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

Improved Access. Improved Services. Better Health Outcomes.

FISCAL YEAR 2023
QUARTER 1
(SEPTEMBER–DECEMBER 2022) REPORT

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PROJECT OVERVIEW

Program Name:	USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Reporting Period:	Quarterly 1 Report Fiscal Year 2023 (September–December 2022)
Activity Start Date and End Date:	September 20, 2018–September 19, 2023
Name of Prime Implementing Partner:	Management Sciences for Health
Contract Number:	7200AA18C00074
MTaPS Partners:	**Core Partners:**	Boston University, FHI360, Overseas Strategic Consulting, Results for Development, International Law Institute-Africa Centre for Legal Excellence, 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

Recommended Citation

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2023. *USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program: Quarterly 1 Report Fiscal Year 2023 (September–December 2022)*. Submitted to the U.S. Agency for International Development by the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program. Arlington, VA: Management Sciences for Health, Inc.

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ACRONYMS AND ABBREVIATIONS

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, IP	*Autoridade Nacional Reguladora de Medicamentos, Instituto Público* [National Medicines Regulatory Authority, Public Institute] (Mozambique)
ANEH	National Hospital Evaluation Agency (Mali)
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
BCZ/S	*Bureau central de la zone/de santé* (DRC)
BSC	balanced scorecard
CAPA	corrective and preventive action
CASIC	County Antimicrobial Stewardship Interagency Committee
CASS	communication and awareness intervention for school students

CCS	community care site (DRC); Centro de Colaboração em Saúde (Mozambique)
CDC	US Centers for Disease Control and Prevention, Communicable Disease Control (Bangladesh)
CDR	regional distribution center (DRC)
CGD	Center for Global Development
CHD	Center for Health Development (Philippines)
CHTF	child health task force
CIPCAC	County Infection Prevention and Control Advisory Committee
CMD	chief medical director
CME	continuous medical education
CMSD	Central Medical Store Depot (Bangladesh)
CNAMM	National Marketing Authorization Commission (Mali)
CODESA	health area development committee
COE	center of excellence
COR	contracting officer representative
COI	conflict of interest
COVID-19	coronavirus disease 2019
COVD	COVID-19 vaccine delivery
CPD	continuing professional development
CQI	continuous quality improvement
CSO	civil society organization
CYP	couple-years of protection
DAV	Drug Administration Department of Vietnam
DDA	Department of Drug Administration (Nepal)
DEPS	DRC Ebola post-mortem surveillance
DFDS	Department of Food and Drug Services (Nigeria)
DGDA	Directorate General of Drug Administration (Bangladesh)
DGFP	Directorate General of Family Planning (Bangladesh)
DGHS	Directorate General of Health Services (Bangladesh)
DGSHP	General Directorate of Health and Public Hygiene (Mali)
DGSV	General Directorate of Veterinary Services (Burkina Faso)
DH	district hospital
DHIS 2	district health information system version 2
DMHP	Directorate of Hospital and Proximity Medicine (Côte d'Ivoire)
DNAM	*Direcção Nacional de Assistência médica* [National Directorate of Medical Assistance] (Mozambique)
DNF	National Directorate of Pharmacy (Mozambique)

DOH	Department of Health (Philippines)
DOHS	Department of Health Services (Nepal)
DPCB	Disease Prevention and Control Bureau (Philippines)
DPM	Directorate of Pharmacy and Medicine (Mali and DRC)
DPML	Directorate of Pharmacy, Medicines, and Laboratories (Cameroon)
DPS	*Division Provinciale de la Santé* [Provincial Health Division] (DRC)
DQA	data quality assurance
DQSHH	Directorate for Quality, Security, and Hospital Hygiene (Senegal)
DRC	Democratic Republic of the Congo
DR-TB	drug-resistant tuberculosis
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, Philippines Food and Drug Administration, Rwanda Food and Drugs Authority
FG	focus group
FGD	focus group discussion
FP	family planning
FS	field support
GAP	global action plan
GBT	Global Benchmarking Tool
GCMN-RAM	National MSC Group on AMR (Mali)
GFF	Global Financing Facility
GHeL	Global Health e-Learning 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
GPVP	good pharmacovigilance practice
GWG	gender working group
HA	health area/account
HAD	health affairs directorate
HAI	health care–associated/acquired infection
HCAC	Health Care Accreditation Council
HCAD	Health Communication and Awareness Directorate
HCAI	health care–associated/acquired infection
HCF	health care facility
HCP	health care provider/practitioner/professional
HCW	health care worker
HCWM	health care waste management
HEOC	health emergency operation center
HEU	health economic unit
HF	health facility
HH	hand hygiene
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	infection prevention and control committee
iCCM	integrated community case management
ICU	intensive care unit
IDDS	infectious disease detection and surveillance
IEC	Information, education, and communication

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
IRB	institutional review board
IRIMS	Integrated Regulatory Information Management System
ISO	International Organization for Standardization
IVD	in vitro diagnostic
JEE	joint external evaluation
JFDA	Jordan Food and Drug Administration
JLN	Joint Learning Network
KAP	knowledge, attitudes, and practices
KMITS	Knowledge Management and Information Technology Service (Philippines)
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/programs (Philippines)
M&E	monitoring and evaluation
MA	marketing authorization
MAAIF	Ministry of Agriculture, Animal Industry, and Fisheries (Uganda)
MALAP	Maturity Level Action Plan
MALF	Ministry of Agriculture, Livestock, and Fisheries (Burkina Faso)
MCC	Multisectoral Coordinating/Coordination Committee
MCCH	maternal, child, and community health

MCDA	multicriteria 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
MKA	Momentum Knowledge Accelerator project
ML	maturity level
MMD	multimonth dispensing
MMS	medicines management supervisors
MNCH	maternal, newborn, and child health
MOES	Ministry of Education and Sports
MOH	Ministry of Health (sometimes MoH)
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly, and Children (Tanzania)
MOHFW	Ministry of Health and Family Welfare (Bangladesh)
MOHP	Ministry of Health and Population (Nepal)
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 subcommittee
NAP	national action plan
NAP-AMR	national action plan for AMR
NASIC	National Antimicrobial Stewardship Interagency Committee (Kenya)
NC-AMR	National Commission on AMR (DRC)
NCAT	National Committee for Antibiotic Treatment (Senegal)
NCD	noncommunicable disease
NCDC	Nigeria Center for Disease Control

NCDC	National Curriculum Development Center (Uganda)
NDA	National Drug Authority (Uganda)
NEML	national essential medicines list
NGO	nongovernmental organization
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 (Bangladesh)
NTP	National Tuberculosis Control Program (Bangladesh)
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
PBF	performance-based financing
PCPD	Pharmacy and Clinical Pharmacy Directorate (Jordan)
PCR	polymerase chain reaction
PD	Pharmaceutical Division (Philippines)
PEA	political economy analysis
PERAC	pharmacovigilance expert review and advisory committee
PIES	provider integration and engagement system
PMDT	programmatic management of drug-resistant TB
PMED	Pharmaceuticals and Medical Equipment Directorate (Ethiopia)
PMS	post-market surveillance
POPCOM	Commission on Population and Development (Philippines)
PPB	Pharmacy and Poisons Board of Kenya
PPE	personal protective equipment
PPM	pooled procurement mechanism
PPS	point prevalence study
PPSSP	*Programme de Promotion de Soins de Santé Primaires* (DRC)
PQM+	Promoting the Quality of Medicines Plus
PRIMS	Pharmaceutical Regulatory Information System

PS	procurement service
PSA	Pharmaceutical Systems Africa
PSCM	procurement and supply chain management
PSCMT	Procurement and Supply Chain Management Team (Philippines)
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 (Indonesia)
PV	pharmacovigilance
PViMS	Pharmacovigilance Monitoring System
PY	program year
QMS	quality management system
RBC	Rwanda Biomedical Center
RDT	rapid diagnostic test
REC	regional economic community
RECO	community health worker (DRC)
REDISSE	Regional Disease Surveillance Systems Enhancement
RH	reproductive health
RHB	regional health bureau
RHMT	regional health management team
RMS	Royal Medical Services (Jordan)
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 (Philippines)
SDP	service delivery point
SDG	Sustainable Development Goal
SEARN	South-East Asia Regulatory Network
SHA	Systems for Health Accounts
SHD	School Health Directorate (Jordan)
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
SWOT	strengths, weaknesses, opportunities, and threats
TA	technical assistance/advice
TB	tuberculosis
TLD	dolutegravir-based tenofovir + lamivudine + dolutegravir
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 (Bangladesh)
UNFPA	United Nations Population Fund
USAID	US Agency for International Development
USD	US dollar
VAMOHS	Voluntary Access Mechanism for Originator Health Supplies
VSS	vaccine safety surveillance
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 USAID and implemented by a team led by MSH, the purpose of the five-year MTaPS program (2018–2023) is to provide 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, combating infectious disease threats, and expanding essential health coverage.

B. MTaPS' GOAL AND OBJECTIVES

The goal of the MTaPS program is to help 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. In this context, MTaPS uses the term "access" to refer 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). The program's utilization of "use" refers to prescribing, dispensing (or sale or supply to the user), and consumption (or end use).

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 the 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 desired health outcomes

C. MTaPS' APPROACH TO STRENGTHENING PHARMACEUTICAL SYSTEMS

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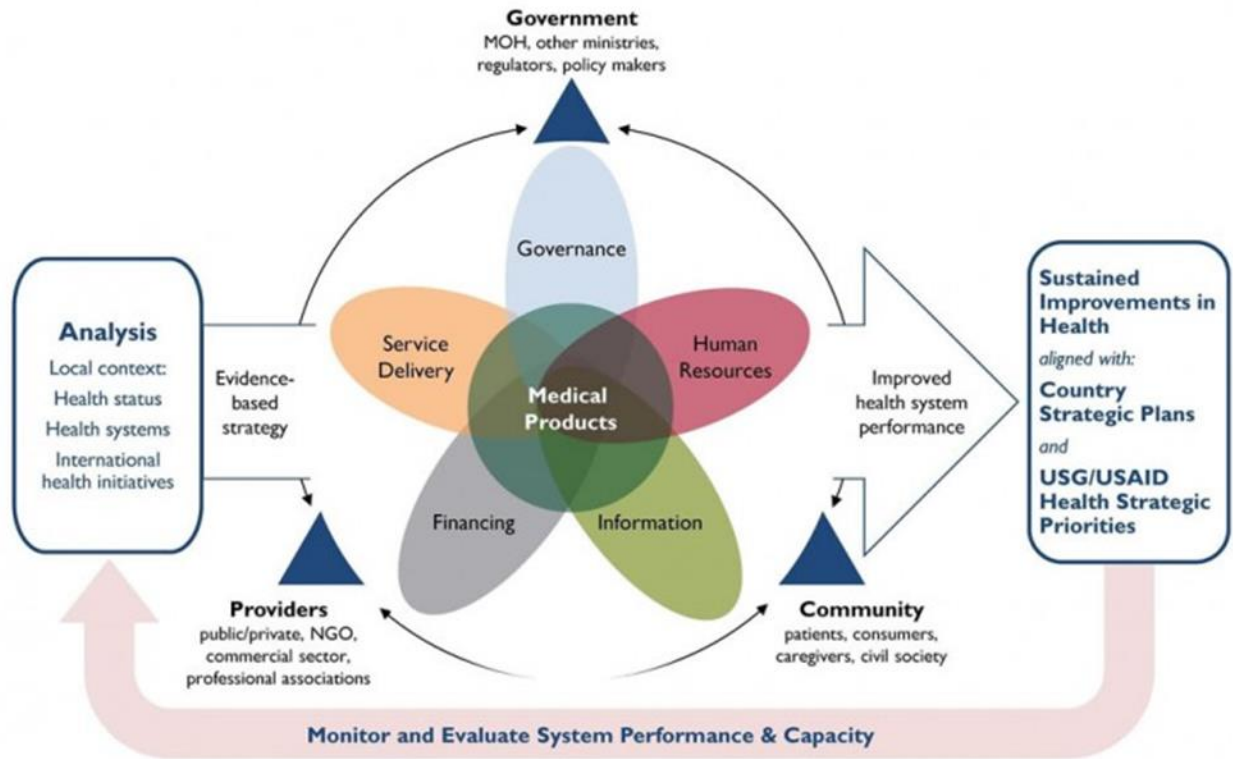
Figure 1. USAID pharmaceutical systems–strengthening approach

D. ABOUT THE REPORT

This report presents activity progress and achievements by portfolio for fiscal year 2023 quarter 1 (October–December 2022). It summarizes program performance and key challenges and is organized by program objectives, funding stream, country, and health element portfolios.

2. PROGRESS BY OBJECTIVES

A. 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

OVERVIEW

Promoting transparency and accountability is a prerequisite for improving access to essential medicines and strengthening health systems to achieve UHC.[1] Poor governance in pharmaceutical systems can reduce access to pharmaceutical products, inflate medicine prices, and waste scarce health system resources.[2] 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.

CUMULATIVE PERFORMANCE TO DATE

Strong pharmaceutical-sector governance is fundamental to well-performing pharmaceutical systems. A key feature for improving these systems is the understanding that it takes time and significant engagement to review and improve governance components. This section highlights selected examples of MTaPS' cumulative work.

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

Bangladesh: With MTaPS' technical assistance, the MOHFW and key directorates initially developed a strategic plan for coordinated procurement. The plan included mapping the MOHFW's procurement entities, their practices, and key actions to be implemented with timelines and periodic reviews. MTaPS also reactivated and strengthened the Procurement and Logistics Management Cell functions in the Health Services Division and Medical Education and Family Welfare Division of the MOHFW through advocacy meetings with the procurement section leads of the two divisions and review of TOR for the cell to ensure an oversight mechanism for effective and efficient procurement systems.

MTaPS then developed a table for the oversight bodies at the MOHFW and DGHS to monitor the performance of the procuring entities using standards indicators to contribute to the improvement of the procurement functions. The MOHFW has started using the table, demonstrating that following multiyear support from MTaPS, the Government of Bangladesh is taking ownership for further procurement system improvements.

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[1] Wirtz VJ, Hogerzeil HV, et al. Essential medicines for universal health coverage. The Lancet. 2017. 389(10067), 403–476.
[2] WHO. 2013. Good Governance in the Pharmaceutical Sector. Geneva: World Health Organization.

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

Ethiopia: In AMS, MTaPS initially supported the revision of the NEML and national STG for general hospitals, based on the WHO AWaRe categorization of antibiotics for the first time in Ethiopia. Following the adoption of these foundational governance documents, MTaPS is now supporting the practical implementation of AMS interventions at selected hospitals.

Nepal: Increasing the maturity of regulatory systems within the DDA of Nepal is dependent on adoption of the new Drug and Health Product Act, which the Cabinet Secretariat of the Government of Nepal has provided consent approval to replace the 1978 Drug Act. The new Act remains under review by the Ministry of Law and Parliamentary Affairs. Also, under review by the DDA and the MOHP is the Code on Sale and Distribution, which includes WHO-aligned GPP and GSDP, the standards of which are planned to be made mandatory for the future registration of pharmacies and wholesalers. The development and submission of these governance documents has been supported by MTaPS throughout the life of the project. Now, with MTaPS' support, the quality manual has been finalized and agreed upon for instituting a QMS in the agency—an important step for ISO 9001:2015 certification. These fundamental documents lay the foundations for further maturity improvements at the DDA.

DRC: MTaPS, in collaboration with WHO, provided support to the pharmaceutical regulatory authority to develop and integrate the WHO AWaRe categorization of antibiotics into the revised EML and disseminate it in the MTaPS-supported provinces of Nord Kivu and Ituri. In both provinces, MTaPS supported the organization of briefing sessions for all stakeholders, including the provincial management teams, donor IPs, and health workers. This new approach provided a framework and guidance for AMS and monitoring of antimicrobial use. MTaPS also supported four DTCs in eastern DRC (Heal Africa, Kyeshero, Nyankunde, and Bunia hospitals) to conduct quarterly assessments of antimicrobial use as part of their CQI program.

SUB-OBJECTIVE 1.3: STAKEHOLDER ENGAGEMENT AND EMPOWERMENT, INCLUDING CIVIL SOCIETY AND CONSUMERS, INCREASED

Ethiopia: MTaPS supported the revision of the NAP-AMR and establishment of an AMR unit within the MOH. To strengthen the operational capacity of the NAMRAC, MTaPS facilitated its restructuring, including updating its membership to ensure broader stakeholder participation and revision of its TOR. Support was provided in the development of TOR for its IPC and AMS TWGs. Using this revised governance platform, MTaPS is now supporting facility-based actions to address AMR.

Philippines: In setting up eLMIS governance, MTaPS continuously advocated with the DOH to finalize the Joint Administrative Order with the Department of Interior and Local Government (DILG) and Department of Information and Communications Technology (DICT). MTaPS suggested that SCMS spearhead an eLMIS governance consultative workshop with all involved DOH bureaus and the DILG and DICT to finalize the provisions in the Joint Administrative Order and complete components of the eLMIS governance policy. MTaPS will continue to advocate for the establishment and active functioning of an eLMIS governance mechanism as the fundamental platform required to roll out the eLMIS country-wide to enable end-to-end visibility of pharmaceutical data, which will improve medicines availability.

MTaPS is also supporting the DOH to build high-impact, multistakeholder partnerships to leverage support and resources from other IPs and institutions. For example, Philippine Business for Social Progress, the prime recipient of the Global Fund in the country, has been covering the cost for eLMIS webhosting services since October 2022. MTaPS was previously covering the hosting service cost. While the DOH is spearheading the rollout plan development and implementation at the central and CHD levels, a broader eLMIS governance mechanism is needed to coordinate implementation at the LGU level and mobilize resources.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Transparency and accountability are necessary in many aspects of the pharmaceutical system. HTA and procurement systems are two examples.

Indonesia: HTA is an important stream of activity for governments to undertake to prioritize uptake of cost-effective new medicines and technologies. These processes need to be transparent and provide an accountable system due to the time taken for HTA and the benefits that positive assessments may have for health systems. This quarter, MTaPS assisted Pusjak PDK and InaHTAC in redefining the criteria for HTA topic selection and use of the MCDA technique for topic prioritization, facilitated the development of digital forms for HTA topic nominations for stakeholders, and supported the call for topic launching events. Application of the MCDA and Delphi survey for selection of HTA topics has enabled wider stakeholder engagement in eliciting, redefining, and weighting topic selection criteria for HTA studies, contributing to the transparency and accountability of the HTA system in Indonesia.

Bangladesh: MTaPS supported the mapping of the organizational structure of the DGHS by focusing on the procuring entities' capacity to plan and process procurement functions. The mapping included recommendations for the formation of a cell in the DGHS with a proposed composition and TOR, procurement schedules suitable for procurement associates and managers, and a training calendar to build the capacity of the different procuring entities of the DGHS to enable them to deliver the procurement functions more efficiently and in a more transparent and accountable way.

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

Evidence-based medicines policies, laws, regulations, and guidelines form the foundation for the appropriate functioning of pharmaceutical systems. The following examples demonstrate the variety of areas within the pharmaceutical system, including regulatory systems, where these are necessary.

Bangladesh: MTaPS assisted in the development and finalization of the DGDA's five-year strategic plan for 2022–2026 through several consultative workshops. The plan will guide the DGDA to implement the key observations of the WHO benchmarking process in a structured and effective way to make the authority functional and ensure sustainable access to quality, safe, and effective medical products.

Burkina Faso: MTaPS, supported the DGSV to organize a workshop in Koudougou to draft a decree/ministerial order on PV in the animal health sector, defining its structural organization and functioning, and to design a PV data collection tool and reporting mechanism. The ministerial order will empower the DGSV to conduct PV activities and to regulate and enforce the rational use of antimicrobials in the animal health sector. Next steps will include the organization of a validation workshop; the review and finalization of the ministerial order by the legal counsel of the Ministry of Agriculture, Animal Resources and Fisheries; and the official endorsement and signature of the ministerial order.

Nepal: MTaPS supported the DDA to update regulations, rules, and guidelines, including the Codes on Sale and Distribution guideline and advocate for their assent and implementation. MTaPS also provided technical assistance in the review of pricing policies and regulations in Nepal and provided a report of findings to the DDA, which was also circulated for stakeholder consultation. The NMP was finalized with input from stakeholders, and the draft implementation plan was shared with the DDA, MOHP, and WHO. An indicator-based monitoring plan was drafted and is being reviewed by the DDA before being submitted to the MOHP. To strengthen the clinical trial function at the DDA, MTaPS drafted an inspection checklist for clinical trial site inspection and discussed it with a DDA pharmacy officer for finalization. In addition, MTaPS is supporting the drafting of clinical trial regulations and guidelines as part of increasing the maturity level to 2 in clinical trial function. Establishing an effective regulatory framework with policies, regulations, and guidelines facilitates adequate control of the safety and quality of medical products circulating in the country. MTaPS drafted TOR for the coalition of interested parties to strengthen the regulatory system for medical products and health technologies and shared it with WHO. Cooperation among development and implementation partners allows streamlining of support and avoidance of duplication of efforts.

Rwanda: MTaPS Rwanda supported the development of regulatory documents used in medical products import and export control as part of its strategic approach to improving the Rwanda FDA by addressing gaps highlighted by the WHO GBT. At a workshop, stakeholders developed three regulations governing control of import and export of food products, tobacco and tobacco products, medicated cosmetics, and household chemicals and two guidelines on importation and exportation of regulated products declared as personal effects and import and export of medicated cosmetics and household chemicals. In addition, the following were reviewed:

- Four process flows
- One regulation on control of importation and exportation of pharmaceutical products and medical devices
- Two guidelines on importation and exportation of pharmaceutical products, medical devices, and food products
- Four SOPs on approval of import visa of regulated products, approval of import license of regulated products, approval of export license of regulated products, inspection of imported regulated products released under seal, and inspection of imported/exported regulated products at port of entry

MTaPS helped develop TOR for the Rwanda FDA's four-year strategic plan mid-term evaluation (2021–2024). To guarantee medical product quality and safety in Rwanda, the regulatory authority requires an appropriate regulatory framework and strategies for effective control of the market.

SUB-OBJECTIVE 1.3: STAKEHOLDER ENGAGEMENT AND EMPOWERMENT, INCLUDING CIVIL SOCIETY AND CONSUMERS, INCREASED

Engaging a full range of stakeholders, including civil society, is vital for agreement and implementation of pharmaceutical systems improvements and reforms. Examples of this from the GHSA are highlighted below.

Ethiopia: As part of promoting a One Health approach toward prevention and containment of AMR, MTaPS supported the Ethiopian Environment Protection Authority (EEPA) to organize an advocacy and sensitization workshop on AMR in November 2022—the first of its kind in the sector. Representatives from a range of directorates from within the EEPA attended the workshop, which aimed to improve awareness among the leadership and staff regarding the implementation of the national AMR strategy. As part of the way forward, a task force comprising 10 members representing nine directorates of the EEPA was established to oversee the sector's AMR prevention and containment activities.

Participants in Ethiopia take part in an awareness-raising event for World Antibiotic Awareness Week, Nov 24, 2022.
Photo credit: Joney Woldegebreal, MTaPS

As part of WAAW 2022, MTaPS supported the organization of an awareness and sensitization forum for CSOs in November 2022, representing various CSOs including the women's federation and youth federations. The event was a great opportunity for participants to increase their understanding of AMR and be prepared to contribute to the national effort in the prevention and containment of AMR through increasing awareness of their members and the community using various platforms such as coffee ceremonies and *Edirs*.

Mozambique: MTaPS facilitated a coordination meeting with ANARME, IP staff, and representatives from CCS and EGPAF to plan the next steps regarding TPT ASM implementation. Meeting participants agreed on the dates for the PViMS TOT and training of the site teams and on the composition of the supervision teams and the need for the central-level ANARME, IP focal persons to make monthly calls to the provincial focal persons (PV, TB, HIV) to assess activity progress at the study sites. The calls were initiated in November 2022.

Senegal: In October 2022, under the aegis of the PS/HCNSSM, MTaPS worked with USAID GHSA IPs, the Fleming Fund, and other AMR stakeholders to organize a workshop for the AMR working group to assess the implementation of the AMR NAP (2017–2022) and to set up the technical committee in charge of elaborating the AMR NAP (2023–2028). All AMR human, animal, environmental, and vegetal health sectors participated in the workshop and were represented on the technical committee. At the end of the workshop, participants agreed to set up a small committee to define the road map for using the One Health approach to develop the AMR NAP (2023–2028). The road map will consider WHO's plan to conduct the IHR JEE January–March 2023 for Senegal.

BEST PRACTICES/LESSONS LEARNED

- Strengthening pharmaceutical governance systems in countries takes time but with regular and ongoing efforts results can be achieved.
- Where countries have improved governance for areas of pharmaceutical systems (e.g., AMR, PV), the focus needs to move to pharmacy services interventions that promote facility-based actions that improve patient care and health outcomes (e.g., changes in antibiotic prescribing patterns and increased reporting of ADRs).
- Stakeholder engagement is key to creating an enabling environment for regulation of medical products in the country. Engagement of civil society, in particular, should be further encouraged at all levels of a country's pharmaceutical system.

B. 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:** Medicine regulatory capacity strengthened, including through regional regulatory harmonization

OVERVIEW

Capacity strengthening of individuals and institutions is a critical aspect of sustainability within MTaPS. Sustainable pharmaceutical systems require more than just training. MTaPS focuses on capacity strengthening, ensuring that the range of activities the program is involved in produces a legacy in areas such as pharmaceutical system working groups (e.g., AMR working groups) that are self-sustaining, e-Learning materials that are integrated into the learning system of ministries for ongoing use, and digital solutions that are seamlessly embedded into the workflows of pharmaceutical systems. MTaPS' aim is to help countries' pharmaceutical systems mature, leaving the responsibility of these systems in the hands of local counterparts.

CUMULATIVE PERFORMANCE TO DATE

This section documents progress in selected MTaPS institutional and human resource capacity building governance activities from the start of the program to demonstrate improvements through the application of MTaPS' PSS approach. One notable example is the approach MTaPS has been undertaking to strengthen the capacity of governments to deliver effective regulatory services for medical products regulation (Sub-Objective 2.4).

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 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 GRP and use of electronic information management systems.

MTaPS worked with several continental and regional organizations (e.g., ASEAN, SEARN) 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 M&E 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.

Support was also provided to foster convergence of medicine regulation in ASEAN, SEARN, and IGAD. One goal of MTaPS is for supported countries to achieve stable and effective regulatory systems to ensure the safety and quality of medical products on the market.

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

MTaPS' approaches to institutionalize pharmaceutical system improvements are systematic in nature, multiyear, and context specific. The following country examples demonstrate this.

Cameroon: MTaPS supported the DPML to carry out a situational analysis of AMS-related policies in the animal and human health sectors; develop a national integrated AMS action plan; establish DTCs in 12 health facilities; train 239 HCPs (134 female, 105 male) in AMS; and conduct CQI of AMS activities in supported health facilities. This process from assessment to improvement of governance and now facility-based activity has laid the groundwork for ongoing improvements in AMS.

Rwanda: In addressing the human resources capacity gap, MTaPS supported training health care providers in different areas of pharmaceutical management, with 695 Rwanda FDA staff and other HCPs trained in various areas including MER, good manufacturing practices, good review practices, good reliance practices, PV, and QMS. As part of sustainable capacity strengthening, MTaPS provided technical support to develop eLearning courses in MER and PV, which are hosted on the Rwanda FDA servers. So far, 78 trainees have enrolled and 17 have completed the courses. MTaPS has also 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).

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

MTaPS is active in a variety of pharmaceutical systems areas. In this quarterly report, we present **Burkina Faso** and **Cameroon** as examples of how MTaPS-related support over the life of the project has improved the ability of governments to manage AMS-related services.

Burkina Faso: MTaPS supported the DPH to establish and train DTCs in 10 health care facilities. A total of 250 DTC members were trained on AMS. Each DTC developed an action plan to implement and oversee AMS interventions in its facility. The DTCs' situational analysis of the causes of inappropriate antibiotic use highlighted the unavailability of facility-level infectious disease STGs and the inappropriate use of antibiotics. To address the inappropriate use of antibiotics, MTaPS supported the DGAP and DPH to develop training modules based on the facility-level infectious disease STGs and trained 350 health professionals (including 158 women) in the 10 health care facilities. MTaPS also supported the DQSS and DPH in printing and disseminating 500 copies of the STGs. MTaPS will continue to support DTCs to use the infectious diseases STG and improved staff competency to improve AMS.

Cameroon: Since the inception of MTaPS in Cameroon in 2019, the program has supported the coordination of AMR activities through the organization of 18 routine meetings of the TS of the AMR MCC, the AMS and IPC TWGs, other OHP members, and partners to monitor the implementation of AMR activities. During FY22, MTaPS supported the organization of a coordination meeting between the TS-MCC and OHP to strengthen linkages between these two bodies and to advocate for creating the MCC. MTaPS also supported a workshop for OHP stakeholders to review the regulatory framework of the OHP and supported a second meeting to review and validate the report on the assessment of the NAP-AMR prior to updating the plan. MTaPS strengthened the technical capacity of key government stakeholders and HCPs during the celebration of AMR-related event days, including WAAW, a conference of the Society of Cameroonian Microbiologists, and World Hand Hygiene Day.

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

Private-sector organizations are a key element in national pharmaceutical systems. In this quarterly report, we share how Côte d'Ivoire has engaged with the private sector in the AMS and IPC space.

Côte d'Ivoire: MTaPS supported a situational analysis of the capacity and functionality of both ICCs and DTCs in four university teaching hospitals, twelve regional hospitals, and four private clinics in the human health sector as well as the veterinary clinic of the Ministry of Animal Resources and Fisheries' Regional Directorate of Bouake and the Antirabic Center of Cocody in the animal health sector. MTaPS facilitated the development and validation of documents and training modules in IPC and AMS, training of HCPs, and the establishment of a CQI process in health facilities. Supported ICCs and DTCs are now functioning with clear TOR and have developed capacity building plans.

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

MTaPS has been supporting strengthening of regulatory systems in countries as part of the effort to improve access to safe, quality-assured, and efficacious medical products. Using the WHO GBT and the corresponding institutional development plan, MTaPS provided technical assistance to address gaps and raise the regulatory capacity maturity level of NRAs to acceptable levels.

Rwanda: Using the results of the 2018 GBT assessment, MTaPS provided technical assistance to the Rwanda FDA to operationalize the authority by developing the regulatory framework and management capacity of the organization. MTaPS supported development of regulations, guidelines for control of medical products and other health products, and development of a business plan and strategic plan to ensure financial self-sufficiency and development of the authority. MTaPS further provided technical assistance to develop the capacity of the authority by offering training and orientation in QMS required to achieve efficiency, consistency in delivery of regulatory services and medicines and medical devices, and assessment of product and technical files before granting marketing authorization. To ensure sustainability of knowledge exchange, MTaPS developed eLearning modules for MER. MTaPS' goal is to enable the Rwanda FDA to raise its capacity maturity level to achieve a stable and functional NRA.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Innovation can take several forms. This quarter, we highlight AMR awareness activities in schools (**Jordan**) and equipping professional associations to continue IPC/AMS learning (**Kenya**).

Jordan: MTaPS implemented the CASS on AMR in eight schools from three health directorates, reaching 1,125 students and 24 teachers.

Kenya: MTaPS supported the National Nurses Association of Kenya in the development of a concept to establish a training academy integrated with IPC/AMS components. This initial step is aimed at providing a sustainable, self-reliant platform that will offer CPD-certified courses for nurses across the country. In collaboration with other professional associations (e.g., IPNET-Kenya, Morticians and Allied Professionals Association of Kenya), MTaPS provided technical assistance in the running of professional education sessions on IPC for HCWs.

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

Improving a government's ability to manage aspects of their pharmaceutical system is incremental and continues to be a priority in the MTaPS program. In this quarter, we highlight procurement systems improvement in **Bangladesh** and government involvement of communities to improve medicines management in **DRC**.

Bangladesh: MTaPS supported the mapping of the organizational structure of the DGHS by focusing on the procuring entities' capacity to plan and process procurement functions. The mapping included recommendations for the formation of a cell in the DGHS with a proposed composition and TOR, procurement schedules suitable for procurement associates and managers, and a training calendar to build the capacity of DGHS procuring entities to enable them to deliver the procurement functions more efficiently.

DRC: MTaPS supported DPSs to expand community engagement in health product management, build communities' capacity to manage health products, and increase experience sharing between health areas to improve product management at health facilities. As part of this effort, MTaPS supported DPSs to hold quarterly meetings with community members (CODESAs) in MTaPS-supported health zones in Ituri and Nord Kivu.

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

The private sector plays a key role in ensuring the availability and use of quality medications. This quarter, we highlight how **Nepal** is improving the quality of services offered by private pharmacies and wholesalers, while in **Tanzania** we show the importance of educating private journalists in IPC to improve AMR.

Nepal: The DDA approved the multipronged GPP and GSDP implementation strategies to improve pharmacy and wholesaler practices; the next step is for the Drug Advisory Committee to approve them. In collaboration with the DDA and with input from stakeholders, MTaPS finalized the GPP and GSDP e-Learning modules. To publish the eLearning modules on the DDA website, MTaPS requested approval from the National Information Technology Center for a virtual private server and subdomain. The strategy calls for the eCourses to be mandatory to register and renew pharmacies and wholesalers. To help pharmacies and wholesalers get ready for future GPP and GSDP inspections, MTaPS advertised a tender for a private-sector service provider to conduct capacity building and assessments on GPP and GSDP.

Tanzania: MTaPS provided technical support to the MOH in training journalists on key components of IPC to enable them to undertake advocacy for and sensitization of IPC practices in the community and health facilities. A total of 108 journalists (43 female, 65 male) from various media, including Channel Ten, Independent Television, Tanzania Broadcasting Cooperation, Mwananchi Communication, Star TV, and Clouds FM, took part in the training. This helped the journalists understand the key components of IPC and accurately report IPC in the media, which will help increase awareness of IPC among community members and HCWs. Following these trainings, various mass media invited the national IPC team to appear on shows to educate the community on IPC and how it helps contain AMR.

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

For this quarter, we highlight activities in pharmaceutical regulatory capacity strengthening from **Bangladesh** and **the Philippines.**

Bangladesh: MTaPS provided technical assistance in developing and implementing a CAPA plan in selected regulatory functions (MA, PV, and QMS) as per the WHO formal assessment report for the DGDA to contribute to increasing the WHO GBT score. MTaPS supported a workshop attended by WHO and other development partners to review the implementation of QMS in all nine functions within the DGDA toward attaining capacity Maturity Level 3, which indicates a stable and functional NRA.

The Philippines: On December 5, 2022, MTaPS participated and made a presentation in the FDA's national conference, focusing on global best practices and approaches for NRAs to advance toward a higher capacity maturity level (levels 3 and 4) of the WHO GBT. An advanced GBT maturity level is evidence of improvement in capacity and systems efficiency in providing regulatory and patient safety services, thus increasing people's confidence in the regulatory and health systems of the country. The conference was attended by 242 (174 female, 68 male) Philippines FDA leaders, officers, and inspectors.

In addition, MTaPS Philippines, in collaboration with the MTaPS Asia Bureau, completed analysis of the institutional and individual competency mapping of the FDA and presented the results to 20 (15 female, 5 male) FDA officers representing evaluators, inspectors, analysts, and PV human resources. Results of the competency mapping exercise outline recommendations for the competency requirements and training needs for regulators to advance the FDA's capacity maturity level and strengthen the functionality of the regulatory system for medical products.

BEST PRACTICES/LESSONS LEARNED

- Using hybrid (virtual and in-person) approaches to deliver capacity-strengthening interventions accelerates implementation of activities and allows for involvement of more people within NRAs.
- The consistent involvement of local counterparts in activity implementation encourages ownership and leads to improved outcomes.
- Tailored mentorship sessions at health care facilities may have more impact than workshop-style training.

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

- **Sub-Objective 3.1:** Pharmaceutical management information systems that are interoperable and link patient and products effectively implemented
- **Sub-Objective 3.2:** Information on pharmaceutical systems available and used
- **Sub-Objective 3.3:** Pharmaceutical systems–strengthening research and global learning agenda advanced

OVERVIEW

The MTaPS' overall strategic approach is to support the governing bodies in using evidence-based recommendations and tested approaches to strengthen the pharmaceutical system. MTaPS is providing technical assistance to government ministries to build institutional and sustainable capacity, which is critical to achieving UHC and sustainable development goals.

CUMULATIVE PERFORMANCE TO DATE

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

Bangladesh

MTaPS Bangladesh performed enhancements to the existing electronic supply management systems, i.e., eLMIS, WIMS, and UIMS. MTaPS Bangladesh also introduced the eAMS in all 62 district hospitals across the country. They also successfully established e-TB Manager (over the e-Tracker tool) as the digital platform to capture individual TB patient information and management. The system has been rolled out nationally to all 868 sites. The NTP in Bangladesh has declared paperless reporting of TB data using the e-TB Manager for selected divisions and has a plan to expand this practice nationwide in a phased manner. e-TB manager is also interoperable with the Janao App in Bangladesh to capture information of TB patients treated at private centers, thereby increasing the network and data visibility.

Nepal

In Nepal, a new regulatory management information system, Pharmadex, is in the process of customization to increase efficiency and data use at the DDA. MTaPS successfully demonstrated to DDA senior management the complete Pharmadex 2 for registering and tracking the country's nearly 30,000 pharmacies and 4,000 pharmaceutical wholesalers and importers.

Mozambique

MTaPS Mozambique and the DNF/ANARME achieved key agreements to implement the online version of the regulatory information management system software, Pharmadex, and are working to enhance it to follow the Common Technical Document (CTD) format for evaluation of MA dossiers in the product registration process.

Rwanda

The electronic regulatory information management system (IRIMS) test system has been deployed on the Rwanda FDA's local test server, and the hosting servers required for optimal running are under procurement.

Philippines

MTaPS Philippines supported PViMS training rolled out to 198 programmatic management of drug-resistant TB facilities in January 2022 to ensure patient safety. The PD was also supported in meeting with Knowledge Management and Information Technology Services and the NTP to align and discuss different scenarios relevant to the interoperability between the PViMS and Integrated Tuberculosis Information System. MTaPS Philippines selected the vendor for a commercial off the-shelf eLMIS solution (Entuition Vesta of Bileeta Pvt. Ltd.)

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

Bangladesh

MTaPS Bangladesh performed enhancements to the existing electronic supply management systems, i.e., eLMIS, WIMS, and UIMS. The DGFP also saved USD 9.6 million by reducing the unnecessary procurement of FP 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. Implementation of DGFP eLMIS enabled the directorate to maintain an adequate stock of contraceptives.

Rwanda

MTaPS Rwanda supported Rwanda FDA to adapt the electronic PViMS for spontaneous reporting of ADEs, including COVID-19 vaccine AEFIs, and subsequently for active safety monitoring of DTG-based antiretroviral therapy (ART) regimens.

Philippines

MTaPS supported the DOH to roll out PViMS, an active surveillance tool for TB, to PMDT facilities in all 17 regions and improve the quality of AE reports prior to causality assessment. MTaPS supported establishing the interoperability between PViMS with FDA's VigiFlow.

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

Please refer to *Office of Health Systems, Cross Bureau* for a full description of progress on this activity.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Bangladesh

In coordination with NTP, MTaPS facilitated training sessions on logistics management and eLMIS for TB Commodities in Dhaka. It is expected that the eLMIS for TB commodities will improve the availability and uninterrupted supply of TB commodities. The use of the system has helped the users in quickly and accurately preparing indents. It has also helped the central level to perform the supply consolidation and distribution planning more easily, quickly, and accurately than the manual process.

MTaPS provided TA in developing an online version of the inventory management system for DGFP, "DGFP eLMIS", which will replace the offline inventory systems (UIMS and WIMS). An action plan was developed for the countrywide scale-up of the online system, which is expected to ensure real time transaction data for decision making.

MTaPS conducted several meetings, provided a demonstration to the DGDA, and discussed the progress on the development of Pharmadex version 2. Based on the discussion and the SOP for registration (NRA-MA-013) received from the DGDA, the digital business process was laid out and accepted by the DGDA.

Nepal

Following the DDA-MIS demonstration of Pharmadex (https://mis.dda.gov.np), the DDA requested that all registration modules (pharmacy, wholesalers, manufacturers, medicines, and HTP) be finalized and demonstrated. The DDA agreed to pilot the DDA-MIS starting with pharmacy and wholesaler registration and renewal modules. MTaPS Nepal used a data visualization tool (Google Looker Studio) to create a dashboard for the pharmacy and wholesale registration modules to optimize data use for the DDA's decision making.

Philippines

In setting up eLMIS governance, MTaPS continuously advocated with the DOH to finalize the Joint Administrative Order (JAO) with the Department of Interior and Local Government (DILG) and the Department of Information and Communications Technology (DICT). MTaPS will continue advocating for the establishment and functioning of eLMIS governance.

MTaPS supported the DOH in the initial rollout of eLMIS in 7 DOH–owned and contracted central warehouses, and 4 regional warehouses (Regions 3, 6, 10 and 11). MTaPS also supported the DOH in developing its master product list, which will help ensure uniform and standard product profile across the system, promote end-to-end visibility, and track inventory information uniformly.

MTaPS trained 217 (102 male, 115 female) participants on eLMIS from 11 UHC-implementing sites. The schedule of the rollout of eLMIS at UHC sites is being discussed with the DOH while the current focus is the operationalization of eLMIS first in the regions. eLMIS is one of the essential information systems identified as part of UHC implementation. MTaPS also facilitated the eLMIS Service Support Structure Training (Level 1/Level 2 support) to 22 (12 male, 10 female) participants from the DOH bureaus and selected CHDs.

Rwanda

MTaPS continued support to the Rwanda FDA for the deployment and implementation of IRIMS and training of stakeholders and additional staff as users. A contract between Rwanda FDA and the Rwanda Information Society Authority (RISA) has been secured for final hosting of IRIMS.

In advance of a WHO regulatory capacity assessment conducted December 12–16, 2022, at Rwanda FDA, MTaPS supported the Rwanda FDA's IT team to prepare a detailed presentation used to explain to WHO assessors how IRIMS will support the automation and digitalization of Rwanda FDA's regulatory functions.

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

Bangladesh

With MTaPS TA, 573 asset information entries were completed in the eAMS during this quarter. To date, information on a total of 8,143 assets is managed by the eAMS to track the availability of assets, their functional status, repair, and maintenance history, including their locations. With information on the assets, health managers can better plan the required repair, management, and maintenance of the assets and contribute to efficient procurement planning of medical equipment.

With support from MTaPS, CMSD formed a product catalog committee to standardize the commodity list with full specifications for the eLMIS. CMSD has reformed the three sub-stores to six sub-stores based on product group. An "Inventory Tool Management Committee" has been formed to monitor and maintain the system, which will optimize the system functionality.

Philippines

The CHD National Capital Region (NCR) National Drug Policy Compliance Officer continued utilizing the data analysis tool provided by MTaPS to the DOH-PD in the past project year to analyze their regional stocks data.

MTaPS introduced PViMS and is supporting its implementation. From October to December 2022, seven PMDT HCFs submitted a total of 27 reports through PViMS, bringing the total number of AE reported in PViMS to 208. MTaPS supported the interoperability between PViMS and VigiFlow through E2B files, enabling DOH to submit a total of 145 E2B files to FDA this quarter.

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

Please refer to *Office of Health Systems, Cross Bureau* for a full description of progress on this activity.

BEST PRACTICES/LESSONS LEARNED

- In Bangladesh, direct monitoring and supervision by the Health Service Division (HSD) and DGHS of MOHFW at the DHs can accelerate the process of full utilization of the eAMS. It will also contribute to the effective use of data from the system for decision making and its sustainability of the system.
- In Nepal, the DDA's limited staff numbers make progress challenging; directly involving the MOHP in drafting laws, policies, and regulations has facilitated progress.

- The visit from the USAID Washington representative was useful in increasing her understanding of the local context in a very short period and provided MTaPS Nepal team an opportunity to discuss and resolve challenges with her.
- During implementation of eLMIS in the Philippines, one of the challenges identified was the minimal engagement of SCMS for eLMIS rollout. The lack of governance structure contributed to this minimal involvement. Although the governance structure was not in place, MTaPS' persistent advocacy to SCMS allowed the entity to lead the eLMIS rollout.
- In the development of an eLMIS, it is important to ensure that alignment of supply chain processes is observed across all supply chain levels. In the Philippines, MTaPS had several interactions with nominated process owners to get information about processes in use at central and regional levels. Making e-Learning platforms available motivates learners to complete training on their own time. This was demonstrated by comparing the number of participants who attended traditional vis-à-vis non-traditional methods of learning.
- As a result of the delayed delivery of the servers to host IRIMS in Rwanda, it is advised that supplier-binding procurement terms and conditions should be defined for the local team prior to the start of the procurement to ensure timely delivery. Also, proper documentation and sign-off of user requirement specifications must be in place to ensure that developed solutions respond to user expectations.
- Online reporting via the PViMS platform is more practical than paper-based reporting and should help increase the rate of AEFI detection (Rwanda).
- Incorporation of a module on causality assessment into PViMS would provide more valuable information to the users and support wider adoption of the system (Rwanda).

D. 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

Ensuring the availability, use, and appropriate allocation of financial resources is critical for enhancing access to essential medicines and strengthening health systems to achieve UHC. 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. Putting sound financing strategies in effect minimizes the incidence of stock-outs and reduces the inefficient use of system resources. MTaPS' objectives include building country pharmaceutical financing systems by strengthening their ability to institutionalize transparent and evidence-based decision making, building their capacity to use robust information to define and cost pharmaceutical benefits coverage, promoting pharmaceutical expenditure (PE) tracking to improve purchasing value, and strengthening pharmaceutical-sector governance.

CUMULATIVE PERFORMANCE TO DATE

This section presents selected MTaPS financing activities to illustrate cumulative performance progress in this objective from the start of the project.

SUB-OBJECTIVE 4.1: FINANCIAL BARRIERS TO ACCESS TO MEDICINES REDUCED

To reduce patient-side financial barriers to accessing medicines, MTaPS works to improve procurement processes allowing governments to access lower prices and improving regulatory systems to protect patients from high prices at the point of care.

Through the **VAMOHS** program, MTaPS explored feasibility of the mechanism to rapidly facilitate access to medical products at higher aggregate volumes and lower unit costs for purchasers and patients in developing countries, particularly MICs. Promoting the use of generics and competitive markets could lower prices and increase access for vulnerable populations.

In **Asia**, MTaPS developed a report on the landscape analysis of country-level pricing policies and available pricing databases for pharmaceuticals in Asia region countries in 2021. MTaPS documented publicly available unit price information paid by public and private sectors for different medicines and reviewed the use of pricing indexes to standardize pharmaceuticals purchase prices and negotiation of the best value.

In **Nepal**, MTaPS supported the development of an evidence-based policy on a price control mechanism for pharmaceutical products. Three DDA staff participated in the WHO online Summer School Pharmaceutical Pricing and Reimbursement Policies course 2021 in preparation for the regulatory revision aiming to reduce out-of-pocket expenditures. MTaPS prepared a concept note to describe the current legal provisions, price ceilings, and the pricing of pharmaceutical products.

In **Mozambique**, MTaPS supported DNF/ANARME in 2021 in developing two regulations and two guidelines to operationalize Law 12/2017. MTaPS drafted the Guidelines for GRP and the Reliance Guidelines and developed the Price Control Regulation and the Regulation on Distribution, Import, and Export of Medical Products. The Price Control Regulation will enable DNF/ANARME to control product price mark-ups in the pharmaceutical sector to stop excessive charging of medicines as they move through the supply chain, hence stimulating wider availability of and access to medicines and other health products.

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

Resource allocation decisions are central to pharmaceutical financing—as countries are working with limited resources. HTA is a systematic and multidisciplinary evaluation of health interventions (test, device, medicine, vaccine, procedure, program, or system) to inform decision-making to promote an equitable, efficient, and high-quality health system. HTA helps countries to identify health interventions to be included in—or removed from—the benefits package and EML for national health insurance programs. More advanced use of HTA allows countries to negotiate prices and manage market access for new technologies.

Supported through the **Asia Bureau and Cross Bureau** portfolios, MTaPS conducted a systematic review of over 18,000 resources. MTaPS collaborated with 16 authors from 10 institutions to develop the HTA road map document for policy action in LMICs. In October 2020, more than 200 participants attended the road map launch webinar, which included a five-member panel discussion with HTA program leaders from Colombia, Kenya, South Africa, Taiwan, and Ukraine.

In **Asia**, MTaPS supported the Indonesian MOH in organizing, synthesizing, and documenting the ninth HTAsiaLink Virtual Conference on October 11–13, 2021. The MTaPS-led pre-conference workshop drew 220 participants. MTaPS also assessed the progression of HTA implementation in nine countries in Asia, which was published in the International Journal of Technology Assessment in Health Care (IJTAHC) in July 2022.

In **Indonesia,** MTaPS is supporting MOH to redefine the criteria for selecting HTA topics, from eight overlapping and unclear criteria to six criteria (volume, impact of technology on health, cost technology, compliance with policy priorities, potential cost savings, and social acceptance). MTaPS also facilitated an MCDA workshop to define a statistical weight for these criteria. InaHTAC accepted the new criteria for its measurable indicators and non-redundancy. To roll out the new changes, MTaPS developed digital forms for HTA topic nomination for stakeholders and supported the call for a topic launching event. MTaPS' key principles in HTA topic selection were incorporated into the revised Indonesian HTA guidelines co-developed with the World Bank, InaHTAC, and Pusjak PDK.

In **Ethiopia,** under Cross Bureau funding, MTaPS developed a manuscript detailing the HTA setup mechanism and a survey to assess skills needed to perform HTA. Preliminary results show that stakeholders in Ethiopia do not have enough information on HTA. MTaPS, with support from the in-country consultant CREATE, developed a document outlining options for setting up an HTA agency in the Ethiopian context.

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

Many pharmaceuticals are costly but essential to target the growing burden of NCDs and infectious diseases. Tracking PE will allow health administrators to learn from past patterns and improve planning and resource allocation, increasing efficiency and accountability. Beyond expenditures, costing exercises look at broader economic resource use, including the labor required to administer the pharmaceuticals, which in turn helps governments better allocate their finite resources.

In **Asia**, MTaPS works to strengthen country capacities for defining and costing evidence-based pharmaceutical benefits programs. MTaPS delivered two training programs on how to use the OHT to cost pharmaceutical benefits with attendees from Kyrgyzstan, Bangladesh, Nepal, and the Philippines. MTaPS developed the report on Pharmaceutical Benefits and Benefits Packages in Asia: A Cross-Country Mapping of Coverage Arrangements, the brief on Defining Pharmaceutical Benefits Packages, and the two-part report reviewing costing tools and offering guidance for costing pharmaceutical benefits packages using the OHT.

In **Bangladesh**, MTaPS worked with MOHFW and others to adopt the international standard to track PE, resulting in a consensus with the HEU on a methodology for tracking MNCH commodities and initiated activities for its implementation.

In **Indonesia**, MTaPS conducted a system-wide landscaping of existing and potential PE data sources and produced a summary brief. MTaPS also collaborated with the Indonesian Health Account team to compile existing PE data from available national sources.

To support **MTaPS COVID-19 immunization costing**, MTaPS reviewed 530 articles across three databases and conducted two online surveys (November 2021 and May 2022) of health experts working in 21 countries to gather real-time COVID-19 vaccine delivery data. These activities feed into the MTaPS-adapted Harvard/COVAX costing model to estimate the cost of delivering COVID-19 vaccines under various scenarios. MTaPS compared its findings with other studies and led two large presentations with major stakeholders at the USAID-UNICEF-led Funders Forum and with the USAID COVID-19 Task Force Leadership.

In **Malawi**, MTaPS has been gathering more detailed vaccine delivery expenditure data. After Institutional Review Board approval, data collectors gathered expenditure data through surveys and interviews in the national offices and 20 facilities.

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

In addition to an improved understanding of current expenditures and costing data and efficient allocation of resources, MTaPS also supports efforts to increase the technical efficiency of existing procurement processes through strategic purchasing and identifying additional financial sources including public-private partnerships, and identification of and support to applying for additional external funding.

In **Bangladesh**, in Y2, MTaPS assisted the National TB Program in preparing concept notes for funding through the Global Fund to Fight AIDS, TB and Malaria for 2020–2023.

In the **Philippines**, MTaPS supported identifying and allocating resources for PSCM through the national strategic plan implementation. MTaPS is advocating for leveraging private-sector capacity to outsource certain components of the PSCM, which is already part of the strategy for increasing PSCM efficiency in the national strategic plan. MTaPS also supported DOH in developing guidelines for framework agreements to ensure quality health commodities are procured efficiently. While the Government Procurement Board did not accept the framework agreement guideline, a policy and legal provisions assessment is under way to address the policy gaps.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

SUB-OBJECTIVE 4.1: FINANCIAL BARRIERS TO ACCESS TO MEDICINES REDUCED

In **Asia**, MTaPS published a blog in November 2022 on Pharmaceutical Pricing Policies. Following the recommendation of WHO, countries should apply policies that control the margins or maximum mark-ups throughout the supply chain. Building a regional database of prices can guide governments in benchmarking their prices to pursue internal or external reference pricing policies.

In **Nepal**, the Government's Cabinet Secretariat provided consent approval to replace the current 1978 Drug Act. MTaPS prepared a preliminary report on pharmaceutical pricing regulations in Nepal. MTaPS will discuss the principles for price regulation with stakeholders in April 2023.

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

In **Asia**, MTaPS presented two abstracts and received an award at the tenth HTAsiaLink Virtual Conference in November 2022. MTaPS also developed the first draft of the HTA Institutionalization Canvas, highlighting the value chain of HTA for countries to support HTA institutionalization. MTaPS surveyed and interviewed over 50 stakeholders in Asia to explore the feasibility of an HTA hub or collaborative institution in the region. MTaPS shared preliminary findings with USAID on December 12, 2022.

Following a revamp of HTA topic selection criteria **in Indonesia**, MTaPS supported the first rollout of the call for topics, and 41 HTA topics were received—twice as many as in the previous year. MTaPS also completed the capacity building presentation series to HTA agents on incorporating real-world data into a Markov model evaluating Trastuzumab, a breast cancer medicine. The Indonesian HTA agent will apply the methods following the completion of their systematic review synthesis.

In **Ethiopia,** under cross-bureau funding, MTaPS wrote a manuscript entitled "Institutionalizing Health Technology Assessment in Ethiopia: Seizing the Window of Opportunity." MTaPS shared the draft with USAID and MOH officials and submitted it to IJTAHC in December 2022. MTaPS/CREATE also presented a 2023 workplan during a three-day, in-person training on HTA, focusing on assessing technical and informational needs to conduct HTA and strengthen institutional capacities and conducting a stakeholder analysis and political economy analysis on HTA.

Arry Putra, MTaPS Indonesia Country Coordinator, shared the HTAsialink award with Enilda Martin, Director of Health Office USAID Indonesia. Photo credit: Nurul Rahmayanti, USAID

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

In **Asia**, following MTaPS' virtual training on OHT, Bangladesh expressed interest in applying the OHT for costing its pharmaceutical benefits coverage and requested a refresher training as part of the costing process. MTaPS continued to engage with the HEU of Bangladesh's MOH to create an implementation plan for costing the Shasthyo Surokhsha Karmasuchi Social Health Protection Scheme benefits package.

In **Bangladesh**, MTaPS developed expenditure tracking procedures to continue supporting the HEU to conduct PE for MNCH commodities. The inception report included the methodology, data collection tool, data source selection, data analysis, and validation and is now under review and validation by HEU.

In **Indonesia**, MTaPS completed the preparation of PE data. In carrying out PE calculations, MTaPS, National Health Account team, and Pusjak PDK have compiled PE information source maps and collected data from various sources.

In supporting the **USAID COVID-19 global** activity, MTaPS led two presentations at the Health Systems Research Conference in Bogota, Colombia, in November 2022 on two global surveys conducted to feed into the costing model, as well as practical challenges conducting in-country costing studies.

In **Malawi**, MTaPS collected COVID-19 costing data in all four districts, with one remaining facility in Lilongwe. Some data was unavailable on-site and will be collected at the district level.

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

In the **Philippines**, MTaPS analyzed the procurement legal and policy environment to identify gaps and provisions to develop feasible models to introduce and pilot a mechanism for pooling demands from multiple procurement entities. The Department of Budget and Management has approved the multi-year contracting authority (MYCA) of the DOH for the procurement of TB commodities. Enabling the MYCA and selecting a framework agreement mechanism for procuring these commodities provides the DOH the flexibility in the quantity of commodities they order for every call-offs/procurement reducing the possibility of overstock or stockout of essential TB commodities. MTaPS reached out to suppliers in the country to understand their interest in FA and determine their capacity to respond to the needs of the DOH.

BEST PRACTICES/LESSONS LEARNED

- Application of the MCDA and Delphi survey for selection of HTA topics enabled wider stakeholder engagement in eliciting, redefining, and weighting topic selection criteria for HTA studies.
- Costing data collection during the COVID-19 pandemic has proven to be challenging. Staff are already overburdened with the additional workload caused by the pandemic. The team worked to mitigate these issues by working closely with local consultants, having regular meetings scheduled in a time most convenient for them.
- Although focusing on the prices of medicines is relevant, when thinking about access to medicines a mechanism is needed that also looks at inefficiencies and creates a safe space for manufacturers and buyers to discuss availability, affordability, accessibility, and value of medicines. Stakeholders from all regions expressed significant interest in implementing a transparent and neutral mechanism to build strong partnerships between manufacturers and buyers.

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

OVERVIEW

Ensuring the availability of essential medicines and assuring patient-centered care is critical for achieving positive health outcomes. Doing so hinges on proper access, quality, and affordability of effective medicines and health technologies and their appropriate use by patients and the providers. Additionally, it requires containing the rising global problem of antimicrobial resistance and institutionalizing best practices to improve pharmaceutical care and patient safety.

CUMULATIVE PERFORMANCE TO DATE

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

Bangladesh

In PY1, MTaPS supported government counterparts in developing long-term procurement and supply-chain strategies, identifying strategic objectives and key interventions with a clear delineation of roles and responsibilities. MTaPS supported the DGFP in using data generated through MTaPS-developed eLMIS for decision-making and canceled unnecessary shipments of FP commodities, saving USD 9.6 million during PY4. MTaPS also supported development of the first versions of the TOE for health facilities with 10- to 500-bed capacities and the reference prices for the TOE items. MTaPS developed a checklist that is now used to monitor the performance of DGHS procuring entities, using standard indicators, to contribute to the improvement of the procurement. MTaPS also provided TA to the FP warehouses to ensure timely resupply of FP commodities, which resulted in out-of-stock rates being maintained below 1% at service delivery points. MTaPS introduced the eAMS in all 61 DHs. Additionally, MTaPS completed a peripheral storage system assessment for TB medicines at the government health facilities and at the partners' stores, and a phased transition plan for storage integration was proposed; NTP is currently improving the peripheral level storage systems based on the plan.

Philippines

In PY1, MTaPS supported government counterparts in developing long-term procurement and supply-chain strategies identifying strategic objectives and key interventions with a clear delineation of roles and responsibilities. In PY2, MTaPS analyzed the draft UHC implementing rules and regulations, recommended adding articles, and secured legal support for supply-chain reforms. Following the UHC reform, MTaPS facilitated the PSCM road map design to support UHC implementation. MTaPS supported the DOH to assess the PSCM and PV workforce needs and develop a related workforce development plan. This has now been used by the DOH in hiring new staff and in developing and offering e-Learning course modules to train the workforce. MTaPS supported the PD in analyzing stock information for key tracer TB, FP, and HIV commodities, starting in PY3. As a result of the capacity-building activities conducted and the tools provided for stock analysis by MTaPS, the PD has since been independent in processing the stocks data and oriented selected regions on stocks data analysis and use for decision making.

Jordan

In PY3, with strong leadership from local counterparts, MTaPS supported the MOH to advance efficient vaccine procurement through policy and legal reforms. The reforms facilitate supplier market entry and increase competitiveness, thereby enhancing vaccine availability to strengthen Jordan's immunization programs. A comprehensive supply-chain assessment was conducted with the MOH, and related recommendations, which aim to improve procurement and supply-chain practices, are integrated into the program's work plan.

SUB-OBJECTIVE 5.2: PATIENT-CENTERED PHARMACEUTICAL CARE IMPROVED

Nepal

MTaPS worked with the DDA to develop and finalize guidelines, inspection tools, and an implementation strategy on GPP and GSDP. As part of the implementation of the GPP and GSDP strategy, MTaPS created e-Learning and IEC materials to raise awareness on GPP among entity owners and the public. In response to findings from the GHPP situational analysis conducted by MTaPS, a nine-member TWG was formed by the MOHP Quality Standard and Regulation Division to revise existing hospital pharmacy directives. In collaboration with the Curative Service Division, MTaPS developed a GHPP capacity-building program for public sector hospital pharmacists.

SUB-OBJECTIVE 5.3: PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS ASSURED

Bangladesh

MTaPS has strengthened the PV system of DGDA through scaling up of PV to more than 30 government and private HFs by providing training and creating PV units to institutionalize PV-related initiatives; developing and implementing risk management and investigation procedures to identify, analyze, and mitigate medicines safety risks; and supporting periodic evaluation of ADE safety data and submitting to the WHO Uppsala Monitoring Center. MTaPS also supported PV awareness creation by organizing a rally and roundtable discussion for World Patient Safety Day in 2022. Overall, DGDA achieved an 88% GBT score in PV, mainly due to the continuous support provided by MTaPS to develop and implement corrective actions.

Jordan

MTaPS has supported the MOH to establish and implement a targeted spontaneous reporting system on the safety of COVID-19 vaccines. MTaPS supported systematic sample randomization of vaccinated individuals, standardization of the information collection processes, and analyses of multiple data sets from the COVID-19 vaccines AEFI surveillance system. It also generated and submitted comprehensive reports and key messages to be approved and disseminated by the MOH's National Pharmacovigilance Committee as health communication messages to encourage vaccine uptake.

Mozambique

MTaPS supported ANARME, IP in the institutionalization of PV and the utilization of PViMS for both active and passive surveillance. The major support provided relating to active surveillance includes implementation of ASM of TLD; training ANARME, IP personnel to act as trainers on the protocol and SOPs for the surveillance; supporting the ANARME, IP in the analysis of the active surveillance data of ASM TLD in PViMS, including causality assessment; establishing and implementing the active surveillance

system on TPT regimens; training of 21 provincial and district focal persons by the PI trainers, who cascaded similar training to 82 other HCWs at the TLD implementing sites; and enrollment of 65 participants in the study, with 30 follow-up visits completed, including support supervision to the sites.

Nepal

MTaPS supported the DDA with a situational analysis of the PV system in the country. Based on the findings of this analysis, as well as WHO's best PV practices and GBT assessment, PV regulations, guidelines, risk management plans, and SOPs for regulation and reporting were developed. MTaPS supported the DDA to establish a PV and drug information working group, which helped the DDA become a member of the International Society of Pharmacovigilance.

Philippines

In PY4, MTaPS supported the FDA in updating the national PV policy and developing draft guidelines on a selection of PV methods through an orientation workshop attended by 31 FDA leadership and officers from the national and regional levels. MTaPS partnered with the FDA to deliver a PV overview webinar aimed at increasing patient safety reporting by HCWs and helped the DOH roll out PViMS as an active surveillance tool for TB.

Rwanda

In PY3, MTaPS supported the development of a costed multi-year national PV plan to guide implementation of patient safety monitoring; e-Learning content on PV as a course that is freely available to be part of a regular CME program; IEC materials for public awareness on medicine safety, which were disseminated in the same year; and an ASM system with protocols that were approved for the newly introduced DTG-based antiretroviral treatment regimens. In PY4, MTaPS supported cascaded trainings on the protocols and SOPs to ensure their effective implementation. PV training for 19 participants, comprising 12 members of the National Pharmacovigilance Advisory Committee and 7 staff of Rwanda FDA's PV and Safety Monitoring Division was conducted to increase local capacity for PV. MTaPS is also supporting safety data evaluation and quarterly supportive supervisory visits to all the sites implementing active surveillance of DTG-based regimens.

Tanzania

MTaPS supported the revision of the TOR for the National PV Safety Advisory Committee, developed safety monitoring guidelines for the pediatric population, and trained Vigilance Technical Committee members on medicines, vaccines, medical devices, and diagnostics, which has helped that committee assess AEs associated with ARVs and other medicines. MTaPS built the capacity of TMDA staff on the assessment of PSURs and risk management plans for ARVs and other medicinal products through a practice-based training.

IGAD

MTaPS helped the IGAD Secretariat operationalize the IGAD EWG-PV by supporting the review and validation of the TOR and the development of a harmonized EWG-PV plan of activities. MTaPS also supported both IGAD and EAC Secretariats to convene quarterly meetings of the EWGs on PV. Regional experts from the IGAD Secretariat and member states were trained as trainers on the use of harmonized indicator-based PV assessment and monitoring tools to undertake a baseline assessment of PV systems. This training was further cascaded down to in-country data collectors from member states. Additionally,

MTaPS trained cross-border HF personnel as trainers and supported the cross-border facilities through CQI and mentorship to implement PV activities. MTaPS also supported NMRAs, specifically the PPB of Kenya, to analyze data for decision-making through capacity building of the PERAC. MTaPS, in collaboration with the EAC Secretariat and EAC states, developed and validated harmonized SOPs for the implementation of the EAC PV compendium. MTaPS also supported the IGAD EWG-PV to develop a draft harmonized IGAD-PV training curriculum, training package, and costed work plan.

SUB-OBJECTIVE 5.4: ANTIMICROBIAL RESISTANCE CONTAINMENT SUPPORTED

Jordan

In PY2, MTaPS strengthened the National AMR Steering Committee and its technical subcommittees to operationalize the NAP-AMR through multisectoral coordination and a stakeholder analysis of the AMR/AMS initiatives. During PY3, MTaPS coordinated with that committee to establish AMS programs at two selected pilot facilities. In PY4, MTaPS further collaborated with the same committee to conduct six workshops for Al-Hussein Hospital ICU as part of the RMS Comprehensive AMS Program. Additionally, the MOH approved the National Policy to Combat multidrug-resistant organisms, developed by the ACIPC with MTaPS' support. To enhance the technical capacities of IPC focal points, MTaPS supported ACIPC in launching a certified IPC training course. MTaPS also coordinated with the MOH's School Health Directorate to nominate health educators for the MTaPS-led Communication and Awareness Intervention for School Students initiative and conducted a TOT program to prepare those educators for AMR awareness sessions.

Philippines

MTaPS supported the finalization of TOT materials on IPC and HCWM standard guidelines and practices in HFs and used the materials to train 41 trainers who will cascade the new standards.

Rwanda

Upon finalization of the first NAP-AMR, MTaPS collaborated with the MOH, Rwanda FDA, and other stakeholders to develop a complementary national multisectoral communication strategy for AMR. MTaPS also provided technical support to the MOH to undertake AWaRe categorization of antibiotics and integrated that categorization into the NEML to help prescribers use antibiotics more effectively. With an aim of improving pharmaceutical management in HFs, MTaPS supported the development of a manual for the establishment and operationalization of MTCs as well as a related training guide, presentations, and job aids to facilitate implementation of the MTC manual.

Nepal

To map previous and ongoing AMR-related actions by the government of Nepal, the MOHP, OH partners, and MTaPS Nepal began an AMR landscape analysis, which will inform the development of an AMR training curriculum for journalists and IEC materials on AMR containment and AMS.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Bangladesh

MTaPS assisted the MOHFW in updating a price guide for medical equipment needed by 10- to 500-bed health facilities, which will improve efficiencies in procurement planning and processing. MTaPS also supported a capacity assessment of DGHS's procuring entities and developed key recommendations to strengthen procurement capacities of DGHS. As part of the continuous support to institutionalize eAMS for medical equipment at district hospitals, with MTaPS' TA, a significant 573 asset information entries about the availability, location, functional status, and maintenance history of medical equipment were completed during this quarter. To date, information on a total of 8,143 assets is managed by the eAMS, and health managers can now better monitor and plan for the maintenance and procurement of medical equipment. A total of 286 tickets have been raised for repair and 123 tickets have been resolved using the system. During this quarter, MTaPS assisted the CMSD in multiple ways to strengthen its capacity: a comprehensive eLMIS was introduced and implementation was initiated to monitor and ensure the availability of health products; "a product catalog committee" was established to standardize the commodity list with full specifications; three sub-stores of CMSD were reformed into six sub-stores, based on product groups; and an "inventory tool management committee" was formed to monitor and maintain the inventory management system.

Philippines

MTaPS supported the DOH in drafting guidelines on the quantification of health commodities, which provide directions on the quantification methods, processes, and types of data required for determining the quantities and costs of health commodities for procurement. In addition, MTaPS supported the DOH Disease Prevention and Control Bureau in the development and review of the quantification module for Integrated Service Delivery for LGUs in the Local Health System Playbook. This playbook guides local health officers on operational planning and management to improve delivery of health services.

Jordan

MTaPS facilitated a technical workshop for the National Vaccine Procurement Modernization Committee, during which the findings of an assessment of the WHO prequalified vaccines procurement were presented and discussed. The JFDA did not take any decision, although it was represented at the event. Following the workshop, the JFDA informed the WHO and MTaPS that it is not willing to participate in additional collaborations; this challenge has been communicated with USAID Jordan. In close technical collaboration with the PSD, MTaPS developed seven supply-chain management operational policies addressing the main recommendations from the supply-chain assessment. These policies were submitted to the Institutional Development and Quality Control Directorate, and that directorate recommended making the policies more concise and further developing detailed SOPs for their implementation.

Asia Bureau

MTaPS is supporting the introduction of strategic procurement interventions in the Philippines. MTaPS facilitated a meeting with the Procurement Services Department of the DOH to introduce the legal consultant and discuss the plan. Inception report and PowerPoint slides were also developed and discussed with USAID-Philippines staff.

SUB-OBJECTIVE 5.2: PATIENT-CENTERED PHARMACEUTICAL CARE IMPROVED

Nepal

MTaPS collaborated with the DDA to finalize the GPP and GSDP e-Learning modules, which are planned to be made mandatory to register and renew pharmacies and wholesalers. Additionally this quarter, MTaPS continued to support the Curative Service Division of the Department of Health Services in revising the capacity-building package for hospital pharmacists and updating the hospital pharmacy directive in order to strengthen GPP.

SUB-OBJECTIVE 5.3: PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS ASSURED

Bangladesh

MTaPS provided TA to the DGDA in conducting a workshop with ADRAC for reviewing the causality assessment of 21 serious adverse reactions conducted by the technical subcommittee (TSC) on PV from January to September 2022. The committee classified the cases as likely (12), possible (4), unlikely (3), and unclassifiable (2), per the WHO causality assessment scale. In addition, the committee recommended several regulatory actions for ensuring safety considering adverse reactions reported from the drugs Carbamazepine, Ketorolac Tromethamine, and Rituximab. MTaPS provided a demonstration of PViMS to DGDA, which was well accepted and appreciated for its integrated functionalities (as desired by DGDA), and feedback on technical requirements such as customization of the AE reporting form and business process is being addressed. For creating AE reporting culture, MTaPS has been assisting the DGDA in the development and implementation of plans for periodic workshops of the adverse drug reaction monitoring (ADRM) cell, TSC, and ADRAC on PV, coordination, and inspection, as recommended by WHO. One ADRM and one ADRAC workshop were conducted, along with three inspections of pharmaceutical companies.

Mozambique

MTaPS supported the coordination between ANARME, IP staff and representatives from CCS and the Elizabeth Glaser Pediatric AIDS Foundation to provide supportive supervision of the five TPT ASM study sites. MTaPS facilitated a virtual training of seven ANARME, IP focal persons (four male, three female) as trainers on the use of PViMS for TPT ASM data collection and the cascading of information on the use of PViMS for data entry to the two Gaza province. A supportive supervision exercise undertaken by ANARME, IP, working with the provincial focal persons, assessed the progress of implementation at the Gaza province sites and made recommendations for addressing the identified gap. Of the 157 patients enrolled into the TPT active surveillance by December 2022 across the 5 implementing facilities, four AEs (all mild) have been reported from 138 follow-up visits achieved so far. MTaPS supported ANARME, IP in its preparation of a letter to the National Bioethics Committee on Health requesting an extension of the TPT study, given the recent slow and low patient enrollment. The committee approved the request to extend the study period until August 31, 2023.

Nepal

On December 3–7, 2022, MTaPS conducted three pharmacovigilance training sessions: one on GPP for 43 staff from regional PV centers (34 male and 9 female); one on signal detection, analysis, and risk management in pharmacovigilance for 3 DDA staff (2 male and 1 female); and one on pharmacovigilance in the government health care system and public health care programs for 14 staff (9 male and 5 female). This training is crucial for improving the reporting of adverse drug events from regional pharmacovigilance centers and public health programs to the DDA. A script for offering the three sessions in a PV e-Learning course was completed and is under review.

Philippines

From October to December 2022, 27 reports were made by seven PMDT HCFs through PViMS, bringing the total number of AEs reported in PViMS so far to 208. Since MTaPS supported establishment of the interoperability between the DOH's PViMS and the FDA's VigiFlow, a total of 145 E2B files—the format recognized by both PViMS and VigiFlow for adverse drug reaction reporting—were submitted by the DOH to the FDA this quarter. The DOH PD led the causality assessment exercise for the 42 reports submitted in PViMS; of those, only 33 were selected for assessment, and only 18 were assessed. The remaining 15 reports were not assessed because they lacked relevant data, such as baseline laboratory results and suspected medications. The PD will discuss with the DPCB and other IPs how to address the lack of data for AEs reports by HCFs. As the PViMS training is incorporated into the regular training for newly hired PMDT staff at the Lung Center of the Philippines, an additional 11 newly hired PMDT doctors and nurses were trained in PViMS. The PD also conducted visits to three facilities in Batangas to provide mentoring on the use of PViMS.

Rwanda

In the ongoing active surveillance of DTG-based antiretroviral therapy regimens, MTaPS agreed with the RBC and Rwanda FDA to conclude enrollment at 1,440 participants, and the protocol was revised in accordance with the new sample size to secure approval from the Rwanda National Ethics Committee. Following protocol approval by that committee, follow-up on the enrolled participants continues. Only nine AEs, i.e., mild skin rashes, have been reported.

SUB-OBJECTIVE 5.4: ANTIMICROBIAL RESISTANCE CONTAINMENT SUPPORTED

Jordan

MTaPS worked with the central RMS AMR Committee to develop 27 protocols and implementation procedures for the prophylaxis, treatment, and management of priority ICU infections. To monitor adherence to those protocols and procedures, MTaPS engaged the RMS Quality Department to develop an audit tool. During a series of three workshops with the AMS committees of the Al Salt and Al Mafraq hospitals, MTaPS supported participants to develop antibiotic prophylactic protocols for four surgical procedures and one antibiotic management protocol. For IPC, MTaPS helped organize six TOT workshops where a total of 168 IPC focal points (114 women) from 164 hospitals across Jordan were trained on IPC topics and can now cascade that training. Completion of the training conveys national continuous professional development credits.

Nepal

MTaPS formally initiated an AMR containment program, beginning by holding a joint AMR workshop with the MOHP to take stock of the AMR landscape. MTaPS also participated in WAAW 2022 activities, including an AMR Public Awareness Walkathon.

Philippines

MTaPS-trained IPC and HCWM trainers have developed plans to roll out training in 9 out of 17 regions.

BEST PRACTICES/LESSONS LEARNED

- As demonstrated in Bangladesh, direct monitoring and supervision by the Health Service Division (HSD) and DGHS of MOHFW at the DHs can accelerate the process of full utilization of the eAMS. It will also contribute to the effective use of data from the system for decision making and its sustainability of the system.

3. PROGRESS BY HEALTH AREA/FUNDING STREAM

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

OVERVIEW

MTaPS provides GHSA support to 13 partner countries (Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Ethiopia, Kenya, Mali, Mozambique, Nigeria, Senegal, Tanzania, and Uganda) focusing on AMR containment. MTaPS' GHSA approach is to help countries reach higher levels of JEE capacity in the three mandated areas of MSC-AMR, IPC, and AMS to enhance their ability to effectively implement NAPs-AMR.

CUMULATIVE PERFORMANCE TO DATE

MTaPS has helped the 13 GHSA-supported countries make considerable progress in building capacity in MSC-AMR, IPC, and AMS, including developing, adapting, and/or adopting evidence-based tools and approaches and transferring technology and competencies. This section highlights select countries' cumulative progress made in the three focus areas.

Effective MSC-AMR: Examples From Two Countries

In PY3, MTaPS **Cameroon** supported the training of 20 key stakeholders of the OHP on AMR topics using an OH approach. Subsequently, to complement and disseminate the training further, MTaPS helped develop and install a Moodle e-Learning platform on the DPML website and supported a pathway to sustainability by training four people on how to manage the platform. During PY4, MTaPS disseminated information on the platform through opportunities such as AMR event days (e.g., WAAW) and health facility visits. Additionally, during PY4, MTaPS collaborated with other implementing partners to help government stakeholders to update the NAP-AMR, which expired in December 2020, including developing a detailed costed operational plan for the activities.

Since PY1, MTaPS **Uganda** has helped set up and operationalize the NAMRsC's IPC and AMS TWCs by collaborating in developing TORs, appointing committee members, and facilitating quarterly meetings to review NAP-AMR implementation progress. During PY1 and PY2, MTaPS also supported the establishment of a data-sharing platform as a repository for documentation and other relevant information for the NAMRsC. During PY4, MTaPS handed over control of the platform to the MOH with the Infectious Diseases Institute, a local partner, continuing to support its full operationalization. To improve cross-sectional communication and data sharing, MTaPS worked with Makerere University and the NAMRsC to publish biannual AMR newsletters. To date, they have published two newsletters and have drafted a third.

IPC Improved and Functional

Between PY1 and PY4, MTaPS **Côte d'Ivoire** conducted baseline and repeat IPCAF assessments at 20 MTaPS-supported facilities, using the results to develop and update facility IPC action plans. In addition to the repeat IPCAF assessments, MTaPS assisted the AMR-TWG to conduct WHO HHSAF and Water and Sanitation for Health Facility Improvement Tool assessments at the same 20 facilities. To increase

sustainability, in PY4, MTaPS advocated for transferring the IPCAF assessment responsibility from the AMR-TWG to other government bodies. MTaPS assisted the AMR-TWG to conduct two WHO IPCAT-2 assessments of the national IPC program and used the findings to target areas that need strengthening in the national program and to prioritize areas to update the national IPC plan.

During PY1 and PY2, MTaPS **Ethiopia** worked with the MOH to revise its national IPC guidelines and align them with the WHO's core components of IPC programs. MTaPS then helped revise/draft IPC training materials, including a facilitators' guide and participants' manual. During PY4, MTaPS helped standardize and finalize the training materials and adapt the IPC training module to train health professionals in primary health care units. Also in PY4, MTaPS helped the MOH develop the IPC facility-level assessment tool by customizing the WHO IPCAF tool to the local context before rolling it out to MTaPS-supported facilities.

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED: EXAMPLES FROM TWO COUNTRIES

Since PY1, MTaPS **DRC** has helped establish DTCs at 12 health facilities in 5 different provinces. To strengthen their capacity to coordinate and implement AMS interventions at their respective facilities, MTaPS has cumulatively supported the training of over 300 DTC members on DTC principles and AMS activities. To measure the DTCs' effectiveness, MTaPS is helping to implement a CQI program and its complementary International Network for Rational Use of Drugs indicators to iteratively assess improvements to rational use of antimicrobials. In addition to the work with DTCs, MTaPS provided technical assistance to the national drug regulatory authority and the DPM to integrate the WHO AWaRe classification of antibiotics into the revised EML.

Since PY2, MTaPS **Mali** has collaborated with government stakeholders to establish DTCs in 16 health facilities. To strengthen their function, MTaPS has not only provided technical assistance to develop a DTC training toolkit but also facilitated on-site and virtual monitoring visits and worked with the DTCs to develop facility action plans. Furthermore, the MTaPS-supported revised national medicine policy requires all health facilities in the country to establish DTCs, which is a key step in their institutionalization. Additionally, in PY2, MTaPS assisted Mali to use epidemiologic profile data from 2015-2020 to incorporate the AWaRe classification of antimicrobials in the development of infectious disease STGs.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

EFFECTIVE MSC-AMR

Celebrating World Antimicrobial Awareness Week: MTaPS helped coordinate WAAW 2022 "Preventing Antimicrobial Resistance Together" activities in **Bangladesh**, **Côte d'Ivoire, DRC**, **Ethiopia**, **Kenya**, **Mali**, **Mozambique**, **Senegal**, and **Tanzania**. In **Bangladesh**, MTaPS cohosted rallies at both the facility and national level, disseminated AMS messaging on Facebook, and facilitated a roundtable discussion covered by both electronic and print media. MTaPS **Côte d'Ivoire** assisted the AMR-TWG in observing WAAW through a one-day ceremony chaired by the Director General of Health and attended by 103 participants (57 women) from a wide range of government bodies, professional associations, and civil society associations. During WAAW festivities in **Ethiopia**, MTaPS helped officially launch the AMR action plan 2022/23, a first of its kind document in Ethiopia that delineates specific activities for each sector. In collaboration with FAO-Emergency Centre for

Transboundary Animal Diseases, MTaPS **Mali** helped organize WAAW activities including an awareness-raising conference at the Faculty of Pharmacy attended by pharmacists, students, and other stakeholders. In **Tanzania**, MTaPS worked with the MOH to prepare for and launch the new NAP-AMR 2023-2028 at a national AMR symposium held during WAAW.

Strengthening MSC governance structures and functions: To build the capacity of **Burkina Faso's** RUA sub-commission, MTaPS provided financial assistance to three members to participate in the month-long antibiology and antibiotherapy inter-university diploma course for sub-Saharan Africa. This quarter, MTaPS **Mozambique** continued to strengthen coordination and collaboration between the AMR MCC and the OHP by facilitating a stakeholder workshop to identify priority actions and roles for each body. In **Nigeria**, MTaPS supported the inauguration of a subnational AMR-TWG. Subsequently, members of the national AMR-TWG trained the 29 (3 female) members of the subnational AMR-TWG on the core components of AMR programming and helped them draft a work plan to guide the implementation of AMR activities in their state.

Holding multisectoral meetings or activities: MTaPS helped coordinate routine MSC meetings in **Bangladesh, Burkina Faso, DRC, Mali,** and **Tanzania**. At an MTaPS-supported AMS sub-committee meeting in **DRC**, participants developed a DTC activity implementation guide that they will present for finalization next quarter. To improve the focus on AMR in the environmental sector in **Ethiopia**, MTaPS collaborated with the Ethiopian Environment Protection Authority (EEPA) to organize a first of its kind AMR training for 32 participants (8 women) from relevant EEPA directorates. As a result of the workshop, an EEPA taskforce was established to oversee AMR prevention and containment activities in the environmental sector. Additionally in **Ethiopia**, MTaPS helped train 34 (5 women) media and public relations professionals on AMU, AMR, and safe food production.

Drafting or updating multisectoral policies, plans, or guidelines: In Q1, MTaPS helped **Cameroon, Kenya, Nigeria, Senegal,** and **Uganda** to review existing and expiring NAP-AMRs. In collaboration with USAID GHSA implementing partners, Fleming Fund, and other national AMR stakeholders, MTaPS **Senegal** facilitated a workshop to review the implementation of the NAP-AMR 2017-2022 and set up a technical committee to draft the NAP-AMR 2023-2028. Workshop participants agreed that the committee would take an OH approach to developing the NAP-AMR and will consider the WHO's plan to conduct the IHR JEE in January-March 2023. MTaPS **Uganda** collaborated with the NAMRsC to develop a review plan for the NAP-AMR 2018-2023, including processes for data collection, stakeholder engagement, and documentation of the results and recommendations.

IPC IMPROVED AND FUNCTIONAL

Strengthening IPC governance structures and functions: In **Bangladesh,** MTaPS analyzed the results of baseline IPCAF assessments conducted at five facilities in PY4Q4, including recommendations to guide the development of facility IPC plans. MTaPS **Bangladesh** also conducted repeat IPCAF assessments at its initial four supported facilities, finding improvements in all. Results from repeat IPCAF and HHSAF assessments that MTaPS-supported trainers conducted at 13 facilities during field supervision visits in **Côte d'Ivoire** found that 9 facilities had improved their IPC components, while 5 facilities had improved their hand hygiene components. MTaPS **Côte d'Ivoire** also assisted the AMR-TWG to conduct a second repeat assessment of the national-level IPC program using the WHO IPCAT-Minimum Requirements tool. The results showed an overall decline in all components, which may be explained by

the fact that the iteration of the tool used for this assessment was different from the version used in the previous two assessments. Findings from virtual IPC monitoring meetings with 16 facilities in **Mali** revealed that all the 16 IPC committees were functional, and 15/16 facilities are implementing IPC action plans and CQI programs. MTaPS **Senegal** worked with the DQSHH to conduct a baseline IPCAF assessment at one health center. Starting next quarter, MTaPS will help revitalize the ICC at this facility, with plans to use the documentation from this process to guide ICC revitalization in other health centers across the country. To build a pathway toward sustainability, MTaPS **Uganda** developed a tool to qualitatively assess the capacity of the six IPC COEs' to perform independently, which will be implemented next quarter.

Developing and implementing IPC policy and guidance documents: At a workshop organized by the MOH, MTaPS **Ethiopia** assisted the development of technical guidance documents for establishing IPC COEs at health facilities and for HCAI surveillance, which is now awaiting final validation and endorsement. In **Kenya**, MTaPS supported the review/revision of two IPC governance documents, including the National Guidelines on HCWM and the IPC/OSH package as well as HCWM IEC materials. In addition, MTaPS **Kenya** provided technical assistance in the revision of the IPC M&E tools and helped cascade training to counties. In **Mozambique,** MTaPS worked with DNAM-DE and the IPC TWG to draft a guideline for HCAI surveillance as well as IPC protocols/SOPs aligned with the recently updated national IPC manual. MTaPS **Nigeria** engaged the NCDC this quarter to begin planning for the review of the IPC guidelines for viral hemorrhagic fever and the implementation of HCAI surveillance activities. MTaPS **Senegal** worked with the DQSHH and other IPC stakeholders to finalize the budgeted national IPC strategic plan and national IPC policy; the strategic plan is expected to undergo validation next quarter.

Developing individual and local training capacities: In **Cameroon,** MTaPS continued to strengthen the capacity of IPC committees in 12 facilities by reviewing proposed IPC committee activities and monitoring their implementation status via the IPC WhatsApp group. To provide a sustainable, self-reliant platform that can offer CPD-certified courses for nurses across the country, MTaPS **Kenya** worked with the National Nurses Association of Kenya to develop a concept for establishing a training academy that integrates IPC/AMS core components. Additionally, this quarter, MTaPS **Kenya** supported the MOH's OSH division to conduct a 3-day IPC/OSH TOT for 55 participants from county health management teams in MTaPS focus counties. Since then, the trained personnel have begun cascading the training to other facilities in the focus counties. MTaPS **Nigeria** collaborated with the national AMR-TWG to conduct a capacity-strengthening workshop on multimodal strategies for implementing sustainable IPC programs for 23 members (11 women) of 4 facility IPC teams. During the workshop, the participants received national IPC guidelines that they used to guide the design of targeted interventions for their facilities. MTaPS **Nigeria** also supported monitoring visits at facilities, which found meaningful implementation of their IPC improvement plans and locally made job aids to promote IPC at the facilities. In **Senegal,** MTaPS collaborated with the DQSHH to work with MTaPS-supported hospitals to implement their IPC improvement action plans; as a result, trainers from 1 hospital trained an additional 90 health care providers on IPC. MTaPS **Tanzania** helped the MOH train 108 journalists (43 women) on IPC issues so they can accurately report on and advocate for IPC. Subsequently, the national IPC team appeared on various media shows to educate the public on IPC and its role in AMR containment.

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Developing and implementing AMS policies, plans, and guidance documents, including AWaRe classification: This quarter, MTaPS **Bangladesh** worked with the CDC to finalize the national AMS guidelines and plan for the implementation of the new national AMS multisectoral plan. In **Burkina Faso,** MTaPS helped the DGSV to organize a workshop where the 11 participants (2 women) drafted a ministerial order creating the national veterinary PV system in Burkina Faso that defined its structural organization and functioning and a PV data collection tool and reporting mechanism. This ministerial order, alongside the previously drafted ministerial order regulating AMU in the animal sector, will help regulate and enforce rational and safe use of antimicrobials in the animal health sector. In the **DRC**, MTaPS collaborated with the DPM to disseminate the newly revised NEML that includes the WHO AWaRe classification in the two MTaPS-supported provinces through briefing sessions for both the provincial management teams and HCWs.

At a workshop attended by 30 government stakeholders (12 women) and other international partners, MTaPS **Ethiopia** assisted the MOH's Ethiopian Health Insurance Services to validate the health insurance medicines list, including reconciling it with the NEML and STGs. In **Kenya**, MTaPS finalized the Kenya National Medicines Formulary, which is Kenya's first medicines formulary that incorporates AWaRe categorization. To enhance the MOH's capacity to conduct supportive supervision at health facilities, MTaPS **Tanzania** provided technical assistance to incorporate the WHO health facility AMS tool into the MOH's digital Afya Supportive Supervision platform. Building on past MTaPS support in developing an antimicrobial consumption surveillance protocol, this quarter, MTaPS **Uganda** worked with the NDA to draft a subgrant budget and roll-out plan to implement the protocol.

Assessing AMS capacity at the national and local levels and developing action plans: In the **DRC**, MTaPS helped DTCs at four facilities to conduct quarterly assessments of AMU as part of their CQI program. The assessment findings found no notable improvement in either the "percent of prescriptions with at least one antibiotic" or "patient knowledge of medicines," due in large part to high staff turnover. MTaPS **Mali** supported the GCMN-RAM and DPM to conduct virtual monitoring meetings for 14/16 facility DTCs, finding that 13/14 of the DTCs had implemented AMS improvement plans and CQI programs. Similarly, in **Nigeria,** MTaPS collaborated with the national AMR TWG secretariat to conduct monitoring visits at seven facilities, which included mentoring on CQI methods and analyzing AMU-PPS results to include in their workplans. These results found that all seven facilities fell short of the expected target of 60% of the antimicrobials used to come from the access category. MTaPS **Uganda** developed two AMS qualitative tools to use next quarter: (1) a checklist to assess AMS interventions and the impact of MTaPS' support at six hospitals to identify barriers to implementation and lessons learned and (2) an assessment to determine whether the six hospitals have the capacity to be designated as AMS COEs.

Strengthening individual and local capacity: To address inappropriate prescribing practices identified through the MTaPS-supported PPS in **Burkina Faso**, MTaPS developed training modules based on facility-level STGs and then used them to train 350 health professionals (158 women) from 10 facilities. In **Côte d'Ivoire,** MTaPS helped organize an AMS TOT for 44 participants (9 women) including 36 regional trainers (6 women) from 18 health regions to strengthen DTC capacity. MTaPS **Ethiopia** helped the MOH/Ethiopian Public Health Institute (EPHI) conduct a TOT on AMS and diagnostic

stewardship programs for 23 health care professionals (5 female) from 5 hospitals that are EPHI surveillance sites. MTaPS **Senegal** collaborated with the National Committee on Antibiotic Treatment to develop training modules on the STGs with specific modules on: (1) antibiotic treatment for community infections in children and adults, (2) HCAIs, and (3) antibiotic prophylaxis.

BEST PRACTICES/LESSONS LEARNED

- Ongoing advocacy to hospital management teams to support AMS and IPC programs is critical to ensure institutionalization of AMS/IPC governance, ownership, and sustainability beyond MTaPS. *(Kenya experience)*
- MTaPS' experience facilitating development and implementation of NAP-AMRs in Mozambique and Cameroon, respectively, has shown that when conflict arises between national counterparts supported by the program, it is important to pause and brainstorm to find a solution before continuing implementation rather than taking sides with one of the parties.
- Making sure technical reference documents are available at the right places and to the right stakeholders is important for effective activity implementation. *(Côte d'Ivoire experience)*

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 (KE), Mali (ML), Mozambique (MZ), Nigeria (NG), Senegal (SN), Tanzania (TZ), Uganda (UG)

Activity & Description	
Global	▪ Finalize the GHeL AMR 2 course after receiving feedback from the USAID COR team.
MSC	▪ Continue facilitating meetings of MSC-AMR bodies and/or their TWGs (BF, CI, ET, KN, ML, MZ) ▪ Continue supporting the development of revised NAP-AMR (CM, KN, NG, SN) ▪ Review the NAP-AMR implementation and the IHR benchmark action status (UG) ▪ Assist MSC-AMR bodies and/or their TWGs to implement and/or monitor AMR activities (DRC, ET, ML) ▪ Collaborate in conducting the annual Tripartite AMR Country Self-Assessment Survey (DRC)
IPC	▪ Help IPC committees at MTaPS-supported facilities conduct IPC activities (CM, KN, MZ) ▪ Support regional focal persons to conduct regular facility IPC assessments in MZ and supervision in CI ▪ Help validate the national IPC plan (MZ, SN) ▪ Use the ECHO platform to prepare capacity-strengthening sessions to monitor IPC implementation at the hospital level including surveillance of SSIs (TZ)
AMS	▪ Support implementation and/or monitoring of facility AMS activities (BD, CM, DRC, ET, KN, MZ) ▪ Validate the draft ministerial order on PV in the animal sector (BF) ▪ Help transform three health facilities into AMS COEs (CI) ▪ Monitor AWaRe implementation in MTaPS focus counties (KN) ▪ Validate the AWaRe classification of antibiotics, the draft regulation on prescription-only sales of key antibiotics, and the draft provision for appropriate use of antimicrobials (MZ) ▪ Evaluate six hospitals to determine their capacity to be designated as AMS COEs (UG)

B. COVID-19

COVID-19 RESPONSE AND VACCINE INTRODUCTION—QUARTERLY PROGRESS FOR FY23 QUARTER 1

MTaPS supported the governments in 11 countries to strengthen the response to COVID-19 threats, and plan, deploy, administer, and monitor the safety of COVID-19 vaccines (in Burkina Faso MTaPS completed all planned activities in Quarter 4 FY22). Despite a noticeable decline in reported cases, COVID-19 remains a public threat in all 11 countries, which requires continuous efforts for maintaining quality and safety of health services through better IPC, uninterrupted supply of IPC and COVID–related products, and equitable and safe vaccine introduction with specific focus on vulnerable population groups. Vaccines against COVID-19 are available in all 11 countries, and while some MTaPS countries are meeting or getting closer to their vaccination targets, in other countries the rate of uptake and equitable access remains a challenge. The share of people vaccinated with at least one dose in the MTaPS-supported countries ranges from 88% in Bangladesh and 77% in Rwanda to just 7.4% in Madagascar and 12% in Senegal (Figure 2). Careful vaccination planning, reaching out to vulnerable and remote populations, active promotion of vaccine safety monitoring and evidence-based information, and engagement of the private-sector providers are among the tasks performed by MTaPS.

> **COVID-19 funded countries:**
> *Bangladesh (BG)*
> *Cameroon (CM)*
> *Côte d'Ivoire (CI)*
> *Kenya (KN)*
> *Madagascar (MD)*
> *Mozambique (MZ)*
> *Nigeria (NI)*
> *Philippines (PH)*
> *Rwanda (RW)*
> *Senegal (SN)*
> *Tanzania (TZ)*
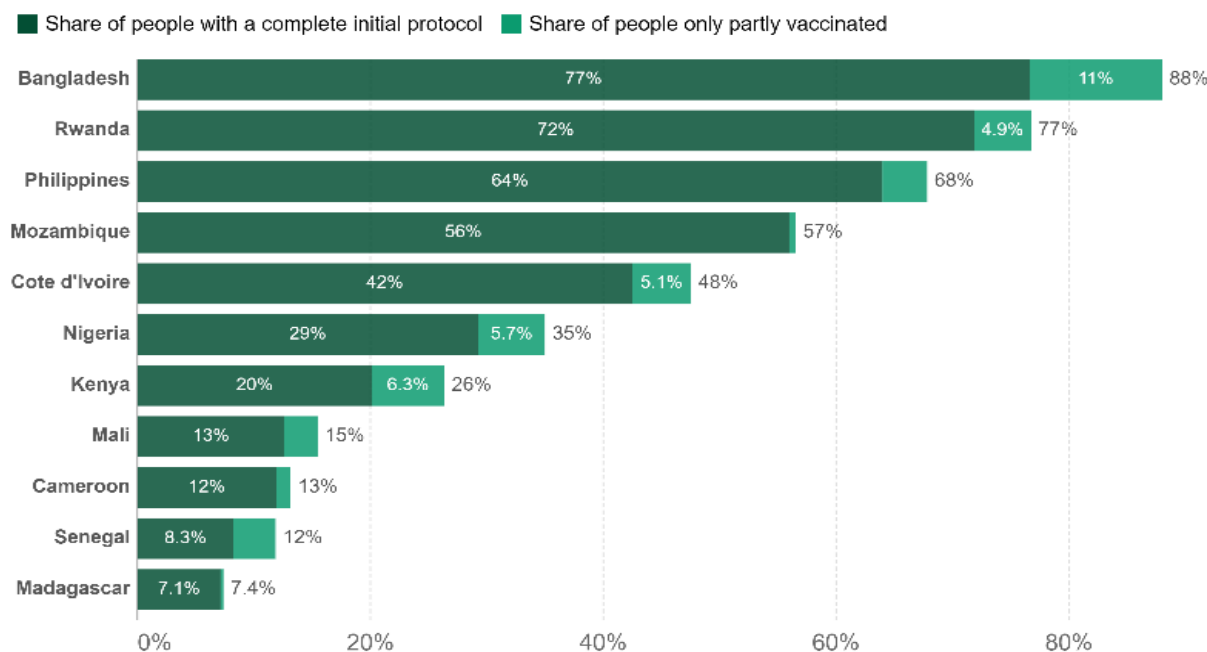
Source: Official data collated by Our World in Data CC BY
Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

Figure 2. Share of people vaccinated against COVID-19 (as of January 17, 2023)

MTaPS actively supported governments and national stakeholders with dedicated funding streams CN108, CN164, CN18, CN31, and CN220. MTaPS also expanded its COVID-19–related scope to include supporting the governments and implementing partners in establishing the COVID-19 vaccine manufacturing in Kenya and Rwanda, and for broad engagement of private-sector providers (pharmacies and clinics) to increase equitable access and uptake of COVID-19 vaccines in Nigeria.

The MTaPS COVID-19 activities are fully aligned with the objectives and result 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:

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

- Result Area 1.2: Cold Chain and Supply Logistics
- Result Area 1.3: Human Resources for Health
- Result Area 1.4: Service Delivery
- Result Area 1.5: Pharmacovigilance and Safety Monitoring

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 2.1: Risk Communication and Community Engagement
- Result Area 2.4: Infection Prevention and Control
- Result Area 2.5: Case Management
- Result Area 2.6: Coordination and Operations

Quarter 1 highlights from the MTaPS countries include the following:

In **Bangladesh**, MTaPS made significant progress with the eLMIS CMSD, which included training of staff on the management of stock data for effective supply decision making and assisting CMSD to initiate day-to-day stock transactions through the CMSD online portal (set to be fully functional in early 2023). It is expected that the system will be sustained with the allocation of adequate resources through the sectoral OP budget of the MOH.

In **Cameroon**, MTaPS supported the fifth national COVID-19 vaccination campaigns in three assigned regions with the targeted population of 1,287,025, focusing on the supervision of vaccine services and their accessibility for populations in hard-to-reach areas, vaccines logistics, and management of biomedical waste resulting from vaccination. MTaPS supported the deployment of 630,720 doses of anti-COVID-19 vaccines in 76 health districts, and as a result 466,827 people received their first dose of anti-COVID-19 vaccine (36.3%), 13,204 received their second dose (1.02%), 96,819 received their booster dose (7.5%), and 383,557 were fully vaccinated (29.8%).

In **Côte d'Ivoire**, to support two national COVID-19 vaccination efforts in Quarter 1, MTaPS trained 1,687 vaccinators (438 female, 1,249 male) on vaccination-related IPC, injection safety, and waste management, and provided technical support through supervisions of 8,455 immunization teams in 62 health districts. Overall, over 3.5 million people were vaccinated, or 58.8% of the target population of the

districts. In Quarter 2, MTaPS will focus on supporting the remaining 24 low-performing districts and on the integration of private facilities in in vaccination services in Abidjan and several other major cities.

In Quarter 1, **Kenya** successfully implemented a wide variety of COVID-19 related activities, e.g. training 748 non-HCWs and 78 HCWs (324 female, 502 male) on COVID-19 IPC. Kenya is one of only two MTaPS countries that is supporting national government in establishing vaccine manufacturing (Rwanda is starting in January 2023). The MTaPS areas of ongoing support include regional harmonization, product registration guidelines and market authorization, pharmacovigilance, clinical trials procedures; in Quarter 1, MTaPS trained 502 people (246 female, 256 male) on these technical areas.

Madagascar is the only MTaPS COVID-19 program with a strong focus on diagnostic laboratory network. MTaPS supports the implementation of the National Laboratory Strategic Plan for 2021–2025, strengthening the laboratory information system (LIS) data management for M&E, and supporting national and seven regional laboratories to implement rapid antigen testing for surveillance. In Quarter 1, MTaPS contributed to the validation of screening algorithms such as PCR, GeneXpert, Antigen Rapid Diagnostic Test (Ag RDT), used for COVID-19, TB, HIV, and malaria, and conducted the quantification of related products to avoid duplication across the programs. MTaPS worked with counterparts to finalize training curriculum on Ag RDT and GeneXpert for COVID-19, and trained 63 laboratory workers (30 female, 33 male).

The **Nigeria** MTaPS COVID-19 program is uniquely positioned to be solely focused on supporting the Government of Nigeria to expand equitable access to COVID-19 vaccines through the engagement of private clinics and pharmacies and communication with communities. In Quarter 1, MTaPS finalized a comprehensive guide on COVID-19 vaccination for private facilities covering standards for immunization services, planning, logistics, vaccine administration, IPC, and waste management, as well as a training curriculum training 127 people (92 female, 35 male). MTaPS supports vaccination delivery through 115 pharmacies and 100 private clinics. As of Quarter 1, 15,784 people have been vaccinated with at least one dose by MTaPS-supported private facilities.

In **Rwanda**, MTaPS has successfully integrated AEFI reporting for COVID-19 into a national MTaPS-developed PViMS platform implemented through earlier non–COVID-19 funding. In total, 1,231 COVID-19 AEFI reports have been submitted via PViMS platform, including 378 serious events, 46 of which were investigated by the Rwanda FDA. In Quarter 1, 52 reports were submitted to this national platform.

In **Tanzania**, MTaPS is supporting the Tanzania Medicines and medical Devices Authority (TMDA) to strengthen national pharmacovigilance system and improve reporting by health facilities. In Quarter 1, in conjunction with the Muhimbili University of Health and Allied Sciences, MTaPS developed COVID-19 AEFI reporting guidelines, a training package, and conducted TOT for 94 members of region and council hospital management teams from 10 regions, followed by training of 300 health workers (overall, 239 female, 155 male). As a result, in Quarter 1, health facilities submitted 310 COVID-19 AEFI reports, including 4 moderate and 2 serious, which were further investigated by the TMDA.

More information about MTaPS' COVID-19 activities can be found here.

Table 1. MTaPS COVID-19 Q1 FY23 indicators (detailed breakdown can be found in annex 3)

Indicator and Disaggregation			Q1 FY23	Total from March 2020
Objective 1. Accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations				
CV.1.3-3 Number of people trained on COVID-19 vaccine-related topics with MTaPS' support				
		# of people trained	3,836	9,415
	Sex	Male	2,242	5,294
		Female	1,594	4,121
		Unknown sex	0	0
CV.1.3-4 Number of health workers who are renumerated by USG to support workload required for COVID-19 vaccine delivery in the reporting period				
		# of people renumerated	1,348	2,477
	Cadre	Clinical	581	634
		Community/law	0	179
		Data management	171	451
		Supervision and logistics	596	1,213
CV.1.4-5 Number of vaccination sites supported by USG during the reporting period				
		# of vaccination sites supported	5,593	15,132
	Types of sites	Fixed sites	4,042	8,841
		Community-based outreach vaccination sites	127	4,867
		Mobile team (or clinic) or transit team strategy	0	0
		Mass vaccination sites/campaigns	1,424	1,424
		Unknown	0	0
CV.1.4-6 Number of people who received a first dose of an approved COVID-19 vaccine (COV-1) with USG direct support				
		# of people who received first dose	470,191	473,307
	Sex	Male	1,520	3,080
		Female	1,844	3,308
		Unknown sex	466,827	466,919
CV.1.4-7 Number of people who received a last recommended dose of primary series of an approved COVID-19 vaccine (COV-c) with USG direct support				
		# of people who received last dose	19,681	20,517
	Sex	Male	2,989	3,035
		Female	3,488	3,570
		Unknown sex	13,204	13,912
CV.1.4-8 Number of people who received a booster dose of an approved COVID-19 vaccine (COV-2,3,4) with USG direct support				
		# of people who received booster dose	100,360	100,470
	Sex	Male	1,384	1,432
		Female	2,157	2,219
		Unknown sex	96,819	96,819
CV.1.5-9 Number of AEFI reports reviewed with MTaPS' support among those submitted to country monitoring systems				
		# of AEFI reports reviewed with MTaPS' support	**538**	**7,271**
Objective 2. Reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including to prevent, detect, and respond to pandemic threats				
CV.2.3-15 Number of health workers trained in COVID-19 testing or specimen transport with USG support				
	Sex	Male	33	33
		Female	30	30
		Unknown sex	0	0
CV.2.4-17 Number of health facilities where MTaPS provided support for IPC and/or WASH for COVID-19				
		# of health facilities	429	6,154
CV.2.4-18 Number of workers who received COVID-19-related training in IPC and/or WASH with MTaPS' support				
		# of people trained	3,162	49,236
	Sex	Male	2,014	22,169
		Female	1,130	26,828
		Unknown sex	18	23,918
CV.2.6-22 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	18	94

COVID-19 IMMUNIZATION COSTING

OVERVIEW

LMICs have been facing an incredibly challenging vaccine rollout and COVID-19 vaccine delivery and what it costs to deliver these vaccines is highly uncertain. According to the WHO, as of October 16, 2022, just 24% of Africa's population had completed their primary vaccination series compared to the coverage of 64% at the global level.[3] Data on the actual costs of delivering COVID-19 vaccines in 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.

Tools and guidance developed by the WHO and its partners can be helpful in generating estimates of COVID-19 vaccine delivery costs. 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. Although existing data (including pre-COVID-19 data) 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.

CUMULATIVE PERFORMANCE TO DATE

To date, MTaPS has assessed the available modeling tools, and determined that the Harvard/COVAX model has the 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 used four times.

In January and February 2022, MTaPS conducted a desk review across 3 databases, screened 530 articles, and identified 20 relevant studies on both social mobilization (14) and campaign/outreach strategies (6). The purpose of this exercise is to gather insights to improve the MTaPS-adapted Harvard/COVAX costing model.

Global estimates require assumptions, which 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, implementation of demand generation campaigns. This survey, completed in November 2021 and again for May 2022, identified evolving trends in vaccine delivery at the country level.

Further, MTaPS began the process of gathering more detailed vaccine delivery expenditure data in two countries: Malawi and Madagascar. MTaPS designed protocol for the country studies based on the How to Cost Immunization Programs Guide, WHO's COVID-19 vaccine introduction and

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

deployment costing tool, and ThinkWell's COVID-19 Vaccine Delivery Costing protocol.[4,5] In Malawi, Institutional Review Board (IRB) approval was sought and obtained. Data collectors have been gathering expenditure data through surveys and interviews in the national office, supplemented by facility-level secondary data collection in 20 facilities. Data collection is expected to finish by the end of January 2023; the analysis is expected to be completed by March 2023. In Madagascar, the research protocol was submitted to the National Biomedical Research Ethics Committee Madagascar (CERBM). The team is awaiting the appointment of a focal person by the MOH. Meanwhile, a data collection team was selected under supervision of the Accessible Continuum of Care and Essential Services Sustained (ACCESS) Program and once the MOH point of contact is selected, he/she will make the final selection. Once the MOH focal person is appointed and the site selection is made, the team will finalize training materials and pilot the survey.

Lastly, MTaPS has supported ad hoc requests beyond the scope mentioned in the work plan. To date, MTaPS conducted assessment of the Cooperative for Assistance and Relief Everywhere (CARE) Studies on the cost of COVID-19, conducted comparative assessment with Access to COVID-19 Tools Accelerator (ACT-A) studies, and led two large presentations with major stakeholders at the USAID-UNICEF-led Funders Forum and the USAID COVID-19 Task Force Leadership.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

In November 2022, two representatives from the MTaPS COVID-19 Vaccine Costing Initiative participated in a satellite session at the biannual Health Systems Research Conference in Bogota, Colombia. MTaPS presented on two global surveys conducted to feed into the costing model, as well as on practical challenges moving costing studies forward in-country. Other session attendees and presenters included UNICEF, ThinkWell, and others carrying out COVID-19 vaccine costing efforts.

In **Malawi**, MTaPS received IRB approval from the National Health Sciences Research Committee of Malawi. A team of experts immediately started the data collection efforts in the Mangochi, Mwanza, Mzimba South, and Lilongwe districts. In Quarter 1, all four districts were visited. The team has only one remaining facility (Mitundu) in Lilongwe that they will complete in Quarter 2. The team is waiting for outstanding information at the district level that was not available on site during the day of visit. The districts will share this information with the team, and MTaPS expects it to arrive in early January 2023.

In **Madagascar**, the team received approval from the Secretary General for the MOH for the research protocol that was submitted to the CERBM. While waiting for the appointment of a focal person by the MOH, the data collection team will be selected under supervision of the ACCESS Program. Once the MOH focal person is appointed and the site selection is made, the team will finalize training materials and pilot the survey.

Additionally, the team explored presentations for July 2023 iHEA Cape Town. A total of two abstracts were submitted on COVID-19 costing.

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[4] Resch S, Menzies N, Portnoy A, Clarke-Deelder E, O'Keeffe L, Suharlim C, Brenzel L. How to cost immunization programs: a practical guide on primary data collection and analysis. 2020. Cambridge, MA: immunizationeconomics.org/ Harvard T.H. Chan School of Public Health.
[5] ThinkWell. (2021). General Study Protocol COVID-19 Vaccine Delivery Costing. Retrieved 2 February 2022, from https://thinkwell.global/wp-content/uploads/2021/12/General-research-protocol-17-Nov-2021.pdf.

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Finish data collection, Malawi	January 2023
Data analysis, Malawi	March 2023
Pilot survey, Madagascar	February 2023

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

OVERVIEW

The goal of the MTaPS 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.

CUMULATIVE PERFORMANCE TO DATE

Strengthening pharmaceutical systems is essential to achieving SDG 3 targets 3.1 and 3.2 for MNCH and requires a holistic look beyond product availability and logistics to additionally strengthen other system components—such as governance, regulation and PV, 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 PY3, 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 provides lessons learned from social accountability research and interventions and highlights the importance of understanding the accountability ecosystem and building linkages between levels and with civil society to facilitate effective advocacy for systemic change. As a follow-on activity begun in PY4, MTaPS is developing a summary brief on the key messages and action points in the discussion paper to make those messages more readily accessible to USAID missions and partner organizations and facilitate their application by NGOs and governments.

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

As a follow on to the PY2 mapping of challenges in registering MNCH medical products in nine countries, MTaPS has been supporting Mozambique's regulatory authority, the ANARME, IP, in streamlining registration of MNCH medicines by using findings and recommendations from the mapping. In PY4, MTaPS supported capacity building of 13 assessors from ANARME, IP in the assessment of bioequivalence studies for generic oral medicines and also helped increase visibility and transparency of registration procedures through a workshop of 70 manufacturers, importers, and distributors hosted by ANARME, IP.

Also in PY4, MTaPS held a regional knowledge exchange with regulators from SADC member states and selected manufacturers of MNCH medicines on the optimization and prioritization of MNCH medical product registration. Participating regulators and manufacturers proposed pragmatic solutions, which are the focus of MTaPS' follow-on support to SADC.

To strengthen the regulation of medical devices and ensure their quality, safety, and efficacy, MTaPS is working with the AMDF to develop a resource document on specific considerations for regulating MNCH medical devices, which was shared widely with technical experts at WHO, the Newborn Essential Solutions and Technologies (NEST) Alliance, the USAID Standards Alliance Phase 2 COVID-19 Medical Device Regulatory Convergence Project, FDA, and PQM+, as well as the AMDF leadership team for review.

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 PY1, MTaPS seconded a pharmaceutical advisor to the GFF who developed resources for GFF country focal points and country teams on management of medicines and supplies. These included guidance documents on managing medicines and quality in procurement, as well as webinars to stimulate thinking in country teams on the importance of having a robust pharmaceutical system to support MNCH interventions and for such a system to be prioritized in the country investment case. As a result, a section on management of medicines is included in the GFF annual report and, recognizing the importance of the role, GFF is recruiting a pharmaceutical advisor on their staff.

In Liberia, the MTaPS senior principal technical advisor provided support to the MOH and the WB PBF team to establish an FA for county procurement of specific MNCH medicines and supplies from approved wholesalers when the Central Medical Stores are unable to supply. The FA would be a means to ensure availability of quality medicines in counties implementing PBF.

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

Recognizing that most MNCH medicines are considered essential medicines and are procured by national governments, sufficient measures must be in place to ensure their quality, particularly in decentralized settings. In PY2, MTaPS described the subnational procurement practices in Liberia, Nigeria, and Tanzania in a technical brief highlighting key areas that should be considered to ensure the quality of products procured. In Nepal, through a mapping conducted in PY2 and PY3 and a dissemination workshop held in PY4, MTaPS supported the MOH to understand the challenges of subnational procurement of medicines, including for MNCH. MTaPS also supported the MOH to identify and include in annual budgets and plans key interventions to improve the quality of, and access to, medicines procured at the subnational levels, such as the implementation of a framework contract, capacity building in procurement, strengthening of SCM, and strengthening and expansion of the eLMIS.

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

In PY2, MTaPS updated the 2016 forecasting supplement for lifesaving essential reproductive, maternal, newborn, and child health (RMNCH) commodities, as applying best practices in the quantification of RMNCH medical products directly affects product availability and the potential to save the lives of women, newborns, and children. With partners' support, MTaPS revised the document to align with current WHO recommendations and validated the guide with quantification teams in five countries in collaboration with USAID GHSC-PSM. The RMNCH forecasting supplement is available in English and French and has been disseminated to more than 160 people and 8 country teams through a series of webinars held in PY4 for GHSC-PSM country teams, the Maternal Health Supplies Caucus, and the Child Health Task Force.

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 treating possible serious bacterial infections in newborns. The preferred formulation is dispersible tablets, which need some explanation so caregivers know how to administer them correctly. In PY1, MTAPS updated a set of job aids and dispensing envelopes to promote adherence to correct treatment protocols by HCPs and caregivers. During PY2 and PY3, MTaPS worked with UNICEF, USAID, GHSC-PSM, and PQM+ to prepare a series of consultative meetings with wide stakeholder engagement to address bottlenecks in access to, and appropriate use of, amoxicillin and gentamicin. Those meetings were held in PY4. MTaPS is collaborating with GHSC-PSM and PQM+ to consolidate key points from the discussions and presentations of the consultative meetings and develop a call-to-action paper to provide a set of actionable solutions for countries.

Oxygen is an essential medical product for children and newborns suffering from hypoxia due to pneumonia and other conditions; it is also important for treating COVID-19. A previous MTaPS mapping of partner support in the respiratory ecosystem found little support for strengthening countries' regulatory systems to ensure appropriate administration of quality oxygen. MTaPS also noted discrepancies in alignment between the contents of different technical packages of medical devices and their technical specifications for the respiratory ecosystem according to the different global guidance documents. WHO agreed that a technical resource document for the quality assurance of oxygen would address the identified gap and complement other operational guidance that WHO is developing on pressure swing adsorption oxygen plants. During PY4, MTaPS finalized the scope of the activity and outline for the document on quality assurance of oxygen through discussions with WHO and USAID.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Disseminate the lessons for design of social accountability interventions for medical products access and use
During this quarter, MTaPS, along with the Momentum Knowledge Accelerator (MKA) Project, discussed a knowledge exchange on applying the lessons that MTaPS highlighted in the discussion paper. Together, MKA and MTaPS developed a concept note for the event, where they and other projects will present on approaches and strategies for social accountability and will facilitate a panel session for speakers to reflect on the feasibility of adopting and implementing the approaches.

MTaPS continued to develop a summary brief on the key messages and action points in the discussion paper to make those messages more readily accessible to USAID missions and partner organizations and facilitate their application by NGOs and governments. MTaPS began revision of the draft brief based on USAID feedback.

MTaPS also featured this work in a PSS-in-practice webinar for MTaPS, MSH, and USAID in early December entitled "How to Engage Civil Society in Social Accountability to Improve Access to and Appropriate Use of Medical Products." The webinar, held in English and French, had 75 attendees representing MTaPS, MSH, and USAID Washington and generated good discussion.

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
Improving regulation of MNCH medical devices at regional level
MTaPS, working with an expert in regulation of medical devices, finalized the document on considerations for regulating MNCH medical devices, integrating feedback received from technical experts at WHO, NEST, MDRC, US FDA, PQM+, and the AMRH AMDF leadership team. The document was presented to the AMDF leadership team for consideration for adoption and endorsement at the AMRH meeting in December; however, further clarifications were requested on its objectives. MTaPS revised the document accordingly and shared it with the AMDF chair and vice-chair for their approval to restart the process for requesting endorsement of the document.

Creating a center of excellence for building capacity for regulation of medical devices in a region, with a focus on MNCH medical devices
MTaPS received comments from the AMDF leadership team on the concept paper for this activity. There is a high level of interest in the proposed MTaPS support, and MTaPS will meet with AMDF to define the scope and selection of a country to work with.

Implementing a regional approach to support national regulatory authorities to streamline registration of MNCH medicines in countries

MTaPS discussed with the project coordinator of SADC, who supported MTaPS' proposed activity, conducting an in-person regional joint assessment for a selected number of MNCH medicines and developing an advocacy document for NMRAs in the region to use to gain support for prioritization of registration of MNCH medicines. To guide the selection of the MNCH medicines to be considered in the joint review, MTaPS is gathering information from the SADC member countries on those MNCH medicines that are pending review for market authorization as well as the registration status of MNCH medicines. MTaPS is drafting the advocacy document to prioritize registration of MNCH medicines, which, after review and endorsement by the leadership team of SADC, will be presented at the SADC regional meeting tentatively planned for the end of Q2 or early Q3.

Improving systems for managing and administering oxygen and other medical devices of the respiratory ecosystem

After WHO confirmed that the resource document on quality assurance of oxygen would be a useful resource and complement WHO technical documents that already exist or are under development, MTaPS started developing the draft document.

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

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

Developing and disseminating global guidance on local procurement

Drawing on the recommendations from Nepal, MTaPS developed a draft guidance document on subnational procurement and shared it with USAID for review in December. As part of the dissemination strategy, MTaPS is in discussions with GHSC-PSM about the inclusion of a summary of the guidance in the GHSC-PSM quality manual.

Providing global technical leadership on pharmaceutical systems issues related to MNCH

In this quarter, MTaPS collaborated with GHSC-PSM and PQM+ to review the small and sick newborn toolkit of NEST and the Center for Maternal, Adolescent, Reproductive, and Child Health London School of Hygiene and Tropical Medicine to ensure that the management of medicines is adequately covered, submitting comments for consideration. MTaPS started to map medicines used for newborns to develop a list that will then be classified into "essential" and "desirable" as a contribution to the Every Newborn Action Plan-Commodities Group (ENAP-C), but whether the group will continue with this activity given other priorities remains unclear.

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

Supporting documentation of bottlenecks of access to, and appropriate use of, pediatric amoxicillin (DT or oral suspension) and gentamicin injection and implementation of actionable solutions

MTaPS, in collaboration with GHSC-PSM and PQM+, drafted a call-to-action paper to improve access to, and use of, amoxicillin and gentamicin and revised that paper in line with feedback from USAID, UNICEF, and other stakeholders. The paper is undergoing finalization and graphic design.

BEST PRACTICES/LESSONS LEARNED

- None this quarter

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
• Conduct the knowledge event on social accountability with Momentum awards and a few other USAID IPs • Finalize the summary of the social accountability discussion paper	March 2023 February 2023
• Work with AMDF to get endorsement of the document on considerations for regulation of medical devices and plan the virtual orientation session	March 2023
• Finalize the scope of support to AMDF to establish a regional center of excellence for regulation of medical devices and start implementation	February 2023
• Finalize the advocacy document to prioritize registration of MNCH medicines and plan the joint assessment of MNCH medicines in Tanzania for the SADC region	March 2023
• Share the draft resource document on quality assurance of medical oxygen with a wide stakeholder group of potential users for review • Finalize the document and conduct a virtual stakeholder meeting to validate the document	February 2023 March 2023
• Finalize the guidance document on subnational procurement and start to disseminate	March 2023
• Present the call-to-action paper to improve uptake of amoxicillin and gentamicin to the CHTF commodities sub-group for their final comments and validation	January 2023

D. OFFICE OF POPULATION AND REPRODUCTIVE HEALTH (PRH), COMMODITY SECURITY AND 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 support voluntary modern contraceptive use by everyone who wants it, achieved in part through responsive and sustainable systems providing a range of contraceptives, and a supportive policy environment.[6] 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, with CSL funds, contributes 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. This will improve availability of and access to these commodities at service delivery points and in communities as a result of stronger supply and logistics services.

CUMULATIVE PERFORMANCE TO DATE

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 that may shape decisions around increasing government financing within its decentralized health system. The PEA enables the MOH, USAID, and other stakeholders to be better informed about the factors that influence priority setting and financing and procurement allocations for FP commodities at different levels of the system, as well as possible entry points and interventions. The PEA is a useful contribution to the development and implementation of a 10-year supply chain road map plan aimed at supporting the GOU to achieve self-reliance in supply chain and essential medicines and supplies being supported by the USAID/Strengthening Supply Chain Systems Activity. The PEA also provides an entry point for looking at factors that influence financing decisions on essential medicines and health products more broadly, as government-funded FP products are managed through the essential medicines and health products supply system. From the analysis of the desk review and PEA interview data, MTaPS developed a policy brief entitled *Increasing government financing and resource allocation for FP commodities and supply chain operations in Uganda: A Political Economy Analysis*, which was finalized following a stakeholder validation meeting. MTaPS also developed a PEA methods module that will allow others to apply the streamlined PEA methodology that the MTaPS team found effective. The policy brief and PEA methods module have been finalized and circulated, and the activity is complete.

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[6] OPRH. (2021). Family Planning and reproductive health overview. USAID Office of Population and Reproductive Health. November 2021 Available at: https://www.usaid.gov/sites/default/files/2022-05/2021.11.04_PRH_FP_RH_Program_Overview.pdf

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 4PL providers to understand factors, considerations, and influences and to develop models and advocacy strategies for governments and donors to leverage private-sector supply chain service providers in the public health supply chain. MTaPS engaged its partner organization, PSA, to conduct the study. There were four parts to the study in both countries: a desk review of 4PL providers in public health supply chains, a rapid PEA to understand influences and motivating factors, an operational capabilities analysis, and a cost-benefit analysis. After completing data analysis, MTaPS drafted technical reports for Nigeria and the Philippines, and produced two advocacy briefs entitled *Building a more efficient public-health supply chain through 4PL*—one for each country. MTaPS collaborated with PSA to facilitate virtual study result dissemination workshops for Nigeria (with more than 45 participants) and the Philippines (with more than 75 participants) in March 2022. Comments and feedback from the workshops were incorporated and used for next steps and implementation. MTaPS also facilitated a webinar in July 2022 on leveraging best practice 3PL or 4PL providers for USAID staff. The objective of the webinar was to share the results of the study and receive practical feedback.

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

MTaPS 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. The paper identified and documented examples of high-income countries and LMICs using private-sector outlets to serve public-sector clients with FP and other essential medicines. It also assessed how these private-sector engagements are operationalized. MTaPS developed an analytical framework to guide the assessment on how the public sector in high-income countries incorporates retail pharmacies in the provision of FP and essential medicines. The analytical framework also enabled MTaPS to gather evidence on how high-income countries mitigate risks associated with the engagement of private-sector pharmacies. MTaPS developed country case reports from three high-income countries (Spain, Sweden, and the United Kingdom) and three LMICs (Namibia, Ghana, and South Africa) and a thought leadership paper highlighting the key considerations, advantages, and disadvantages of engaging retail pharmacies as a source of essential medicines and FP products in LMICs and lessons learned in the context of COVID-19. The paper was disseminated in an internal USAID webinar and a global learning series webinar and is available on the MTaPS website.

EVALUATING THE EFFICACY OF USING A DIGITAL CONSUMPTION TRACKING AND WORKFLOW MANAGEMENT TOOL TO DECREASE UNMET DEMAND AND FOSTER CONTRACEPTIVE CONTINUOUS USE AT LAST MILE POINT OF CARE

MTaPS developed the protocol for the randomized control trial to evaluate the efficacy of a digital tracking and workflow management tool (OpenSRP) to decrease unmet demand and improve continuous use of contraceptives at the community level and submitted it for ethical approval. Luapula Province, Zambia, was defined as the study location. MTaPS recruited a vendor to develop and configure the software and started stakeholder engagement to gain support for the activity.

Disability Inclusion in the Health Supply Chain Workforce

MTaPS and USAID formed a TWG to facilitate and guide the study to better understand the context in countries with respect to disability inclusion in the health supply chain and to identify key stakeholders and nascent efforts or trends. The TWG met twice to introduce the activity and discuss the landscape analysis. MTaPS also developed a framework for country selection for a case study on disability inclusion in the health supply chain.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

ACTIVITY 1: EVALUATING THE EFFICACY OF USING A DIGITAL CONSUMPTION TRACKING AND WORKFLOW MANAGEMENT TOOL TO DECREASE UNMET NEED AND FOSTER CONTRACEPTIVE CONTINUOUS USE AT LAST MILE POINT OF CARE

MTaPS is evaluating the effect of community-based distributors' use of OpenSRP for client, stock, and workflow management on unmet FP needs in Luapula Province, Zambia. The impact study is designed as a parallel group, two-arm cluster-randomized trial paired with a concurrent implementation evaluation, making it a Type 2 hybrid design. After approval by the appropriate ethics committees, MTaPS collected baseline data in three districts during this quarter. Data collection included gathering quantitative stock data and interviewing 220 community-based distributors and other selected health personnel (104 at intervention sites and 116 at controls sites) in October and November. Client phone surveys were conducted in December, with a sample of 1,153 clients (583 from intervention arm; 570 from control). The team initiated data analysis in December. MTaPS also reviewed the inception report from BlueCode, the software developer. The team developed the system requirements specifications and incorporated feedback from USAID during this quarter. Additionally, the team is proceeding with the device procurement process, with vendor selection completed.

ACTIVITY 2: DISABILITY INCLUSION IN THE HEALTH SUPPLY CHAIN WORKFORCE

During this quarter, MTaPS conducted interviews for the landscape analysis and drafted the landscape analysis report, which is currently under review. The analysis found that while disability inclusive employment has been gaining increasing political priority, there is still a gap between policy and implementation. There is also a lack of robust evidence regarding labor market participation and conditions for persons with disabilities. The analysis found limited evidence of persons with disabilities being considered a constituent part of the health supply chain workforce.

The team also explored countries for the case study in the second phase of the activity, and country selection is under way.

ACTIVITY 3: ENGAGING 3PLS/4PLS TO SUPPORT THE PUBLIC HEALTH SUPPLY CHAIN

During this quarter, MTaPS held regular meetings with the Nigerian MOH National Product Supply Chain Management Program to discuss key project activities, approaches, and progress. MTaPS reviewed available documents, developed data requirements, and arranged and held meetings/interviews with stakeholders. MTaPS then finalized data collection and analyses to guide the development of the guidance document, which lays out how 3PL/4PL provider outsourcing can be operationalized in Nigeria considering the legal landscape, international best practices, and other country-specific considerations. This included

engaging a legal expert to provide input to the guidance document, which has been finalized. Preparations for the learning and advocacy workshop, planned for February 2023, are ongoing.

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1. ▪ Finalize and submit baseline report ▪ Complete software development and test	February 2023 March 2023
Activity 2. ▪ Submit landscape analysis report and survey instrument for review ▪ Initiate the case study in a country	February 2023
Activity 3. ▪ Conduct the learning and advocacy workshop for government and other supply chain stakeholders on private-sector 4PL and 3PL models and best practices for management	February 2023

E. OFFICE OF HEALTH SYSTEMS, CROSS BUREAU

OVERVIEW

USAID's OHS works across the Bureau for Global Health's programs and is responsible for technical leadership and direction in health systems strengthening, enabling countries to address complex health challenges and protect against extreme poverty. PSS is one of its areas of work. MTaPS 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 that contribute 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 LMICs. Ultimately, 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 COVID-19 pandemic.

CUMULATIVE PERFORMANCE TO DATE

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

MTaPS has been engaging with AUDA-NEPAD on medical product regulation on the African continent—especially in the wake of the COVID-19 pandemic—and has participated in advocacy initiatives for the creation of the African Medicines Agency (AMA) for improved regulation of medical products in Africa. MTaPS also supported AUDA-NEPAD to conduct a quality review of the AMRH program management guidance tool, which aimed to help streamline regulatory harmonization program implementation and strengthen the impact and sustainability of program results and outcomes. MTaPS validated the M&E tool for the performance of AMRH's Regional Centers of Regulatory Excellence and collected baseline data. MTaPS has been involved in developing a set of minimum common standards for regulatory IMS for adoption in LMICs. MTaPS and PQM+ convened the final consultative meeting in June 2022 to validate the set of standards identified through the consultation process with key global stakeholders and representatives from national regulatory authorities. An advocacy brief to promote adoption of the identified standards was finalized. During the last quarter of FY22, MTaPS worked with PQM+ to develop a guidance document providing a reference pathway for countries to digitalize their regulatory IMSs. The two programs have since developed and implemented a dissemination strategy for the advocacy brief, minimum common standards, and pathway for digitalization of regulatory IMS.

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 launching the PSS 101 course during FY22. Previously, MTaPS convened an 11-member PSS technical advisory group of donor governments, foundations, academic institutions, and public-private partnerships to publish a

paper that would generate political attention and improving access to medicines in health systems. The program also conducted a peer-to-peer learning exchange on medical products pricing strategies with health policy and financing government officials from 15 LMICs. MTaPS has submitted 67 global conference abstracts and 15 manuscripts for peer review.

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

MTaPS developed and successfully launched a policy and guideline document entitled Practical Guide for Systematic Priority Setting and HTA Introduction in LMICs, which provides a stepwise approach for HTA implementation. MTaPS has also collaborated with the USAID LHSS project to develop an approach for tracking PE using the SHA2011 framework. The team drafted a PE tracking guide and, following pilots in two countries, MTaPS developed two policy briefs that will serve as resources for countries to capture population-per-capita PE per disease or drug therapeutic class more accurately.

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

MTaPS collaborated with the West African Health Organization and the 15 ECOWAS member states to develop and successfully launch a web-based platform for improving 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. MTaPS also completed a case study in Bangladesh to identify gaps in integration of IPC/WASH critical conditions into the quality of care and quality improvement tools and processes.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

SUPPORTING AUDA-NEPAD IN THE ONGOING CREATION AND OPERATIONALIZATION OF THE AMA

During this quarter, MTaPS held meetings with the AUDA-NEPAD AMR Harmonization Initiative (AMRHI) to define the approach to support operationalization of the AMA. MTaPS then supported the development of a concept note and white paper on formulating a reliance framework between the EAC and IGAD regional economic communities. MTaPS met with the AMRH Secretariat to plan for presenting these documents to the heads of national regulatory authorities in December 2022 during AMRH week in Accra, Ghana. During the December meeting, the heads of the national regulatory authorities endorsed the white paper and agreed that the AMRH Secretariat should start working with MTaPS and the Gates Foundation to develop the reliance framework. MTaPS also participated in various technical committee meetings during AMRH week, including with the AMDF to present the reference document on the regulation of MNCH medical devices for consideration and the AMRH Partnership Platform to discuss progress on the operationalization of the AMA and cooperation among partners involved in regulatory systems strengthening on the continent. In addition, MTaPS developed an implementation plan and scope of work to guide the development of a road map on digitalization of RIMS for the AMA. Preparations for the development of the road map are ongoing, and MTaPS is working with the AMRH IMS Technical Committee to engage a consultant to facilitate the exercise.

MEASURING PSS, INCLUDING ACCESS TO MEDICINE

MTaPS developed country reports for Uganda and Tanzania, which have been shared with country counterparts as final drafts ahead of further country-level engagement and dissemination. The stakeholders for the country workshop in Uganda have been identified, and an engagement strategy is under development. The team held a data collection workshop in Nepal in late November. During the half-day session, key stakeholders went through the PSS Insight v2.0 data collection exercise in plenary. A few indicators could not be filled in at the time of the workshop, so the MTaPS Nepal team conducted follow-up key informant interviews to complete the in-country data collection portion of the pilot in Nepal. The country report for Nepal will be finalized in Q2. Data collection in Bangladesh took place between October and December. The consultant finalized the first draft of the data entry for the key informant interviews, and the team will continue to analyze the data set in Q2. The country report for Bangladesh is under development.

MTaPS also finalized the subcontract for the software development of pssinsight.org during this quarter. The contract period will run from January to March 2023, and a kickoff meeting is scheduled with the vendor in early January to review the scope and deliverables and initiate the software development process.

PSS 101 COURSE

MTaPS reviewed and updated the GheL PSS 101 web pages, finalized the main modules, and completed the final review of the video components for the PSS 101 French version. MTaPS is coordinating with the GheL team to upload the French version files to the GheL system. Between October 1 and December 31, 244 PSS 101 certificates and 179 Governance in the Management of Medicines certificates were earned.

MTaPS finalized dates for the two 2023 PSS 101 deliveries, which will take place in February and June. Preparations are well under way for the February PSS 101 delivery. MTaPS is coordinating logistics with USAID University, MTaPS subject matter expects, and PQM+ in preparation for the February delivery, and invitations will be sent out in mid-January.

EQUIPPING LOCAL INSTITUTIONS WITH PSS LEARNING RESOURCES

MTaPS held internal discussions to develop an activity timeline and plan with a detailed approach for delivery of two regional workshops in East Africa and Southeast Asia. The team tried some initial delivery approaches at the People that Deliver Global Indaba and the Global Health Supply Chain Summit, updating the plans for the activity materials and approach accordingly. Work is well under way on the curation of existing resources and development of additional workshop materials. The virtual delivery for East Africa is planned for February 28–March 2, 2023, and for Southeast Asia March 22–24, 2023. Invitations for the East Africa workshop will be sent out in mid-January.

MTAPS CLOSEOUT EVENT/PSS LEARNING SERIES WEBINARS

MTaPS drafted a concept note for this activity, which will be shared with technical leads. The concept has shifted from four webinars to:

- Two webinars, planned for March and April 2023
- A workshop on PSS Insight at SAPICS 2023
- A panel discussion at SAPICS 2023 on PSS as necessary for supply chain resilience

If the workshop and panel discussion at SAPICS are not feasible, MTaPS will shift to webinars as a contingency. Planning for the half-day symposium is contingent on other program closeout events.

IMPLEMENTING THE HIGH-PERFORMING HEALTH CARE (HPHC) TOOL

During this quarter, MTaPS met with USAID to discuss the preferred approach for implementing the HPHC tool. The team selected Bangladesh and Côte d'Ivoire for implementation, and the Bangladesh Mission granted concurrence for the activity. Discussions with the Côte d'Ivoire Mission are under way. The team also developed a detailed activity plan and drafted a scope of work for consultant recruitment.

EXTENDED YEAR 4 ACTIVITIES

DEVELOPING A METHODOLOGY FOR ASSESSING THE ROLES OF NATIONAL PHARMACEUTICAL SERVICES UNITS (PSUS) AND THEIR CAPACITY TO FULFILL THEIR MANDATE

MTaPS completed data collection in Kenya and Côte d'Ivoire this quarter. In Kenya, the team was able to reach only half of the target number of stakeholders due to unavailability or lack of response during the post-election transition period. The team has completed interview transcription for Kenya, and analysis is ongoing. The team also completed interviews in Côte d'Ivoire, with one remaining key informant to confirm availability to grant an interview. In early December, MTaPS received ethics approval from the NRC in Nepal and conducted two initial interviews. The team anticipates completing the interviews by the end of February.

To mitigate for delays and accommodate phase two of the activity, the team initiated discussions with MTaPS Rwanda in early December regarding piloting the methodology once developed. The pilot would be designed to align with MTaPS Rwanda's ongoing advocacy efforts for the creation of a national PSU in Rwanda.

DISSEMINATION AND ROLLOUT OF COMMON STANDARDS FOR REGULATORY IMS TOOLS IN LMICS

MTaPS and PQM+ completed this activity this quarter. The programs finalized the development of the guidance document outlining the pathway for countries to digitalize their regulatory functions and incorporate the identified minimum common standards for regulatory IMS. MTaPS implemented the dissemination plan, including uploading the advocacy brief and documents with the identified minimum common standards to the MTaPS website and publishing the RIMS blog (in conjunction with PQM+, AUDA-NEPAD, and the Pakistan regulatory authority). The programs concluded the activity by presenting the set of identified minimum common standards to WHO in November 2022 for incorporation into the international guidance for establishing an effective regulatory IMS.

OPTIMIZING PHARMADEX AND PVIMS TO REFLECT COMMON STANDARDS, ADD VACCINES AND MEDICAL DEVICES, AND INCORPORATE EMERGENCY USE AUTHORIZATIONS AND MONITORING/OVERSIGHT

MTaPS developed the interoperability design for implementation based on the interoperability document developed during the previous quarter. The team is working on interoperability and preparing tests for the OpenRIMS modules (PViMS and Pharmadex), as well as preparing for other applications, such as the RIMS being implemented in Rwanda. With the need to ensure that OpenRIMS continues to keep pace with technology trends and open standards, a POC of GraphQL as an interoperability option has been created for both OpenRIMS modules. MTaPS continued to implement common standards into OpenRIMS. The PViMS module has an added option to use an open-source database to enable deployment on open-source operating systems and ensure that it would be free of any proprietary licensing needs. This move to open source and non-proprietary licensing has enabled MTaPS to finalize the process to have PViMS recognized as a Digital Public Good under a suggested new name, OpenPV. OpenRIMS and all of its modules were recognized December 2022 as a Digital Public Good (https://digitalpublicgoods.net/registry/). The team continued to build new base/core workflows, and a test workflow for clinical trials is now in OpenRIMS. Further base/core workflows have been built and tested for the remaining GBT modules selected for implementation with OpenRIMS. MTaPS is exploring new indicators for inclusion into the OpenRIMS dashboard initially designed in a Google Looker Studio report combined with a data connection to PViMS to ensure data integration at reporting level. The latest source code and system documentation for OpenRIMS have been updated on GitHub.

TESTING BEHAVIORAL NUDGES FOR AMS

In October, MTaPS received approval for the updated protocol from the Makerere Research Ethics Committee (REC) and the Uganda National Council for Science and Technology. The team reviewed and finalized the key informant interview guide for phase 1 and contacted the identified potential key informants. The team also prepared data collection tools for the baseline and held a planning meeting to map the details of hospital data collection. Seventeen phase 1 key informant interviews were conducted in December, and the team abstracted secondary baseline data from four of the five study implementation sites. In December, the team submitted a protocol amendment to the Makerere REC for approval of the new consultant MTaPS engaged and to replace the fifth implementation site with Mengo Hospital due to administrative and operational challenges at the previous site.

EXTENDED YEAR 3 ACTIVITIES

ROAD MAP FOR HTA INSTITUTIONALIZATION

MTaPS developed a new SOW to reflect the extension of the activity, which was shared with USAID and the MOH in Ethiopia. MTaPS/CREATE presented the work plan to continue this work during a three-day, in-person training on HTA with the MOH and other partners, and the team held a meeting with the MOH to discuss the 2023 work plan. Additionally, MTaPS drafted a manuscript entitled "Institutionalizing Health Technology Assessment in Ethiopia: Seizing the Window of Opportunity." MTaPS shared the draft with USAID and MOH officials and submitted it to the *International Journal of Technology Assessment in Health Care* in late December.

INVESTIGATING THE USE OF INFORMATION FROM PMIS FOR EVIDENCE-BASED DECISION MAKING

MTaPS had several exchanges with the ethics committee during this quarter and submitted updated versions of the protocol to address the committee's comments. The updated protocol is scheduled for further review in February 2023. The team is discussing an alternative study if approval is not received during the next review.

BEST PRACTICES/LESSONS LEARNED

- Activities that require joint implementation with partner organizations involve protracted processes and timelines but lead to greater results and impact. We can mitigate delays by investing more time upfront to clearly identify roles and responsibilities and ensure clear communication and shared expectations throughout the implementation process.
- To the extent possible, the program should consider using program evaluation or assessment activities instead of research studies for knowledge generation. Research studies often require ethics review, even when human research exemptions apply. The speed of the ethics review varies across countries and can often lead to extended delays, which cannot always be mitigated, jeopardizing the study implementation.
- Cross Bureau has had success in promoting several activities to a wider audience by using individual professional communication channels (e.g., personal LinkedIn and professional society membership lists) to augment more traditional communication channels (e.g., listservs, social media).

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 2.4.6: Support AUDA-NEPAD in the Ongoing Creation and Operationalization of the AMA ▪ Work with AMRH and the Gates Foundation to gather information required for development of the draft reliance framework ▪ Work with AMRH IMS TC and PQM+ to define the draft road map before stakeholder consultation	January–March 2023
Activity 3.3.1: Measuring PSS, Including Access to Medicine ▪ Finalize country workshops ▪ Convene country dissemination workshops ▪ Initiate pssinsight.org development with SRS validation	January–March 2023
Activity 3.3.2: PSS 101 Course ▪ Provide first offering of hybrid course	February 2023
Activity 3.3.3: Equip Local Institutions with PSS Learning Resources ▪ Conduct East Africa regional virtual workshop	February 2023
Activity 3.3.4: MTaPS Closeout Event/PSS Learning Series Webinars ▪ Disseminate concept note for review ▪ Plan first two webinars	January–March 2023
Activity 3.3.5: HPHC Tool Implementation ▪ Recruit consultant ▪ Introduce the activity to the government for approval ▪ Compile list of stakeholder organizations and select sample ▪ Disseminate the HPHC tool	February–March 2023
Year 4, Activity 2.2.1: Methodology for Assessing the Roles of National Pharmaceutical Services Units (PSUs) and Their Capacity to Fulfill Their Mandate ▪ Complete data analysis and draft case study report on Kenya and Côte d'Ivoire ▪ Present case findings to technical working group ▪ Continue engagement with Rwanda team on potential pilot	January–March 2023

Activity and Description	Date
Activity 5.4.1: Testing Behavioral Nudges for AMS ▪ Collect baseline data from Mengo Hospital after obtaining Makerere REC approval and MOH administrative clearance ▪ Analyze the findings of the key informant interviews and the overall baseline data to inform the development of contextually suitable behavioral nudge intervention ▪ Implement the intervention ▪ Organize a meeting with the USAID COR team to provide an update on the progress made thus far	January–March 2023
Year 3, Activity 3: Road map for HTA Institutionalization ▪ Prepare a manuscript to assess technical and informational needs to conduct HTA and strengthen institutional capacities ▪ Conduct a stakeholder analysis and political economy analysis and report findings	January–March 2023
Year 3, Activity 7: Investigating the Use of Information from PMIS for Evidence-Based Decision Making ▪ Protocol to be reviewed by the Ethics Committee on February 15, 2023	February 2023

F. GENDER

OVERVIEW

The goal of the MTaPS gender 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 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 and meets 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:

1. 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
2. Number of gender-related technical guidance documents and other capacity building products produced by MTaPS.

These gender-specific indicators are being used to 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. Lastly was a presentation entitled "Transforming Health and Pharmaceutical Policies to be Gender Inclusive" given by the MTaPS gender advisor during one of the biweekly 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 all staff. 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 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.

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. Five blog posts were published in Year 3.

- 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/
- Lawry LL. We Can Only Fix What We Know About – Why Sex-Disaggregated Data in Pharmaceutical Systems is Crucial. https://www.mtapsprogram.org/news-blog/we-can-only-fix-what-we-know-about-why-sex-disaggregated-data-in-pharmaceutical-systems-is-crucial/

To reinforce the necessity of sex and gender integration in PSS, USAID MTaPS Knowledge Exchange Series and staff meetings presentations were given to the contracting officer representative (COR) and MTaPS staff.

Throughout Year 3, MTaPS' gender advisor identified opportunities for interventions to mitigate sex and gender disparities within pharmaceutical systems and their beneficiaries through technical activities that were country-specific and/or cross-cutting 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 MEL 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, included country-specific sex and gender activities and continuing the momentum of bringing sex and gender to the forefront of MTaPS through scholarly activity, education, and mentorship. Capitalizing on gains in sex and gender awareness, Year 4 included the development of knowledge products such as IEC materials and e-Learning modules; writing and publishing academic products such as a journal articles to address the need for standardized PSS tools to incorporate sex-disaggregated data; and the development of technical guidance on incorporating sex-disaggregated data and gender considerations as part of antimicrobial stewardship interventions and MTaPS-supported management information systems (MIS). To continue building sex and gender awareness in MTaPS, the Senior Gender Advisor gave Knowledge Exchange and webinar presentations to staff, the COR, partners, and presented a module in PSS 101 for USAID staff. A panel presentation in support of the GHSA action package on 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 presented at the 2022 Global Health Security Conference in June/July 2022 in Singapore. A Gender Gist blog post following the conference was published to add to the series from previous years. These blogs remain among the top pages viewed on the MTaPS website. At the end of Year 4, due to new requirements of the Philippine DOH, the e-Learning modules developed in Quarter 3 required additional knowledge checks and pre-/post-test questions.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

The gender advisor was asked by the Philippine DOH to review and update their "menu of gender and development (GAD) activities" and asked to review and comment on their GAD e-Learning slides, which they plan to animate and add to their e-Learning library. Replies to USAID questions on the Year 5 Philippines work plan were required in this quarter and the Philippines workforce development plan required another review to ensure that gender was incorporated in this updated plan.

Following two manuscript refusals, MTaPS made revisions to the point prevalence survey paper for possible publication in a different journal.

After final revisions, MTaPS published another gender blog post:
- Lawry LL. Where the Wild Things Are: Missing the Forest for the Trees. The Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program. October 18, 2022. https://www.linkedin.com/feed/update/urn:li:activity:6998747695725121536/

Bangladesh asked for review and comment on their AMR materials which was completed in this quarter. In November, the gender advisor created and gave a presentation to the COR to summarize progress and challenges in integration of gender considerations in MTaPS and to discuss the way forward for Year 5. One of the most important successes for this quarter is the inclusion of sex and gender concepts into Tanzania's National Action Plan on Antimicrobial Resistance 2023–2028.

The PSS 101 skills launch for this year will again include a gender section. The gender advisor worked on this year's PSS 101 summary for gender.

Furthermore, the gender advisor participated in biweekly staff meetings and the quarterly expanded COR and technical meetings and prepared the gender sections of the MTaPS quarterly and annual reports.

BEST PRACTICES/LESSONS LEARNED

- One-on-one discussions with the COR were helpful for understanding the barriers to integrating gender into MTaPS—a follow up presentation later in Year 5 will be helpful to update the COR and allow the COR to advocate for gender initiatives at the country level.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Develop a Year 5 task order for gender activities pending USAID approvals on work plans	February 2023
Resubmit WHO PPS manuscript to a journal	January 2023
Drafting of a new Gender Gist Blog—topic TBD	March 2023
Participation in biweekly staff, quarterly technical, and expanded COR meetings	January–March 2023

4. PROGRESS BY COUNTRY

A. BANGLADESH

FIELD SUPPORT

OVERVIEW

The overall goal of the 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 UHC. MTaPS' overall strategic approach is to support the GOB to strengthen the pharmaceutical services and supply management system. MTaPS is providing technical assistance (TA) to the MOHFW to build institutionalized and sustainable technical capacity for pharmaceutical system strengthening.

CUMULATIVE PERFORMANCE TO DATE

With MTaPS' TA, the MOHFW developed a strategic plan for coordinated procurement. The plan included mapping of procurement entities, their practices, and key actions to be implemented. MTaPS also developed the TOE for HFs with 10 to 500-bed capacity (up to tertiary level) and assisted to update the reference prices for the TOE items and the MSR list with full specifications and assisted the MSR list updating committee to develop a strategy to assign and review standard reference prices to the updated list. MTaPS developed a table for the oversight bodies at the MOHFW and the DGHS to monitor the performance of the procuring entities using standards indicators to contribute to the improvement of the procurement functions. MOHFW has started using the table.

The DGFP allocated funds in their operational plans for managing and maintaining the DGFP eLMIS. The UIMS and WIMS were successfully incorporated in the eLMIS to ensure real-time logistics transactional data. MTaPS provided TA in organizing the training on supply chain management and troubleshooting of the UIMS and WIMS for 299 sub-district level managers for better management of supply chain functions including smooth functionality of the two inventory management systems. MTaPS also provided TA to the FP warehouses to ensure timely resupply of FP commodities, resulting in stock-out rates maintained below 1% at service delivery points. Analyzing data generated by the eLMIS, DGFP avoided unnecessary procurement of 20 million units of FP injectable commodities, saving USD 9.6 million during FY 2021-22. MTaPS introduced the eAMS in all 61 DHs across the country. Approximately 70% of them completed nearly 100% data entry of assets into the eAMS. The eAMS helps in the real-time tracking of assets and timely maintenance, contributing to effective procurement.

MTaPS established e-TB Manager as the national digital platform to capture and manage individual TB patient information, enabling the NTP to accurately record and report quality TB data. The system has been rolled out nationally to all 868 TB treatment sites and NTP has been replacing manual reporting with paperless reporting in a phased manner. The time for the end users to generate different reports has been reduced from one day to just a few minutes and data is now available in real time. The system server has been transferred from MSH to DGHS MIS and is being managed by local developers. e-TB Manager has

been enhanced for electronic reporting of aDSM by the NTP in all 10 DR-TB sites allowing data analysis and prompt actions by the DGDA to mitigate adverse reactions caused by TB medicines. In collaboration with NTP, MTaPS completed a peripheral storage system assessment for TB medicine at the government HFs and at the partner's stores where options for storage integration were analyzed, and a phased transition plan was proposed. Based on the assessment recommendations, the NTP is currently improving the peripheral level storage system through the implementation of said transition plan.

In PY1 and PY2, MTaPS assisted the DGDA in developing an inspection strategy for model pharmacies and medicine shops for ensuring good pharmacy practices. In PY3, MTaPS assisted the development of DGDA's annual action plan based on the five-year strategic plan and assisted in establishing a monitoring mechanism for implementing the institutional development plan based on the WHO GBT. DGDA is using an electronic inspection and licensing system for pharmacies developed by MTaPS in collaboration with Better Health in Bangladesh. MTaPS supported the DGDA to develop the CAPA plan which was endorsed by WHO. An independent and functional QMS was established. In PY4, DGDA's technical capacity was built on the convergence of technical standards and regulatory guidelines along with common technical document (CTD) dossier evaluation to improve good regulatory practices. For strengthening PV, in PY3 MTaPS facilitated DGDA's scaling up of PV to 30+ government and private HFs. It helped increase the individual case safety reports received by more than 200 (from 701 in PY3 to 969 in PY4). In the latest WHO GBT assessment, DGDA achieved the highest score in the MTaPS-supported functional area of PV. In PY5, to contribute to the safety of medicines, MTaPS supported DGDA in periodic evaluations of 34 AE reports by the ADRAC and the adverse drug reaction monitoring (ADRM) cell. Actions were taken on a range of products based on evidence-based recommendations—for example, updating patient information leaflet and disseminating safety concerns for Carbamazepine, Ketorolac Tromethamine, Methotrexate, and Rituximab.

MTaPS worked with MOHFW and other stakeholders to explore options for supporting the implementation of the pharmaceutical-related components of the Bangladesh Health Care Financing strategy (2012–2032), including expenditure tracking of pharmaceuticals, and developed a situational analysis report. The tracking will be followed by training for the HEU and dissemination of the report.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PROCUREMENT AND SUPPLY CHAIN SYSTEMS IMPROVED AND MODERNIZED

(Y4) Activity 1.1.1: Update the price guide of medical equipment and align with the revised TOE.
MTaPS assisted MOHFW in organizing two events with over 50 participants representing relevant stakeholders including the MOHFW Health Service Division (HSD), DGHS, CMSD, National Electro-Medical Equipment Maintenance Workshop, and clinicians from various hospitals to develop a single line specification and assign updated prices for the TOE items to then update the price guide. The updated price guide will be uploaded to the webpages of the MOHFW and DGHS making available the indicative prices of the equipment required in the procurement process which will benefit the procuring entities and contribute to improving efficiencies in the procurement planning and processing.

(Y4) Activity 1.1.2: Map the organizational and governance structure of DGHS procurement functions.

MTaPS supported the mapping of the organizational structure of the DGHS by focusing on the procuring entities' capacity to plan and process procurement functions. The mapping included recommendations for the formation of a cell in the DGHS with a proposed composition and TOR, the procurement schedules suitable for the procurement associates and managers, and a training calendar to build the capacity of the different procuring entities of the DGHS to enable them to deliver the procurement functions more efficiently.

(Y5) Activity 1.2.2: Institutionalize the eAMS use at district hospitals.

With MTaPS' TA, a significant number of asset information entries (n=573) were completed during this quarter. To date, information on a total of 8,143 assets is managed by the eAMS to track the availability of assets, their functional status, and repair and maintenance history, including their locations. With information on the assets, health managers can better plan the required repair, management, and maintenance of the assets and contribute to efficient procurement planning of medical equipment.

(Y5) Activity 1.2.3: Assist CMSD to implement the comprehensive eLMIS.

After the completion of preparatory activities to introduce an electronic inventory management system at CMSD, MTaPS conducted a two-day training on eLMIS for a total of 15 participants from CMSD (3 women and 12 men). With support from MTaPS, CMSD also formed a product catalog committee to standardize the commodity list with full specifications. CMSD has reformed the 3 sub-stores to 6 sub-stores based on product group. An inventory tool management committee has been formed to monitor and maintain the system, which will optimize the system functionality.

OBJECTIVE 2: PHARMACEUTICAL REGULATORY SYSTEMS STRENGTHENED

(Y5) Activity 2.1.1: Continue to provide TA in developing and implementation of CAPA plan in selected functions as per WHO formal assessment report for the DGDA to contribute to increasing score on WHO GBT.

To strengthen PV and create a culture of reporting AEs, MTaPS assisted DGDA in the development and implementation of plans for periodic workshops of ADRM cell, technical subcommittee (TSC), and ADRAC on PV, coordination, and inspection as recommended by WHO. MTaPS conducted one ADRM and one ADRAC workshop, including inspections of three pharmaceutical companies. MTaPS supported management review workshops on QMS toward attainment of GBT ML3; participants included members of the DGDA's nine regulatory function teams and representatives of the WHO and other development partners.

(Y5) Activity 2.2.1: Continue to provide TA for generating evidence-based regulatory decisions towards ensuring medicine safety.

DGDA conducted a workshop with ADRAC to review the causality assessment of 21 serious adverse reactions conducted by the TSC. In addition, the committee recommended several regulatory actions for ensuring safety regarding adverse reactions reported from the drugs Carbamazepine, Ketorolac Tromethamine, and Rituximab. MTaPS provided a demonstration of the PViMS to DGDA, which was well accepted and appreciated. DGDA noted that PViMS provides the integrated functionalities that it is seeking. MTaPS is responsive to and integrates DGDA's feedback on technical requirements, for example, during customization of the AE reporting form and business process.

(Y4) 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).

MTaPS held several consultative workshops to assist DGDA with development and finalization of its five-year strategic plan (2022-2026). The plan will guide the DGDA to implement the key WHO benchmarks in a structured and effective way to make the authority functional to ensure sustainable access to quality, safe, and effective medical products.

(Y4) Activity 2.2.4: Work with DGDA and other stakeholders to develop guidelines on GVP and update the national PV system guideline per WHO GBT requirements (refer to VL01.02) to increase score to ML3.

MTaPS supported DGDA in the development of the Good Pharmacovigilance Practices (GVP) guideline for marketing authorization holders and update of the national guideline on the PV system in Bangladesh. The guidelines will be printed for use by the relevant users and will be uploaded to the DGDA web page. This will help improve the implementation of PV activities and will address the WHO observations made in the latest inspection at DGDA towards attaining ML3.

OBJECTIVE 3: SYSTEMS FOR EVIDENCE-BASED DECISION-MAKING INSTITUTIONALIZED

(Y4) Activity 3.1.1: Enhancement and scaling up eLMIS previously developed for TB commodities in DGHS.

In coordination with NTP, MTaPS facilitated training sessions on logistics management and eLMIS for TB commodities in Dhaka. It is expected that the eLMIS for TB commodities will improve the availability and uninterrupted supply of TB commodities. All 158 upazilas trained in the previous quarter were able to submit the TB logistics indents, receive the supplies, and manage the issuance and dispensing of the TB commodities throughout the reporting quarter. The use of the system has helped the users in preparing the indents quickly and accurately. It has also helped the central level to perform the supply consolidation and distribution planning more easily, quickly, and accurately than the manual process. In addition, MTaPS visited e-TB Manager sites to ensure data quality and accurate paperless reporting and found that the sites are ready to produce quality paperless reporting using e-TB Manager.

(Y4) Activity 3.1.2: Provide TA to DGFP in transitioning the existing inventory tools from offline to online.

MTaPS provided TA in developing an online version of the inventory management system for DGFP, "DGFP eLMIS," which will replace the offline inventory systems (UIMS and WIMS). DGFP organized an "orientation workshop on the DGFP online inventory management system" to review and test the features and streamlined functionality of the newly developed online version. An action plan was developed for the countrywide scale up of the online system, which is expected to ensure real time transaction data for decision-making.

Participants take part in a group exercise during the training on eLMIS for TB Commodities. Dhaka, Bangladesh, December 5, 2022. Photo credit: Prioiit Kumar Nandi, MTaPS

Activity 3.1.3: Customize Pharmadex version 2 for vaccines.

MTaPS conducted several meetings, provided a demonstration to DGDA, and discussed the progress on the development of Pharmadex version 2. DGDA renamed the system DGDA-regulatory information management system (RIMS). Based on the discussion and the SOP for registration (NRA-MA-013) received from the DGDA, the digital business process was laid out and accepted by DGDA, which provided feedback for workflow customization and business process. Next quarter, MTaPS will address the feedback received, perform another demonstration to DGDA, and conduct the UAT before implementation.

OBJECTIVE 5: PHARMACEUTICAL FINANCIAL RESOURCE ALLOCATION AND USE OPTIMIZED

(Y4) Activity 5.1.1: Continue to support the HEU to conduct pharmaceutical expenditure tracking for MNCH commodities.

MTaPS developed the inception report for the activity, documenting the methodology that will be followed for the expenditure tracking of the MNCH commodities (i.e., data collection tool, data source selection, data analysis, and validation) including timelines. The report was submitted to the HEU for validation of the questionnaire and the methodology. Data collection will follow next quarter.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

(Addressed under the Objectives/Health Areas sections of the report.)

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Continue to assist the MOHFW and the DGHS to address issues with procurement processes and documentation of different procuring entities with an aim to improve efficiency (quality improvement)	January–March 2023
Activity 1.2.2: Institutionalize the eAMS use at DHs—visit DHs to assist eAMS users in updating the asset entry and provide necessary troubleshooting support	January–March 2023
Activity 1.2.3: Assist CMSD to implement the comprehensive eLMIS Stock initialization will be completed and CMSD will start to use the tool	January–March 2023
Activity 1.3.1: In collaboration with NTP, roll out eLMIS for TB commodities in all subdistricts 15 batches of training have been planned for the quarter	January–March 2023
Activity 2.1.1: Continue to provide TA in developing and implementation of CAPA plan in selected functions as per WHO formal assessment report for the DGDA to contribute to increasing score on WHO GBT Support DGDA in addressing the observations of the WHO external assessment as per the CAPA plan	January–March 2023
Activity 2.2.1: Continue to provide TA for generating evidence-based regulatory decisions towards ensuring medicine safety ADRM and TSC workshop on AE case recording, summary of AE assessment, and evaluation, including aDSM reports	January–March 2023
Activity 3.2.1: Develop handover documents for major IT systems supported by MTaPS in consultation with the respective GOB units Completed drafting a few of the required handover documents	March 2023
Activity 5.1.1: Continue to support the HEU to conduct pharmaceutical expenditure tracking for MNCH commodities (Y4) Data collection on expenditure for MNCH commodities; data analysis and preparation of brief report	January–March 2023
Activity 5.1.1: Assist HEU to build capacity on pharmaceutical expenditure tracking for MNCH commodities Development of training modules based on the standard processes on pharmaceutical expenditure tracking	March 2023

Table 2. Quarter 1, FY23, Activity Progress, Bangladesh—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Continue to assist the MOHFW and the DGHS to address issues with procurement processes and documentation of different procuring entities with an aim to improve efficiency (quality improvement) **Activity Description:** MTaPS will facilitate the discussion of the tool developed to monitor procurement performances of the procuring entities on a quarterly basis.	Obj 1, SO 1.1	This activity involves documenting procurement issues in a tabulated form and discussing periodically for improvement. The workshop initially planned for this quarter will be held in the second quarter. The oversight bodies concerned with the DGHS and MOHFW are populating the information in the monitoring tool to be presented and discussed with the procuring entities in a workshop expected to be held in late February. This activity will be transitioned and carried out by the concerned desks to ensure the pathway to sustainability.
Activity 1.2.1: Collaborate with the DGFP to implement the transition to the online inventory management system **Activity Description:** MTaPS will work with the DGFP to conduct TOT on the online version of the DGFP eLMIS as part of the transition from offline to online.	Obj 1, SO 1.2	An orientation workshop on the online version of DGFP eLMIS was conducted with selected participants, the UAT was completed, and the feedback was incorporated in the online version of the DGFP eLMIS. The IT vendor has been working with the DGFP MIS unit to host the system locally. The L&S unit has selected sites to initiate the eLMIS and is working to select the officials to provide TOT, which will contribute to ensure the pathway to sustainability.
Activity 1.2.2: Institutionalize the eAMS use at district hospitals **Activity Description:** To monitor the eAMS implementation progress, conduct regular monitoring visits, and provide needed technical support to the system users, MTaPS will visit 20-25 DHs next quarter. According to the requirement of eAMS TWC of MoHFW/Hospital Services Management (HSM) of DGHS, MTaPS technical team members will participate in the joint monitoring visit to DHs as well.	Obj 1, SO 1.2	To review the implementation progress, the eAMS TWC of MOHFW organized a review meeting and the decisions taken were: (a) 14 field monitoring teams formed, (b) resident medical officer of each DH will be the focal person, and (c) if any DH fails to implement the eAMS, line director HSM of DGHS will initiate disciplinary action. HSM of DGHS organized a consultative workshop to finalize the monitoring checklist for eAMS functionality in the hospitals where the system is deployed. Joint monitoring teams visited 10 DHs during October-December 2022 and provided guidance to the users for the smooth functioning of the system.
Activity 1.2.3: Assist CMSD to implement the comprehensive eLMIS **Activity Description:** MTaPS will continue providing TA to the users of the CMSD eLMIS in the smooth functioning of the system and troubleshooting support as and when required.	Obj 1, SO 1.2	A two-day training on the eLMIS was successfully completed as part of initiating the system at the CMSD. The system is hosted on the government server. Store allocation was reformed, and physical inventory is in progress. Stock initialization started in December 2022, and it is expected to be completed by January 2023.
Activity 1.3.1: In collaboration with NTP, roll out eLMIS for TB commodities in all subdistricts **Activity Description:** MTaPS will continue to scale up the eLMIS in the remaining upazilas.	Obj 1, SO 1.3	MTaPS began communication with NTP regarding MTaPS' plans to scale up the eLMIS for TB commodities in the remaining 267 upazilas from 34 districts of 4 divisions during PY5 and is close to finalizing dates. Approximately 43 batches of training will be conducted. As part of the plan, an initial 15 batches of training to cover 100 upazilas of Chattogram division will be arranged from mid-January to mid-February 2023, and finalization of the dates is in process. The facilities completing the training are using the system to submit their reports and requisition for the quarter, which is evidence of the sustainability of the activity.

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.3.2: Institutionalize e-Learning course of the relevant directorates of the MOHFW **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	Out of four e-Learning courses, the basic logistics management course was finalized and hosted at the Muktopaath platform under a2i. A protocol field testing was developed in December 2022 and the testing is expected to be initiated by January 2022 for further improvement and finalization.
Activity 2.1.1: Continue to provide TA in developing and implementation of CAPA plan in selected functions as per WHO formal assessment report for the DGDA to contribute to increasing score on WHO GBT (PY5) **Activity Description:** CAPA plan implementation in PV and QMS through periodic mechanism established by MTaPS with other development partners, UAT and training for implementation of Pharmadex version 2/Open RIMS	Obj 2, SO 2.1	Assisted in addressing the CAPA that includes development of plans for workshop/inspection/training and their execution. Management review workshops were also supported on QMS showing implementation status in all nine functions, identified critical challenges, and emphasized the need of management commitment to address WHO assessment observations for ML3. This activity of periodic review of CAPA following WHO assessment is a continuous process and is a good example of pathway to sustainability. The activity is led by DGDA and the role of MTaPS is to participate as the TA provider.
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) (PY4) **Activity Description:** Review the existing strategy and develop a new one with the formed working committee	Obj 2, SO 2.1	Mentorship was provided to DGDA, and MTaPS supported several consultative workshops to update and finalize the five-year strategic plan of DGDA, which is approved and being used by DGDA.
Activity 2.2.1: Continue to provide TA for generating evidence-based regulatory decisions towards ensuring medicine safety (PY5) **Activity Description:** Assess AEs including aDSM reports, prepare newsletter, implement PViMS	Obj 2, SO 2.2	One ADRM cell and one ADRAC workshop was facilitated. TSC and ADRAC workshops will follow for causality determination and generating regulatory recommendations for DGDA action. PV newsletter development is under way. PViMS development status was demonstrated to DGDA, and feedback was taken to work further for implementation. Advocacy is being continued to allocate funds in the OP for AEs evaluation committees and PViMS implementation with maintenance.
Activity 2.2.2: Assist DGDA in strengthening existing online ADR reporting and monitoring system (refer to VL04.01 and VL06) (PY4) **Activity Description:** Electronic AE reporting and monitoring system development through PViMS	Obj 2, SO 2.2	The ADR reporting form and evaluation process was configured in PViMS. The progress of the system development was demonstrated to DGDA, and feedback noted. DGDA is actively participating in this process which will contribute towards sustainability.
Activity 2.2.4: Work with DGDA and other stakeholders to develop guidelines on GVP and update the national PV system guideline per WHO GBT requirements (refer to VL01.02) to increase score to ML3 (Y4) **Activity Description:** Updating and development of the guidelines through consultative workshops of a working committee formed and the ADRAC for approval	Obj 2, SO 2.2	MTaPS assisted the working committee responsible for the guidelines updating/development, DGDA and WHO to update/develop both guidelines with international practices and standards and present to the ADRAC for feedback and then approval.

Activity	MTaPS Objective(s)	Activity Progress
Activity 3.1.1: Enhancement and scaling up eLMIS previously developed for TB commodities in DGHS (Y4) **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	By the end of PY4, a total of 248 sites (in 217 upazilas, 30 districts, and TB central warehouse) has been capacitated. The capacity building efforts of the MTaPS team on eLMIS for TB commodities extended beyond the training by providing virtual assistance to the participants, arranging supporting supervision, providing on-site assistance, encouraging peer learning, and supporting the participants with supervisory roles to promote mentoring where needed.
Activity 3.1.3: Customize and implement Pharmadex version 2 for vaccines registration in DGDA (PY4) **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 3.1, SO 3.1	DGDA decided to change the name of Pharmadex version 2 to DGDA RIMS. MTaPS provided a demonstration which was well received and appreciated by DGDA for the flexibility and functionality of the system for further configuration. The director suggested removing a few fields like ATC Code, Product Category, Price, etc. and adding fields like "Sample and testing method submitted to NCL: Yes/No," Excipient Name, etc. The director also suggested the parallel steps to put under options of a common series instead of going vertically as separate series. MTaPS noted all feedback and agreed to address them and get back to the MA team for another round of demonstration soon.
Activity 3.2.1: Develop handover documents for major IT systems supported by MTaPS in consultation with the respective GOB units **Activity Description:** MTaPS team is closely working with the recent short-term technical assistance to draft the required handover documents. In the next quarter, a few of the documents are expected to be in good shape.	Obj 1, SO 3.2	Short-term technical assistance by the principal technical advisor – MIS from the MTaPS home office helped draft a transition document template for all major systems. This would be the foundation for the preparation of this handover document which will continue in the next quarter.
(Y4) Activity 5.1.1: Continue to support the HEU to conduct pharmaceutical expenditure tracking for MNCH commodities (Y4) **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	Several coordination meetings were held among MTaPS, HEU, and Results for Development to implement the activity. An inception report on pharmaceutical expenditure tracking for MNCH commodities documenting the methodology that will be followed, including timelines for different steps, was shared with HEU to define the standard processes which is currently going through HEU review process.

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

Under the work plan objective 4, MTaPS Bangladesh supports ARC by implementing the NAP on AMR. The 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 MSC on AMR, IPC, and optimized implementation of AMS to help the country progress to the next higher JEE level.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' primary goal is to support the country move up to the next JEE level across the 3 result areas by supporting the completion of WHO IHR benchmark actions. As of September 2022, MTaPS has supported the completion of 15 (24%) of the 62 total WHO benchmark actions - 3 contributing to MSC/AMR, 8 to IPC, and 4 to AMS—while 4 other benchmark actions are at various stages of completion (ongoing).

Before the inception of GHSA funding in FY20, MTaPS' assistance in ARC was focused on MSC. MTaPS conducted a mapping exercise under the leadership of the CDC/DGHS to assess the implementation status of the NAP-AMR and identify gaps and priorities. After the inception of GHSA funding, MTaPS' contribution to ARC was further strengthened by successfully facilitating joint stakeholders' meetings, finalizing the AMR framework and indicators for IPC and AMS, and extending AMR activities from the national to the facility level. In collaboration with CDC, MTaPS updated the National AMR Strategy, updated and costed the NAP-AMR, and developed the STGs, AMS guidelines, and National Multisectoral AMS Plan. MTaPS secured agreement among relevant parties for the holding of the meetings of the coordination bodies (core working group [CWG] and NTC), participated in the technical discussion of the various agenda items—including those developed with MTaPS' facilitation—and continued providing TA to strengthen the multidisciplinary implementation of IPC and AMS at four targeted HFs. Subsequently, in FY22, IPC and AMS activities were expanded to five additional selected facilities. MTaPS has been supporting the government and stakeholders to improve the global benchmark actions according to WHO JEE in the MSC, IPC, and AMS components of the AMR technical area under the GHSA mandate.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

(Y4) Activity 1.1.1: Continue to support governance, functionality, and implementation capacity of the national MSC mechanisms

(Y4) Sub-activity 1.1.1.2: Continue to build the managerial and technical capacity of the NTC towards sustainability by supporting regular coordination and review meetings
A costed operational plan on NAP-ARC (2021-2026) was recently developed by CDC with MTaPS' facilitation. This costed plan was developed with MTaPS' support and technically validated through the contribution of the CWG members at an NTC meeting. After the NTC meeting, the plan was forwarded to the MOHFW for approval. Costing by department, as well as by activity, will help allocate resources to implement and maintain effective AMR interventions in Bangladesh.

(Y5) Activity 1.1.1: Continue to support governance, functionality, and implementation capacity of the national MSC mechanisms

(Y5) Sub-activity 1.1.1.3: Support the CDC/DGHS to plan and stage the annual WAAW for 2022

The theme of WAAW 2022 was "Preventing antimicrobial resistance together." A series of events were organized and efficiently managed during WAAW 2022. Featured activities cohosted by MTaPS included both national and facility-based rallies and discussions, engagement of multi-stakeholders from the community level to the national level, Facebook boosting of key messages, and roundtable discussion with coverage by electronic and print media. Most of the relevant stakeholders from the GOB and development partners took part in the MTaPS-facilitated roundtable discussion led by the director general of DGHS, DGDA, CDC, and Quality Improvement Secretariat (QIS). In the discussion, DGHS expressed gratitude to all stakeholders for the support extended in combating AMR. MTaPS shared their efforts in ARC in Bangladesh and USAID expressed their continued support to contain AMR in Bangladesh. Print media emphasized the necessity of such events to be more frequent to disseminate messages to the population concerning this silent pandemic. The discussion came to a consensus that all stakeholders from human, animal, and environment sectors will work together to combat AMR.

Roundtable discussion with key stakeholders and partners marking WAAW 2022 in Bangladesh. Photo Credit: Quazi Shahreen Haq, MTaPS

RESULT AREA 2: IPC

(Y4) Activity 2.5.1: Continue to strengthen IPC activities in the current four participating facilities; scale up similar initiatives to six additional facilities

MTaPS facilitated analysis of the baseline IPCAF assessments conducted on the five additional MTaPS-supported facilities (a sixth private sector facility was excluded from the assessment on CDC request during the previous quarter). Results demonstrated that they are at the basic level following the WHO facility performance scale (i.e., inadequate, basic, intermediate, advanced). A report was drafted with the causes of the low score and recommendations to help develop the facility IPC plan to improve IPC program core components in these newly supported facilities. A repeat IPC assessment was also conducted in the initial four MTaPS-supported facilities. The four categories of level were measured with a maximum of 800 points possible. Facilities are graded according to levels: 0-200 inadequate, 201-400 basic, 401-600 intermediate, and 601-800 advanced level. The repeat assessment found progress over the baseline from inadequate to intermediate in two facilities: Taraganj Upazila Health Center (increase from 177 to 462) and Nilphamari DH (increase from 165 to 427). Munshiganj DH remained at the intermediate level (increase from 440 to 597). Cumilla Medical College Hospital demonstrated an improvement from basic to advanced level (increase from 273 to 670). Analysis of baseline and repeat assessments will help in understanding progress to date and the current IPC committees' capacity to plan, implement, and evaluate

IPC activities to address gaps at the facility level. To strengthen IPC activities, monitoring of IPC activities continued. This quarter, four MTaPS-supported facilities have been monitored using a checklist and a report submitted for quality review. In addition, to increase the frequency of monitoring, three consultants have been selected to support seven remote and newer facilities.

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

(Y4) Activity 3.1.1: Strengthen AMS governance structures at the national level

MTaPS supported the CDC and QIS to finalize the AMS guidelines. The process included a review of other countries' AMS guidelines and sharing of the draft with experts in different CWG meetings, with feedback and further modifications. In addition, the AMS and STG training modules were developed. The guidelines and training modules are essential tools to develop the capacity of health care providers to contain AMR in Bangladesh.

MTaPS discussed with the CDC the draft National AMS Multisectoral Plan which was prepared during an MTaPS workshop (Q4 PY4). The plan is based on the assessment of the AMS policies, regulations, and practices in both the human and animal health sectors (conducted in Q3 of PY4). After discussion with the CDC, it was decided to finalize the plan in Q2 PY5. The national committee will then implement the plan. This plan is an opportunity for Bangladesh to move forward with adequate resources and skills to contain AMR.

(Y5) Activity 3.5.1: Help strengthen AMS program at facility level

MTaPS supported the CDC in leading the development of STGs for antimicrobial medicines following the WHO AWaRe guidance. The STG app is now ready for field testing, which will take place next quarter to gather comments and feedback on user-friendliness. A detailed protocol for field testing was developed.

Periodic monitoring, particularly joint monitoring with CDC and QIS officials, has improved the quality of AMS implementation. HFs have asked for training on the STG and AMS and the recently developed STG and AMS training modules are critical tools to build capacity of care providers to improve AMS practices and services at the facility level. In response, MTaPS will conduct training on these topics beginning in Q2.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- In Quarter 1 of FY2023, the celebration of WAAW 2022 included activities at the facility level, in addition to the usual national level rallies, meetings, distribution of posters with key messages, and roundtable discussion. It was observed that the involvement of the facility level participants in WAAW activities evoked more enthusiasm for WAAW.
- Monthly scientific sessions to discuss various technical issues at Cumilla Medical College Hospital are a potential platform to discuss, plan, and implement IPC and AMS effectively and efficiently. The facility authority encourages and ensures the participation of all department heads, microbiologists, consultants, and regional medical officers in the sessions. This is a fully locally developed initiative through which AMR has been added and became the priority agenda for all levels of care providers. In addition, the director of Cumilla Medical College Hospital is encouraging the IPC and AMS focal points to organize learning sessions for nurses and interns on IPC and AMS. These actions demonstrate the local leadership on AMR containment.

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 mechanisms ▪ A workshop will be conducted to draft an inventory of AMR interventions in the country by different stakeholders. ▪ A workshop to draft the road map for implementation of the new NAP-AMR 2021-2026 ▪ A report on discussions and decisions of the CWG meetings, including recommendations for self-reliance of the group Report on WAAW 2022 events will be prepared	January–March 2023
Activity 2.1.1: Strengthen IPC governance structures at the national level, including updating of the multi-year IPC NAP ▪ TOR for the National Multisectoral IPC Committee will be finalized ▪ National Multisectoral IPC Committee formation ▪ National IPC action plan developed and vetted by CWG meeting ▪ Consultant will be hired for national IPC repeat assessment Report of national IPC repeat assessment will be developed by the consultant	January–March 2023
Activity 2.2.1: Help expand and sustain the use of the newly developed IPC e-Learning module in collaboration with key stakeholders ▪ IPC e-Learning course will be finalized Upload and use of IPC e-Learning course	January–March 2023
Activity 2.5.1: Continue support to strengthen IPC activities through IPC committee in the nine MTaPS-targeted facilities and introduce a mechanism to implement actions and update ▪ Facility supervision, monitoring, and on-the-job training reports will be developed Cross-learning visit at the facility level	January–March 2023
Activity 3.1.1: Collaborate with CDC/DGHS and QIS to strengthen AMS governance, planning, and implementation at the national level Report on prioritized AMS activities and implementation responsibilities protocol and report on field testing and use of the STG app	January–March 2023
Activity 3.5.1: Help strengthen AMS programs at facility level ▪ Facility supervision, monitoring, and on-the-job training reports will be developed Cross-learning visit at the facility level	January–March 2023
Activity 2.5.1: Strengthen IPC activities in the participating facilities representing different levels of care (PY2) Workshop will be organized to share the AMS assessment lessons learned in target facilities	January–March 2023

Table 3. Quarter 1, FY23, Activity Progress, Bangladesh—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Continue to support governance, functionality, and implementation capacity of national MSC mechanisms **Activity Description:** MTaPS will focus support to the NTC, and its CWG, to complement ongoing interventions, with the aim to continue to support the country's progress toward higher JEE capacity level, consolidate gains, ensure smooth transition, and advocate. A key activity under MSC will be to support CDC in mapping the country AMR activities at a national level, with the aim of identifying gaps in addressing WHO JEE areas followed by updating the road map of the NAP.	N/A	1.1	Collaborated with CDC and DGDA to celebrate the WAAW 2022 events. MTaPS participated in rally and discussion sessions in two selected facilities, organized a roundtable discussion with government officials, and facilitated boosting on key messages on Facebook.
Activity 2.1.1: Strengthen IPC governance structures at national level, including updating of the multisectoral IPC NAP **Activity Description:** MTaPS provides TA to draft TOR for national IPC committee, draft committee and plan following the assessment findings, and other areas such as drafting meeting minutes and invitation letters and translating any documents, when needed. MTaPS is coordinating CWG meetings to identify agenda for actions (i.e., various assessment, updates of NAP, developing AMS guidelines).	N/A	2.1	A draft national IPC plan supported by MTaPS is pending discussion in the CWG for approval. As the draft plan has been discussed with CDC several times, it was agreed to approve it early in Q2.
Activity 2.2.1: Help expand and sustain the use of the newly developed IPC e-Learning module in collaboration with key stakeholders **Activity Description:** The modified IPC e-Learning course is in the development stages. MTaPS will upload the courses into MUKTAPATH to ensure its use by health care providers	N/A	2.2	MTaPS Bangladesh team worked extensively on an e-Learning module to finalize the content to be uploaded to the national platform next quarter.
Activity 2.5.1: Continue support to strengthen IPC activities through IPC committee in the nine MTaPS-targeted facilities and introduce a mechanism to implement actions and update plans **Activity Description:** MTaPS team has collected IPC information from four old facilities using CDC customized checklist. MTaPS plans to hire three facility-based consultants to ensure on-the-job training, data collection, analysis, interpretation, and reporting.	N/A	2.5	Monitoring report prepared and ready for submission. Facility-based consultants have been shortlisted.
Activity 3.1.1: Collaborate with CDC/DGHS and QIS to strengthen AMS governance, planning, and implementation at the national level **Activity Description:** MTaPS will give support to prioritized AMR activities including implementation protocol and field testing of the STG app.	N/A	3.1	MTaPS has developed the STG app protocol. Once finalized, the team will conduct field testing, analysis, and finalize the app prior to uploading it into the Google Play store.
Activity 3.5.1: Help strengthen AMS programs at facility level **Activity Description:** Improve facility-based AMS implementation efficiency through joint supervisory visit, on-job assistance, and peer-to-peer visit.	N/A	3.5	MTaPS performed joint visits with CDC and QIS officials and shared reports with management.

B. BURKINA FASO

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of the MTaPS program in Burkina Faso is to support AMR containment by slowing the emergence of resistant pathogens and preventing the spread of resistant infections. AMS is one of the five strategic objectives in the 2015 WHO GAP on AMR, which also strongly emphasizes MSC. To advance its goal, MTaPS is assisting Burkina Faso to make progress toward the next JEE capacity level through activities focused on the MSC and AMS components of AMR in both the human and animal health sectors. As of September 2022, MTaPS has supported the completion of 4 WHO benchmark actions—1 contributing to MSC/AMR, and 3 to AMS—while 5 other benchmark actions are at various stages of completion (ongoing).

Burkina Faso has a clear strategy in place to ensure the availability of, access to, and appropriate use of quality-assured antimicrobials in the human and animal health sectors. MTaPS' support is focused on structures that ensure the enforcement and compliance monitoring of existing regulations, policies, and guidelines, including the recently updated STGs and EML. Such enforcement is needed to address the sale and use of antibiotics without prescription.

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 DTCs in more health facilities and capacitating those that already exist to provide supportive supervision in their facilities and promote AMS practices. In FY23, in addition to activities to strengthen facility-level DTCs, MTaPS is supporting the TS of the OHP and the OHP's 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 plans to support the 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 working to support the operationalization of the OHP in Burkina Faso, which was established by the Government of Burkina Faso to implement MSC activities, including AMR. To facilitate the official establishment of the OHP, MTaPS—in collaboration with the USAID GHSC-PSM program and OHP members—supported the TS-OHP to draft Inter-Ministerial Order No. 2020-210/MS/MINEFID/MESRSI/MAAH/MRAH/MEEVCC, which defines the TOR, organization, composition, and functioning of the technical steering committee, TS, and OH focal points, and was signed on June 30, 2020.

To operationalize the OHP, MTaPS collaborated with other OHP stakeholders to organize a governance meeting of the presidents and vice-presidents of the OHP's seven TTCs to orient them and enable the effective governance of their respective committees. MTaPS supported the TS-OHP to review and update the inter-ministerial orders establishing the TTCs, which were then submitted to the respective ministers for signature. MTaPS also worked with the TS-OHP, the AMR-TTC, and OH partners to

strengthen the organizational and governance structure of the AMR-TTC by defining the TOR, roles and responsibilities, and composition of the AMR-TTC and its sub-commissions. MTaPS collaborated with FAO and the Country Health Information Systems and Data Use project to organize OHP meetings and strengthen coordination between the AMR-TTC and OHP. In FY22—in collaboration with FAO, the Ministry of Water, Energy, and Environment (the current chair of the OH steering committee), and other AMR stakeholders—MTaPS supported the leadership of the AMR-TTC to organize a quarterly meeting to review activity implementation by implementing partners and any challenges encountered. Additionally, MTaPS, in collaboration with WHO, supported the AMR-TTC and the TS-OHP to develop Burkina Faso's 2021-2024 NAP-AMR.

MTaPS also supported two RUA sub-commission meetings and facilitated the participation of two MOH representatives in a two-part interuniversity diploma course on antibiology and antibiotherapy in sub-Saharan Africa (*Diplôme Interuniversitaire d'Antibiologie et Antibiothérapie en Afrique Subsaharienne*), organized by the University of Nazi Boni in Bobo-Dioulasso, Burkina Faso, and the University of Montpellier in France. The course included a two-week online session followed by four weeks of in-person classes with laboratory sessions.

MTaPS, in collaboration with the FAO and other partners, supported the DGSV to develop guidelines for AMU in the animal sector and drafted a ministerial order regulating AMU in the animal sector, which was then submitted to the minister of agriculture, animal resources, and fisheries for signature. MTaPS also 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 3 TOT sessions for 15 veterinarians (2 female, 13 male) and 42 livestock technicians (4 female, 38 male) using the developed training package. MTaPS also supported the DGSV to print 500 copies of the guidelines for dissemination to support AMS at the peripheral level of the health system.

WHO and the General Directorate of Pharmacy, Medicines, and Laboratories led a review of Burkina Faso's EML in 2020. As part of the process, MTaPS provided technical assistance to ensure that antibiotics in the EML were classified according to the WHO AWaRe categorization. In FY21, MTaPS supported the National Drug Regulatory Authority (NDRA) to disseminate 1,500 copies of the EML (including the AWaRe categorization of antibiotics) to assist health care professionals to follow proper prescribing practices. In FY22, MTaPS and the WHO also supported the NDRA to develop the 2022 national therapeutic formulary (NTF).

Additionally, MTaPS supported the Directorate of Hospital Pharmacy (DPH) to establish and train DTCs in 10 selected health care facilities (HCFs). A total of 250 DTC members (60 female, 190 male) were trained on AMS. 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 antibiotic use highlighted the unavailability of facility-level infectious disease STGs. A PPS on antibiotic consumption and use conducted in July 2022 at the Regional Hospital of Banfora revealed that (a) 136 (including 75 female patients) out of 176 hospitalized patients (77.27%) were being treated with antibiotics; (b) 99% of patients were treated without performing an antibiogram; (c) only 4.95% of patients had undergone cytobacteriological examination; (d) 75% of prescribed antibiotics were in the Watch category (Beta-lactams: cephalosporin of third generation), followed by aminoglycosides and nitroimidazoles; and (e) 68% of antibiotics prescribed did not comply with the treatment protocol recommended in the

guidelines of the facility-level infectious disease STGs ("Practical Guidelines of Good Prescribing of Antibiotics in Burkina Faso"). To address the inappropriate use of antibiotics, MTaPS supported the General Directorate of Access to Health Products (*Direction Général de l'Accès aux Produits de Santé* [DGAP]) and the DPH to develop training modules based on the facility-level infectious disease STGs and trained 350 health professionals (including 158 women) in the 10 selected HCFs. MTaPS also supported the Department of Quality and Health Care (DQSS) and DPH in printing and disseminating 500 copies of the STGs.

Finally, MTaPS supported the DGAP, DPH, and *Direction de l'Information Pharmaceutique et de l'Usage Rationnel des Produits de Santé* to conduct supervision visits to the *Centres Hospitaliers Regionaux* of Tenkodogo, Ziniaré, Kaya, Banfora, Koudougou, Gaoua and the *Centre Hospitalier Universitaire* (CHU) *Régional* of Ouahigouya, the CHU Sanou Souro of Bobo-Dioulasso, and the *Centres Médicaux avec Antenne Chirurgicale* of Zorgho and Pissy to assess the functionality of their respective DTCs. These supervision visits revealed that DTCs do not hold regular meetings and lack relevant STGs, a list of hospital medicines and consumables, training on RUA, and information on the availability, removal, and adverse effects (PV) of medicines. The supervisors recommended to the respective hospital management teams to (a) appoint designated staff members to lead their facility's DTC, ensure its full functioning, and organize regular DTC meetings; (b) support development of hospital-specific therapeutic protocols and a hospital formulary; and (c) advocate for hospitals to allocate a budget line to support their DTCs. MTaPS also assisted the DGAP in printing 250 copies of the DTC organization guide.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.2: Provide technical assistance to the AMR-TTC to complete the establishment of and capacitate the AMS subcommittee, including its human, animal, agricultural, and environmental sector TWGs

MTaPS supported the RUA sub-commission to organize its first quarterly meeting of FY23. Nine participants (four female and five male) attended the meeting. Meeting participants shared the results of previous PPS of antibiotic use within five hospitals conducted in 2020 in Burkina Faso which revealed the misuses of antibiotics in the country and highlighted the need to improve antibiotics use to contain AMR.

MTaPS supported three additional members of the RUA sub-commission to participate in the six-week antibiology and antibiotherapy interuniversity diploma course for Sub-Saharan Africa in order to build their capacity to support the functioning of the RUA sub-commission effectively and sustainably.

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

Activity 3.5.1: Support the DPH, the DQSS, and AMR TTC to monitor the functionality of DTCs in 10 establishments

The analysis of the PPS on antibiotic use conducted in July 2022 at the Regional Hospital of Banfora revealed that (a) 136 (including 75 female patients) out of 176 hospitalized patients (77.27%) were being treated with antibiotics; (b) 99% of patients were treated without performing an antibiogram; (c) only 4.95% of patients had performed a cytobacteriological examination; (d) 75% of prescribed antibiotics

were in the Watch category (Beta-lactams: cephalosporin of third generation), followed by aminoglycosides and nitroimidazoles; and (e) 68% of antibiotics prescribed did not comply with the treatment protocol recommended in the official guidelines for facility-level infectious disease STGs ("the practical guidelines for the correct prescription of antibiotics in Burkina Faso"). To address the inappropriate use of antibiotics, MTaPS supported the DGAP, DQSS, and the DPH to develop training modules based on the facility-level infectious disease STGs. From October 4 to October 22, 2022, MTaPS—under the aegis of the DPH and in collaboration with the RUA sub-commission of the OHP— organized on-site trainings of 350 health professionals (including 158 women) from the 10 MTaPS-supported HCFs on the infectious disease STGs. Training participants included medical biologists, physicians, pharmacists, nurses, and midwives from *Centres Hospitaliers Régionaux* of Ziniaré, Kaya, Banfora, Tenkodogo, Gaoua, and Koudougou, the medical centers with a surgical branch (*centre médical avec antenne chirurgicale*) of Zorgho and Boulmiougou, the CHU Sanou Souro of Bobo-Dioulasso, and the CHU *Régional* of Ouahigouya.

Activity 3.2.1: Support the DGSV to disseminate the ministerial order regulating and enforcing the rational use of antimicrobials and to draft a ministerial order on PV in the animal health sector

From December 13 to December 17, 2022, MTaPS supported the DGSV to organize a workshop in Koudougou to draft a ministerial order to create a national veterinary PV system in Burkina Faso and define its structural organization and functioning. This ministerial order will empower the DGSV to conduct PV activities and to regulate and enforce the rational use of antimicrobials in the animal health sector. A total of 11 participants (2 women) from DGSV (9 participants), University Joseph KI-ZERBO (1 participant), and MTaPS (1 participant) attended the workshop, with the aim of establishing a regulatory framework on the creation, missions, organization, and functioning of the national veterinary PV system in Burkina Faso. The workshop allowed participants to develop the draft ministerial order and design a PV data collection tool and reporting mechanism. Next steps after the workshop will include (a) the organization of a validation workshop, (b) the review and finalization of the ministerial order by the legal counsel of the Ministry of Agriculture, Animal Resources and Fisheries, and (c) the official endorsement and signature of the ministerial order.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- The lack of official appointment of members of the AMR TTC and its RUA sub-commission hampers the functioning of these bodies. Under the leadership of the USAID Mission in Burkina Faso, MTaPS continues to advocate for the official appointment of members of these bodies.
- Involvement of country counterparts in the development of training modules and the implementation of training activities resulted in attendees being more engaged in these activities and outcomes improved.

Dr. Sekou Traore, surgeon and President of the DTC at *Centre Hospitalier Régional* of Banfora, Burkina Faso, responding to questions during an MTaPS-supported training on the proper use of antimicrobials. Photo credit: Hema Yacouba, MTaPS

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 3.2.1: Support the DGSV to disseminate the ministerial order regulating and enforcing the rational use of antimicrobials and to draft a ministerial order on PV in the animal health sector ▪ Support a validation workshop for the draft ministerial order on PV in the animal sector	February 2023
Activity 1.1.2: Strengthen the functionality of the TTC-AMR and the RUA sub-commission ▪ Support the RÚA sub-commission to organize its quarterly meetings ▪ Organize a sensitization day on AMR for students from Nazi Boni University of Bobo-Dioulasso at the end of their medical and pharmacy training cycle during their internship at CHU of Sanou Souro as part of the WAAW celebration	January 13 and January 30-31, 2023
Activity 3.2.2: Develop and promote the use of a website application that includes the NTF and other rational use and AMR-related documents	February 2023
Activity 3.5.1: Support the DPH, TTC-AMR, and DTCs to monitor the implementation of AMS interventions in selected health facilities	March 2023

Table 4. Quarter 1, FY23, Activity Progress, Burkina Faso—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.2: Provide technical assistance to the AMR-TTC to complete the establishment of and capacitate the AMS subcommittee, including its human, animal, agricultural, and environmental sector TWGs **Activity Description:** Support the functioning of the AMR TTC and its sub-commission, organize coordination meetings, and build capacity of the RUA sub-commission members	5.4	1.1	The RUA sub-commission organized its first quarterly coordination meeting. Additionally, three of its members attended antibiology and antibiotherapy interuniversity diploma course for sub-Saharan Africa. Upon return, they shared the knowledge acquired with the rest of the RUA sub-commission.
Activity 3.2.1: Support the DGSV to disseminate the ministerial order regulating and enforcing the rational use of antimicrobials and to draft a ministerial order on PV in the animal health sector **Activity Description:** Organize a two-day workshop in eight administrative regions and establish a PV system in the animal health sector	5.4	3.5	MTaPS supported the DGSV to draft the decree/ministerial order creating the national veterinary PV system in Burkina Faso and to design a PV data collection tool and reporting mechanism. The decree/ministerial order is now with the ministry of agriculture, animal resources and fisheries for finalization and endorsement.

C. CAMEROON

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of MTaPS/Cameroon is to support AMR containment and slow the emergence of resistant bacteria and prevent the spread of resistant infections. MTaPS/Cameroon provides support to strengthen governance for MSC, improve IPC practices and services, and strengthen governance for AMS, including capacity building. Through MTaPS, USAID is supporting Cameroon to make progress toward higher JEE capacity levels in the AMR technical area. Activities in Cameroon fall under MTaPS sub-objective 5.4, and many of them are being implemented in coordination with other partners, especially those funded by USAID and the CDC.

MTaPS uses the OH approach to strengthen the operationalization of AMR governance in Cameroon by supporting the establishment of IPC and AMS TWGs with terms of reference, as well as the organization of routine coordination meetings of AMR stakeholders to plan, monitor, and evaluate AMR activities. MTaPS is also supporting the operationalization of the OHP through technical assistance to revise the OH strategic policy document.

To ensure accountability, MTaPS supported the government to put in place a strong governance mechanism, starting from the central and regional levels with the appointment of national and regional IPC and AMS focal persons and culminating with the establishment of IPC committees and DTCs with clear terms of reference and action plans at HFs. MTaPS uses a sustained, systematic approach to train, coach, and mentor health care workers to improve IPC practices and AMS in HFs. MTaPS also supported the development of reference policy documents and tools including the national IPC guidelines, national IPC action plan, IPC training curricula, and the integrated national AMS action plan.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' primary goal is to support the country move up to the next JEE level across the 3 result areas by supporting the completion of WHO IHR benchmark actions. As of September 2022, MTaPS has supported the completion of 6 (10%) of the 62 total WHO benchmark actions—5 contributing to IPC, and 1 to AMS—while 17 other benchmark actions are at various stages of completion (ongoing).

Since MTaPS began its work in Cameroon in 2019, the program has supported the MSC of AMR through assisting the organization of 18 routine meetings of the TS of the AMR MCC, the AMS and IPC TWGs, other OHP members, and partners to monitor the implementation of AMR activities. During FY22, MTaPS supported the organization of a coordination meeting between the TS-MCC and OHP to strengthen linkages between these two bodies and to advocate for creating the MCC. MTaPS also supported a workshop for OHP stakeholders to review the regulatory framework of the OHP and supported a second meeting to review and validate the report on the assessment of the NAP-AMR prior to updating the plan. MTaPS also supported the celebration of AMR-related events including WAAW, a conference of the Society of Cameroonian Microbiologists, and World Hand Hygiene Day to strengthen the technical capacity of key government stakeholders and health care providers.

MTaPS supported a baseline assessment of IPC practices in 38 HFs, the development of IPC training curricula, the establishment of IPC committees in 12 HFs, the development of the national IPC guidelines and action plan, the training of 174 health staff (79 female, 95 male) in IPC, CQI of IPC practices in 12 HFs, and the development of a national surveillance protocol to monitor HCAIs.

Additionally, MTaPS supported the DPML to carry out a situational analysis of AMS-related policies in the animal and human health sectors, develop a national integrated AMS action plan, establish DTCs in 12 HFs, train 239 health care providers (134 female, 105 male) in AMS, and conduct CQI of AMS activities in supported HFs.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the MSC of AMR activities by organizing a working session with the TS of the AMR MCC, the OHP, and partners including the USAID's IDDS project and WHO to collaborate and agree on the next steps for the review and update of the NAP-AMR following the validation of the report on the assessment of the previous NAP-AMR.

MTaPS continued to strengthen the governance, functionality, and capacity of IPC committees to implement self-initiated activities and CQI using IPC tools and institutionalized actions. MTaPS also supported the *Departement de Promotion de la Santé* (DPS) to develop a documentary video on MTaPS-supported activities in Mbouda District Hospital, an MTaPS-supported HF that has experienced remarkable improvement in IPC performance.

MTaPS supported the DPML to monitor DTC activities through virtual meetings of the DTC champions at supported HFs. MTaPS also supported the DPML to begin the recruitment of a national consultant to carry out the WHO AWaRe categorization of antibiotics in Cameroon.

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.2.1 (FY22 activity): Support the TS of the AMR MCC and the OHP to update the NAP-AMR

In December, MTaPS organized a working session with the TS of the AMR MCC, the OHP, IDDS, WHO, and other partners to collaborate and plan next steps for the review and update of the NAP-AMR. After the validation of the assessment report on the previous NAP-AMR, the consultants proposed a draft NAP-AMR to be reviewed and validated by the relevant stakeholders. However, the TS of the AMR MCC and the OHP did not agree on who should lead the organization of the review and validation workshop. MTaPS organized working sessions with the TS of the AMR MCC and the OHP to resolve this disagreement, and it was finally agreed that the OHP will organize the workshop, which has been scheduled for February 2023.

Activity 1.2.1: Continue to support the institutionalization, ownership, and uptake of AMR-related e-Learning courses through multisectoral efforts

MTaPS planned to collaborate with AFROHUN and IDDS to use the existing IPC and AMS modules developed with MTaPS' support to strengthen the capacity of health staff, as well as to develop the course content for the master's curriculum in infectious diseases and AMR recently launched at the University of Buea (UB) and support UB to develop the e-Learning platform for this course content. In

December, MTaPS held a working session with IDDS and AFROHUN to develop a road map for this activity including the following steps:

1. Organize a stakeholder engagement meeting with officials of UB
2. Recruit and engage consultants to develop the e-Learning platform
3. Develop the MSC curricula content
4. Develop the e-Learning platform using the content
5. Validate and adopt the e-Learning platform

A stakeholder engagement meeting with UB officials to present and validate the road map and approve the implementation timeline is scheduled for January 2023,

RESULT AREA 2: IPC

Activity 2.5.1: Continue to strengthen the governance, functionality, and capacity of IPC committees to implement self-initiated IPC activities and CQI using IPC tools, and institutionalized actions

MTaPS continued to support the DPS strengthen the governance, functionality, and capacity of IPC committees in the 12 MTaPS-supported HFs by monitoring their activities through the IPC WhatsApp group and supporting the committees to implement self-initiated activities as part of the CQI process. Seven of the 12 IPC committees have already selected impactful activities for their IPC action plans such as the use of multimodal strategy to improve waste management, hand hygiene audits to strengthen compliance of health staff to hand hygiene practices, and surveillance of HCAIs. MTaPS provided technical assistance to review the proposed activities prior to financially supporting their implementation.

From October 25 to October 28, 2022, the MTaPS communications officer visited Cameroon to direct the filming and conduct field interviews for a documentary video on MTaPS-supported activities at Mbouda District Hospital. Following MTaPS' efforts there to strengthen the technical and managerial capacities of facility IPC champions to improve the quality of health care and ensure the safety of patients and health care workers, Mbouda District Hospital has received awards in IPC and has become a leading example of an HF with improved IPC status in the west region of Cameroon. The video will demonstrate the outcomes of MTaPS' technical assistance to a general audience in Cameroon and globally. The communications officer and an MTaPS Cameroon senior technical advisor interviewed key staff at Mbouda District Hospital, including the director, general supervisor, and IPC champion, and captured video footage at the facility. The team also interviewed the regional IPC focal person and the regional delegate of public health in the west region, as well as the national IPC focal person in Yaoundé. The communications officer is currently finishing the editing and production of the video.

National IPC focal person, Cameroon, takes part in a video-recorded interview, October 28, 2022. Photo credit: Alphonse Acho, MTaPS

Regional delegate of public health of the west region (Cameroon) takes part in an interview, October 27, 2022. Photo credit: Alphonse Acho, MTaPS

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

Activity 3.5.1: Support the governance and functionality of the DTCs to implement AMS programs and actions, including monitoring of AMU and other interventions, to improve AMU at designated HFs

MTaPS continued to support the DPML to strengthen the governance and functionality of DTCs to continue to implement AMS programs through self-initiated efforts to foster ownership and sustainability. Each of the 12 supported DTCs were asked to identify at least 1 data-based improvement or other results-oriented activity either from their existing AMS improvement plan or by proposing a new activity. With technical assistance from MTaPS, DPML is following up with the DTCs to prepare and share the protocols for these activities. Once the activities are identified, MTaPS will provide technical and financial support to the DTCs to implement them.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

(Addressed under the Objectives/Health Areas sections of the report.)

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1.2.1: Support the TS of the AMR MCC and the OHP to update the NAP-AMR	February 2023
Activity 1.2.1: Continue to support the institutionalization, ownership, and uptake of AMR-related e-Learning courses through multisectoral efforts	March 2023
Activity 2.5.1: Continue to strengthen the governance, functionality, and capacity of IPC committees to implement self-initiated IPC activities and CQI using IPC tools, and institutionalized actions	February 2023
Activity 3.5.1: Support the governance and functionality of the DTCs to implement AMS programs and actions, including monitoring of AMU and other interventions, to improve AMU at designated HFs	February 2023
Activity 3.1.1: Support the classification of antibiotics in the human sector following recommendations from the WHO AWaRe categorization	March 2023

Table 5. Quarter 1, FY23, Activity Progress, Cameroon—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.2.1: Support the TS of the AMR MCC and the OHP to update the NAP-AMR **Activity Description:** MTaPS collaborated with other partners to assess the previous NAP-AMR.	5.4	1.2	MTaPS, IDDS, and FAO had supported the national counterparts to hire consultants to assess the outdated plan and propose a draft NAP-AMR. MTaPS supported a meeting to validate the assessment report. MTaPS will support a workshop to review and validate the draft NAP-AMR.
Activity 1.2.1: Continue to support the institutionalization, ownership, and uptake of AMR-related e-Learning courses through multisectoral efforts **Activity Description:** MTaPS, IDDS, and AFROHUN will support the UB to develop the course content for the master's curriculum in infectious diseases and AMR recently launched at the UB	5.4	1.2	MTaPS, IDDS, and AFROHUN have proposed a road map and a timeline for the implementation of this activity. The next step following the road map will be the organization of a stakeholder's engagement meeting with the officials of the UB to validate the road map and implementation timeline.
Activity 2.5.1: Continue to strengthen the governance, functionality, and capacity of IPC committees to implement self-initiated IPC activities and CQI using IPC tools, and institutionalized actions **Activity Description**: MTaPS supported the IPC committees through the DPS to identify impactful activities and monitor their implementation	5.4	2.5	MTaPS held a working session with the DPS, which has started to mobilize the IPC committees to identify the activities and propose a concept note/protocol including the cost of implementation. MTaPS will continue to provide technical and financial assistance for the implementation of the activities.
Activity 3.1.1: Support the classification of antibiotics in the human sector following recommendations from the WHO AWaRe categorization **Activity Description:** MTaPS will support the DPML to classify antibiotics following the WHO AWaRe categorization	5.4	3.1	MTaPS supported the DPML to develop the terms of reference to recruit a national consultant to produce a first draft of the AWaRe categorization.
Activity 3.5.1: Support the governance and functionality of the DTCs to implement AMS programs and actions, including monitoring of AMU and other interventions, to improve AMU at designated HFs **Activity Description:** MTaPS supported the DTCs through the DPML to identify one or two pertinent activities from their AMS facility action plans to be implemented	5.4	3.5	MTaPS has supported the DPML to organize a virtual meeting of the DTC champions to encourage them to identify proposed activities and send concept notes (including a budget) for implementation. MTaPS will provide technical and financial support once all the 12 facilities have identified their proposed activities.

D. CÔTE D'IVOIRE

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of the USAID MTaPS Program/Côte d'Ivoire is to support sustained AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. MTaPS/Côte d'Ivoire is supporting 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) of the NAP-AMR. IPC and AMS are two of the strategic objectives in the 2015 WHO Global Action Plan on AMR and in Côte d'Ivoire's NAP-AMR, and both documents strongly emphasize MSC. MTaPS has been providing technical support to consolidate MSC on AMR, in addition to supporting the IPC and AMS technical areas, with direct technical assistance to the national AMR TWG and relevant ministries. Planned activities for FY23 were built on the work done during the previous four years of the program, including supporting 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 nationally and at health facilities.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' primary goal is to support the country move up to the next JEE level across the three result areas by supporting the completion of WHO International Health Regulations (IHR) benchmark actions. As of September 2022, MTaPS has supported the completion of 31 WHO benchmark actions – 9 contributing to MSC/AMR, 14 to IPC, and 8 to AMS, while 4 other benchmark actions are at various stages of completion (ongoing).

Since MTaPS launched in September 2018, Côte d'Ivoire has successfully established an MSC mechanism for zoonotic diseases and a TS and TWGs to monitor AMR activities. MTaPS assessed IPC practices and AMS regulations and then supported the development of IPC guidelines and an AMS action plan. Through a decree in April 2019, the Ivorian Government formalized the OHP to institutionalize a national MSC mechanism to address public health threats, including AMR. MTaPS supported the country to establish an AMR TWG to monitor AMR activities, which is connected to the OHP through a national coordinating body called the MSC Group (or MCC). MTaPS helped finalize the TOR and guidance manual for this body and its subcommittees.

In collaboration with WHO, USAID, the US CDC, and FAO, MTaPS supported the AMR TWG, IPC TWG (Multisectoral Technical Committee 4 [MTC4]), and AMS TWG (MTC5) to develop and validate more than 15 reference documents, including the AMR governance manual, national AMR policy, 2019–2020 multisectoral NAP-AMR, national IPC plan, animal-sector IPC guidelines, and the national AMS policy, guidelines, and plan.

MTaPS supported a situational analysis of the capacity and functionality of ICCs and DTCs in 4 university teaching hospitals, 12 regional hospitals, and 4 private clinics in the human health sector as well as the

veterinary clinic of the Ministry of Animal Resources and Fisheries' Regional Directorate of Bouake and the Antirabic Center of Cocody in the animal health sector. MTaPS facilitated the development and validation of documents and training modules in IPC and AMS, training of HCPs, and the establishment of a CQI process in HFs. Supported ICCs and DTCs are now functional with clear TORs and capacity building plans.

MTaPS assisted the AMR TWG to improve the reporting of achievements to health authorities in Côte d'Ivoire. Additionally, MTaPS supported the development of e-Learning modules for training on IPC and AMS and assisted the AMR TWG to establish a regional pool of AMR trainers, including 18 master trainers and 36 regional AMR trainers.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Strengthen the functionality of the MCC by organizing effective coordination through regular meetings of the AMR TWG

In November 2022, the MTaPS Communication Officer visited Côte d'Ivoire to support the production of a photo essay and documentary video on MTaPS activities related to AMR and COVID-19 vaccination. Video footage and photos taken during the visit show MTaPS' technical assistance to the Sinacassci pharmacy and Clinique "Le Grand Centre" and routine vaccination activities in the Gbèkè region. The draft video and the photo essay are under development.

On December 2, 2022, MTaPS supported the AMR-TWG to observe WAAW through a one-day ceremony chaired by the Director General of Health at the Institute of Public Health in Adjamé to sensitize authorities, the general public, and civil society on AMR. A total of 103 participants (46 men and 57 women) from the OHP, the MCC, the AMR secretariat, the MTCs, the Directorates of the Ministry of Animal Resources, the Ministry of Health and Universal Health Coverage, the Ministry of Environment and Sustainable Development, the Ministry of Agriculture, medical and paramedical professional associations, the Directorate of Veterinary Services, the press, civil society associations, biomedical laboratories, health facilities, universities, the National Institute for Health Agent Training, USAID, CDC, FAO, WHO, Breakthrough Action, and MTaPS attended the ceremony. Sensitization activities continued throughout the week at regional hospital centers, health personnel training institutes, and schools and universities.

MTaPS also supported the AMR-TWG to set up a steering committee composed of five people (all women), from the AMR-TWG, the OHP, the Directorate of Veterinary Services, the Ivorian Pollution Control Center, and bioMérieux.

RESULT AREA 2: IPC

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

From October 2 to 15 and October 24 to 27, 2022, MTaPS supported IPC trainers to conduct supervision visits to 20 health facilities (University Hospital Center of Treichville, Angré, Cocody, Bouaké, the Regional Hospital of Yamoussoukro, Abengourou, Daloa, Aboisso, San Pedro, Gagnoa, Man, Bouaflé, Bondoukou, Korhogo, Odienné, Divo, and the International Polyclinic Sainte-Anne-Marie, the

Polyclinic Grand Centre of Yopougon, the International Polyclinic of Indénié, and the Clinique Centrale of Abobo) to strengthen HCPs' capacity in IPC as part of the fight against AMR. This activity was conducted by 11 teams of supervisors using the WHO IPCAF and HHSAF. IPCAF results are currently available from 13 sites (the IPCAF reports from the 7 sites in Abidjan are still pending), and show that only 1 site (the CHU of Bouaké), i.e. 7.69% of the total (1/13), had an "advanced" IPC score. Similarly, only 1 site (the Regional Hospital of Bondoukou) had a score of "insufficient." Just over half of the health facilities assessed, or 53.84% (7/13), had an "intermediate" score in IPC, while 4 out of the 13 sites (30.76%) scored as "basic." In addition, on the HHSAF, 61.53% (8/13) of the sites scored at the intermediate level in IPC, while 23.07% (3/13) were at the insufficient level. Only 15.38% (2/13) of the sites scored at the basic level. The scores for nine facilities improved since the previous assessment, and five facilities saw an improved score in the hand washing technical area (Figure 3 and Figure 4).
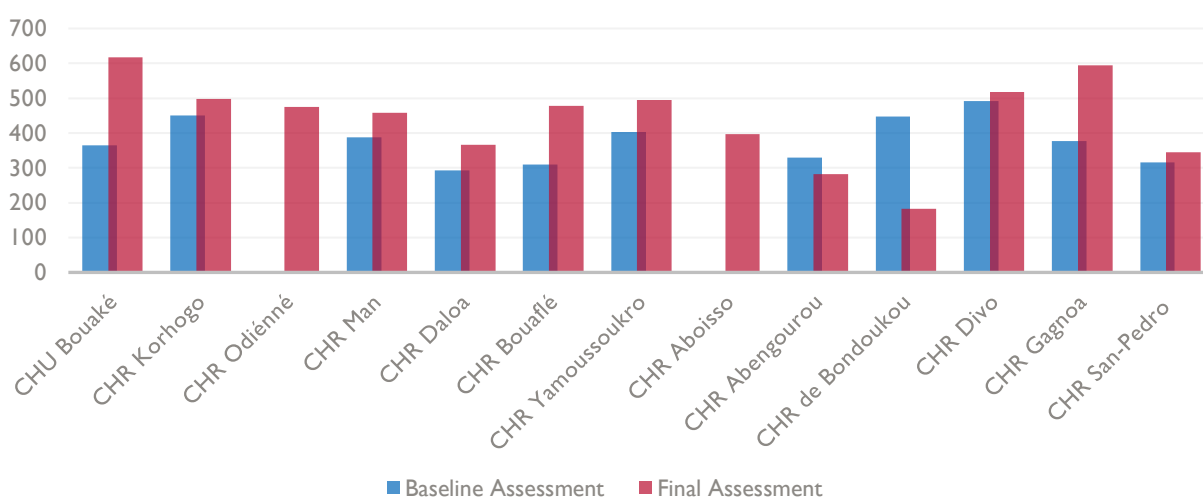
Figure 3. IPC assessment (IPCAF) scores, Côte d'Ivoire (baseline and final)
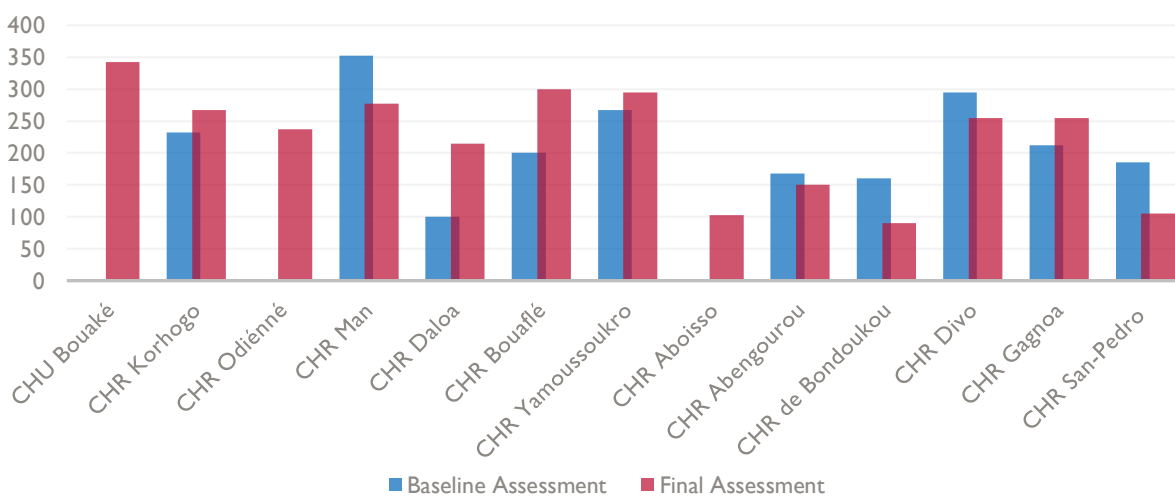
Figure 4. Hand washing assessments (HHSAF) scores, Côte d'Ivoire (baseline and final)

Activity 2.1.1: Support the AMR TWG to strengthen the IPC program at the national and facility levels

On November 30, 2022, MTaPS supported the AMR TWG to carry out an assessment of the national IPC program with the WHO IPCAT-Minimum Requirements (IPCAT-MR) tool, following the previous assessments conducted on June 12, 2020, and July 6, 2021. A total of 13 participants took part in this assessment of 6 IPC components (IPC program, IPC guidelines, IPC education and training, HCAI surveillance, multimodal strategies for implementing IPC interventions, and monitoring and evaluation of IPC practices and reporting of results) at the national level within the Directorates and Institutes of the Ministry of Health, Public Hygiene and Universal Health Coverage (MSHPCMU). The assessment was conducted by three assessors from USAID, CDC, and WHO. The results show an overall decline in all components, which may be explained by the fact that 2022 was the first year that the IPCAT-MR was used for this assessment.

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

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

MTaPS provided financial and technical support to a training of regional trainers from October 10 to 14, 2022, in Grand Bassam. This training aimed to build the capacity of regional AMS trainers for human health to support DTC capacity building, and it was attended by 44 participants (35 men and 9 women), including 36 regional trainers (30 men and 6 women) from 18 health regions. The facilitators came from MTC5, the Red Cross of Côte d'Ivoire (RCCI), the Ivorian Pharmaceutical Regulatory Authority (IPRA), the AMR secretariat, and MTC4. MTaPS also supported MTC5 to organize supervision visits to monitor CQI and AMS activity implementation by the DTCs in 14 health facilities, including 10 referral hospitals (Abengourou, Bondoukou, Yamoussoukro, Divo, Gagnoa, San-Pedro, Bouaflé, Daloa, Korhogo, Man and Odienne) from October 24 to 28; two university hospitals (Bouake and Treichville) from November 7 to 8; and one private clinic (Indenie Polyclinic) on November 29, 2022. Out of the 14 sites assessed, only 10 (71.42%) had improved their performance, but all had completed at least 1 activity in their action plan. On December 20, 2022, MTaPS supported MTC5 to hold a 1-day meeting of the ad hoc committee assigned to work on the decree officially establishing DTCs in the country to prepare for the planned validation workshops for the decree. A total of 10 participants (6 male and 4 female) from the AMR secretariat, the IPRA, the Center for Oceanological Research, the Ivorian Antipollution center, Felix Houphouet Boigny University, the Polyclinic of Indenie, and the RCCI participated in this meeting.

Activity 3.1.1 (FY21 activity): Support the AMR TWG to improve the national essential medicines list using the WHO antibiotic AWaRe categorization

MTaPS supported the organization of an expert committee meeting on October 21, 2022, to make plans for a workshop to integrate the AWaRe categorization into Côte d'Ivoire's NEML. The participants in this meeting were 20 representatives (12 male and 8 female) from AMR stakeholders, and they accomplished the following:

- Presented the preliminary results of the data analysis on bacterial antibiotic resistance patterns in the Ivorian context
- Defined the process to group antibiotics into WHO AWaRe categories
- Planned the categorization workshop itself

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

▪ The AWaRe categorization guidance documents and tool received from the MTaPS US office team facilitated the analysis of data collected during activity implementation in Côte d'Ivoire.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Support the MCC to monitor the implementation of the approved NAP-AMR ▪ Provide technical support to AMR-TWG to organize a quarterly coordination meeting of the MTC for AMS, a one-day face-to-face meeting of the MTC for IPC to define the package of activities to transform three of the facilities supported in previous years into centers of excellence in IPC and AMS.	February 7, 2023
Activity 2.1.1: Support the AMR TWG to strengthen the IPC program at the national and facility levels ▪ Support quarterly assessments with the WHO IPCAF, HHSAF, and water and sanitation for health facility improvement tool (WASH FIT), and work with IPC regional focal points, IPC regional trainers, and IPC committee heads to update and implement IPC improvement plans.	February 2023
Activity 2.5.1: Strengthen the functionality of IPC committees in the human health sector and the capacity of HCPs to implement IPC ▪ Support IPC regional focal points and IPC regional trainers to conduct quarterly supervisions of the IPC committees.	March 2023
Activity 3.1.1: Support the AMR TWG to review the national regulatory framework for appropriate use of antimicrobials in human health ▪ Support two one-day desk review meetings of the experts' group responsible for the revision of the decree officially establishing DTCs in Côte d'Ivoire, and then a five-day workshop to develop and validate the draft decree.	January–February 2023
Activity 3.5.1: Support the AMR TWG to improve a governance and oversight system for AMS in health facilities, including monitoring the implementation of related policies, guidelines, and standards ▪ Support the AMR-TWG to transform three health facilities (CHU Bouake, CHR Gagnoa, and Clinique Le Grand Centre de Yopougon) into AMS centers of excellence through a one-day meeting of MTC5 and the three health facilities to agree on the AMS action package and a road map, and support the AMS regional trainers to conduct quarterly supervision visits to the three facilities.	February–March 2023

Table 6. Quarter 1, FY23, Activity Progress, Côte d'Ivoire—GHSA

| Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)
Activity 1.1.1: Strengthen the functionality of the MCC by organizing effective coordination through regular meetings of the AMR TWG **Activity description:** MTaPS will focus on improving committee self-assessment and transitioning responsibilities and leadership to the AMR secretariat. Under the leadership of the OHP, MTaPS will continue to support the AMR secretariat to ensure the self-functioning of the TWGs. The TWGs will continue to organize regular meetings.	5.4	1.1	MTaPS supported the AMR TWG to launch Côte d'Ivoire's celebration of WAAW, through a ceremony chaired by the Director General of Health, representing the Minister of Health, Public Hygiene and Universal Health Coverage with the theme of "Preventing Antimicrobial Resistance Together." MTaPS also provided technical support to the AMR TWG to set up a steering committee of 5 people from the AMR TWG, the OHP, the Direction of Veterinary Services, the Ivorian Pollution Control Center, bioMérieux, and MTaPS to prepare for a fundraising workshop.
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:** MTaPS will scale up this support to 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	MTaPS IPC trainers conducted field supervision visits to 20 health facilities in order to strengthen the capacity of health personnel in IPC as part of the fight against AMR. This activity comprised 11 teams of supervisors, including 7 teams for the Abidjan sites and 4 teams for the interior sites.
Activity 2.1.1: Support the AMR TWG to strengthen the IPC program at the national and facility levels: To Conduct an additional IPCAT2 assessment to identify areas that still need improvement **Activity description:** MTaPS—in collaboration with the One Health Workforce–Next Generation (OHW-NG)—will 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 to expand the options for learners using e-Learning self-paced options.	5.4	2.2	On November 30, 2022, MTaPS supported the AMR TWG to conduct an IPC national program assessment using the WHO IPCAT-MR tool. This assessment follows those of June 12, 2020, and July 6, 2021. A total of 13 participants took part in this assessment.
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 **Activity description:** MTaPS will provide support to the AMR-TWG through the MTC 4—in collaboration with the Directorate of IT and Health Information (DIIS) and WHO—to begin the process of integrating data from the IPCAF, IPCAT2, and scorecard evaluations into the DHIS2.	5.4	2.3	MTaPS provided financial and technical support to a training of regional trainers from October 10 to 14, 2022, in Grand Bassam to build the capacity of regional AMS trainers for human health. MTaPS supported the MTC5 of the AMR TWG to organize 3 joint supervision visits to evaluate the capacity and functionality of the DTCs in 14 health facilities. 78% of the supervised DTCs have improved their performance on AMS. MTaPS supported MTC5 of the AMR TWG to hold a meeting of the experts' group tasked with revising the decree officially establishing DTCs in Côte d'Ivoire. Participants were presented with the process to revise a government decree, and 2 technical workshops were scheduled for the development and validation of the decree. Participants agreed on a timeline to complete the technical phase of the revision by mid-February 2023.

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)
Activity 3.1.1 (year 3): Support the AMR TWG to improve the NEML using the WHO antibiotic AWaRe categorization. **Activity description:** MTaPS will support the AMR TWG in updating the decree that establishes DTCs in the country to comply with international standards and the WHO recommendation. Updates on the decree will address the issues raised above and strengthen the institutional framework for DTC AMS activities in health facilities.	5.4	3.1	MTaPS supported the organization of an experts' group meeting on October 21, 2022, to present the results of the analysis of data collected on AMR in the country. From the 30,084 strains tested and stored by the Institut Pasteur, the data analysis group selected and analyzed 6,544 antibiograms for the categorization of antibiotics from during the COVID-19 pandemic in Côte d'Ivoire (2020–2021). The four predominant germs were *Escherichia coli*, *Klebsielle pneumoniae*, *Staphylococcus aureus*, and coagulase-negative *Staphylococci*. Details of resistance phenotypes and genotypes were also presented to the experts group. A consensus on resistance rate limits for each AWaRe category will be needed to move forward with the development of the draft AWaRe list and organize the validation workshop.

E. DRC

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The MTaPS GHSA strategy is aligned with MTaPS' results framework. The goal of MTaPS' 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—MSC on AMR strengthened, IPC improved, and AMS optimized.

The strategic approach and actions are focused on supporting the critical path to achieving higher capacity levels as outlined in the JEE tool and WHO benchmarks for 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 tools including IHR, JEE, and benchmarks tools, 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 supporting DRC to progress toward higher WHO IHR capacity levels in the AMR technical areas.

CUMULATIVE PERFORMANCE TO DATE

Since its JEE was conducted in March 2018, DRC has made progress with the AMR recommendations identified in the JEE report by developing a NAP-AMR in 2019. Since its startup in DRC, MTaPS has supported the NC-AMR to implement the NAP-AMR and achieve progress in the MSC, AMS, and IPC technical areas. As of September 2022, MTaPS/DRC supported 21 (31%) of the 67 WHO benchmark actions—8 contributing to MSC/AMR, 8 to IPC, and 5 to AMS. MTaPS has assisted country counterparts to make progress in MSC/AMR by supporting 50% (2/4) of the level 2 actions, 50% (2/4) of the level 3 actions, 75% (3/4) of the level 4 actions, and 20% (1/5) of the level 5 actions in DRC. MTaPS has also contributed to improvement from the baseline score of 1 toward full level 2 capacity for AMS by supporting 75% (3/4) of the actions for level 2. MTaPS has also supported 33% (2/6) of the actions recommended for level 3 for AMS in DRC.

MTaPS supported the establishment of 12 DTCs in five provinces in DRC to oversee AMS interventions at health facilities. MTaPS is also supporting DTCs to conduct quarterly assessments of antimicrobial use, including antibiotics prescribing patterns and patients' knowledge on antibiotic prescriptions, as part of their CQI programs. In addition, MTaPS, in collaboration with WHO, provided support to the Pharmaceutical Regulatory Authority (ACOREP, formerly known as the DPM) to develop and integrate the WHO AWaRe categorization of antibiotics into the revised NEML and disseminate it in the provinces of Nord Kivu and Ituri.

A study on the aggregate consumption of antimicrobials in DRC revealed that at least 70% of antibacterial medicines consumed were in the Access category of the AWaRe categorization, which is higher than the WHO's recommendation of 60%. Despite good national results, the AWaRe categorization needs further review at the health facility level. An assessment conducted in May 2021 in MTaPS-supported facilities showed that only 2 out of the 7 (or 29%) health facilities assessed had at least 60% of prescribed antibiotics grouped under the Access group of WHO AWaRe categorization (Table 7).

Table 7. Antibiotics in use in MTaPS-supported facilities (DRC) according to AWaRe categorization (May 2021)

Name of facility	Total antibiotics (ATB) in use	Total ATB in Access category	% ATB in Access category
CME NYAKUNDE (Bunia)	21	14	67
BUNIA GENERAL HOSPITAL (Bunia)	18	13	72
KYESHERO GENERAL HOSPITAL (Goma)	20	11	55
HEAL AFRICA HOSPITAL (Goma)	27	12	44
MONKOLE HOSPITAL CENTER (Kinshasa)	33	13	39
SAINT JOSEPH HOSPITAL (Kinshasa)	23	10	43
UNIVERSITY CLINICS (Kinshasa)	26	10	38

MTaPS has also assisted country counterparts to make progress in the IPC technical area by supporting 80% (4/5) of the level 2 actions and 67% (4/6) of the level 3 actions. In collaboration with WHO and the FAO, MTaPS supported the Directorate of Animal Disease Control (*Direction de Lutte contre les Maladies Animales* [DLMA]) to conduct IPC assessments in the animal health sector. Using an adapted IPCAF tool, the DLMA, the DPM (now ACOREP), and the MOH's Directorate of Hygiene (*Direction d'Hygiène*) carried out the assessment in four farms and four animal health clinics. Afterwards, each facility developed an improvement plan to reduce health care–acquired infections and, by extension, the use of antimicrobials. MTaPS also supported the Directorate of Hygiene to carry out an assessment of hygiene conditions at the central level of DRC's health system with the WHO IPCAT tool and develop an improvement plan, which is currently being implemented.

To contribute to DRC's progress toward higher WHO IHR capacity levels in the AMR technical areas, MTaPS also continued supporting the NC-AMR and its AMS and IPC subcommittees to hold their respective quarterly meetings.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Result 1.1: Governance for MSC for AMR strengthened

Activity 1.1.1: Provide technical and logistical support to the NC-AMR for effective monitoring and planning of AMR interventions

To continue to strengthen AMR interventions in DRC, from October 20 to 28 2022, MTaPS, in collaboration with WHO, supported the NC-AMR to hold their quarterly AMS and IPC subcommittee meetings. Participants from the human, animal, and environmental health sectors carried out the following activities at these meetings:

AMS subcommittee meeting

- Development of road map for DTC activity implementation for 2022 Q4 through 2024 Q4.
- Development of a draft DTC activity implementation guide to share for review and input.
- Preparation for DRC's celebration of WAAW.
- An assessment of AMS subcommittee activity implementation: 4 out of 5 planned activities were carried out.

IPC subcommittee meeting

- Participants recommended to advocate for funding to revitalize the IPC subcommittee during the next meeting of the NC-AMR.
- Participants recommended including environmental sector aspects in the practical manual for IPC—a helpful tool for assessing epidemic response capacity as well as a routine IPC assessment tool to aid facilities to self-assess their IPC scores.
- The Directorate of Hygiene conducted a briefing on the national IPC guidelines, and participants resolved to develop a waste management guide for the animal and environmental sectors, as well as a work plan for January–March 2023.

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

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

From October 23 to November 1, 2022, MTaPS supported the DPM to disseminate the DRC's revised NEML, which includes the WHO AWaRe classification in the two MTaPS-supported provinces in the eastern DRC (North Kivu and Ituri). In both provinces, MTaPS supported the organization of briefing sessions for the provincial management teams, technical and financial partners of the MOH, and health care workers.

Additionally, MTaPS supported the DPS in Nord Kivu and Ituri to organize field supervision visits to selected supported health zones in Heal Africa, HGR Goma, Karisimbi, Bethsaida, Goma, and Kyeshero Hospitals. Supervisors observed that all six hospitals organized feedback sessions on the dissemination of the NEML, and that the NEML had been made available for use by health care workers at the hospitals. Although Heal Africa, Provincial, and Bethsaida Hospitals are approaching the WHO standard for use of

the NEML, supervisors recommended the other hospitals to make a greater effort to achieve the standard. Figure 5 shows supervision findings on the proportion of medicines from the NEML used by each hospital.

Supervisors also assessed the proportion of antibiotics under the WHO Access category that are used in the treatment of common infectious diseases in the 6 MTaPS-supported facilities and found that only Bethsaida Hospital and Karisimbi Hospital managed to meet the WHO recommended standard of at least 60% in the Access category.

Dissemination of the NEML, DRC, October 2022. Photo credit: Augustin Mwala, MTaPS
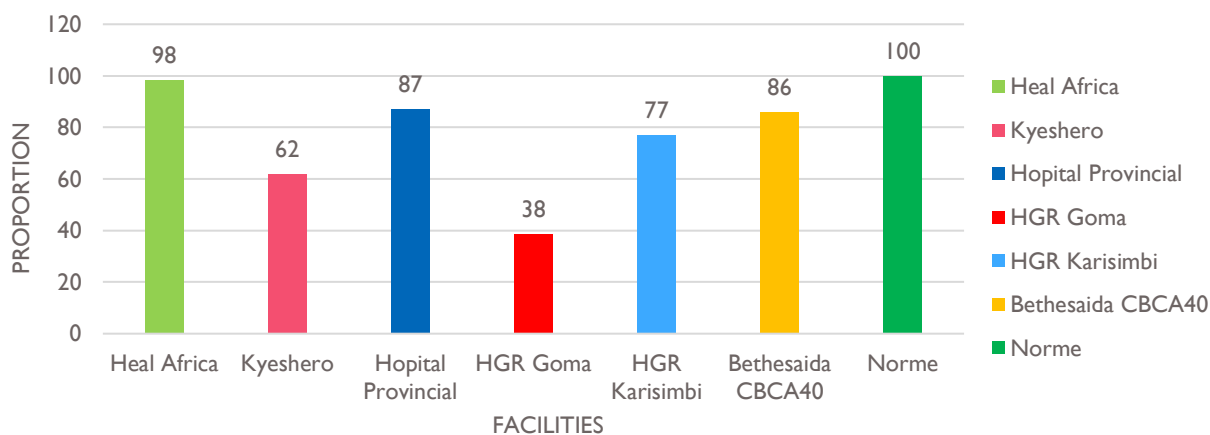
Figure 5. Proportion of medicines from the NEML used by each hospital (DRC) (Results from Q1 Y5 supervision)

Heal Africa exhibited slight improvement (from 44% of antibiotics in the Access category during the first review to 55% during the latest review), as did Kyeshero Hospitals (from 55% of antibiotics in the Access category during the first review to 57% during the latest review); both of these facilities have functional DTCs, but there is still a need for the DTCs to enforce adherence to the WHO AWaRe categorization in the use of antimicrobials.

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

MTaPS supported the DTC of Heal Africa, Kyeshero, Nyankunde, and Bunia hospitals to conduct quarterly assessments of antimicrobial use as part of their CQI program. The areas assessed included antimicrobial prescription patterns, patient knowledge of prescribed drugs, duration of treatment, compliance with standard malaria treatment guidelines, antibiotic prophylaxis in cesarean sections, and compliance with the WHO AWaRe categorization of antibiotics. There was no notable improvement in the use of antibiotics in the health facilities assessed. For example, at Kyeshero hospital, all 30 (or 100%) prescriptions analyzed had at least one antibiotic. The latest assessment data on prescribing patterns did not reveal improvement as compared to the previous assessment data in all the health facilities assessed. According to facility management, this situation is likely caused by high staff turnover, since new staff who have not yet been briefed on antibiotic prescriptions frequently join the facility.

Table 8 summarizes data on patients' knowledge on prescribed medicines. Patient knowledge of medicines prescribed decreased in the four facilities assessed. Once again, facility management pointed out staff turnover as the cause.

Table 8. Patients' knowledge of their prescriptions, DRC (Q3 PY4 and Q1 PY5)

	Route		Dose/frequency		Duration	
	Q3PY4	Q1PY5	Q3PY4	Q1PY5	Q3PY4	Q1PY5
CIM Bunia	100%	100%	95%	100%	82%	86%
HGR Bunia	97%	100%	44%	82%	89%	50%
Heal Africa	100%	78%	100%	96%	62%	90%
Kyeshero Hospital	100%	100%	75%	60%	70%	50%

Additionally, MTaPS supported the DTCs at Kyeshero and Heal Africa to evaluate progress in the implementation of their respective action plans and assess their CQI programs on AMS during a one-day meeting. DTC members at these facilities agreed that the previously developed medicines formulary list should be printed and distributed to all departments.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- DTCs appear to be more effective in health facilities that requested support to establish drug-related committees (such as at Heal Africa Hospital and Initiative Plus Hospital Center, for example), supporting the observation that when the relevance of DTCs is understood upstream by health workers and managers, DTC activities are conducted more effectively.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1.1.1: Provide technical and logistical support to the NC-AMR and related TWGs (AMS and IPC) for effective monitoring and planning of AMR activities.	February 2023
Activity 1.2.1: Support the NC-AMR in conducting joint MSC field support supervision visits in the human, animal, and environmental sectors, and use the supervision findings to conduct the annual Tripartite AMR Country Self-Assessment Survey (TrACSS)	March 2023
Activity 2.1.1: Support the NC-AMR in conducting regular assessments of IPC practices, including implementation of guidelines and regulations in the animal and human health sectors.	March 2023
Activity 3.5.1: Strengthen DTCs established with MTaPS' support to oversee implementation of AMS activities and conduct stewardship practices at their respective facilities	January 2023

Table 9. Quarter 1, FY23, Activity Progress, DRC—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Provide technical and logistical support to the NC-AMR and related TWGs (AMS and IPC) for effective monitoring and planning of AMR activities. **Activity description:** In collaboration with other partners (e.g., WHO, the FAO, IDDS), will continue to support the IPC and AMS TWGs in reviewing and updating their action plans and coordinating IPC and AMS interventions at the national, provincial, and facility levels; hold regular thematic meetings.	1,1.1		MTaPS met with ACOREP (formerly the DPM) in collaboration with WHO, FAO and other partners to support the quarterly AMR coordination meeting scheduled for this quarter. The plans were informed by the issues and recommendations made during the AMS and IPC subcommittee meetings. The work plan for the next quarter was developed especially for the IPC subcommittee. MTaPS will continue supporting the NC-AMR meeting, despite the late approval of the PY5 work plan.
Activity 3.1.1: Support the NC-AMR to strengthen the oversight of compliance with AMS policies and regulations in the human, animal, and environmental health sectors **Activity description:** Support the NC-AMR, Directorate of Hospital Hygiene, General Directorate for the Organization and Management of Health Care Services (DGOGSS), and DLMA in conducting similar assessments to monitor and document progress in implementing required IPC practices as part of CQI.	2,2.1		This activity will be organized during the next quarter (January–March 2023), since the work plan had just been approved.
Activity 3.5.1: Strengthen DTCs established with MTaPS' support to oversee implementation of AMS activities and conduct stewardship practices at their respective facilities **Activity description:** Support the MOH in building the capacity of DTCs at designated facilities to oversee implementation of AMS activities. As part of a CQI package, MTaPS will continue implementing data monitoring mechanisms for CQI and will develop facility AMS improvement plans through a quarterly review process in MTaPS-supported health facilities.	3,3.5		MTaPS continued to support all the DTCs in MTaPS-supported facilities in Kinshasa, Lubumbashi, Kolwezi, Bunia, and Goma to conduct quarterly reviews as part of their CQI programs. During the next quarter, antibiotic use in urinary tract infections will be assessed as well. For this reporting quarter, this activity was conducted only in four DTCs in Goma and Bunia.

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

OVERVIEW

MTaPS' MNCH/FP/RH goal in 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.

Activities for Year 5 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 CDRs, building technical and managerial capacities in pharmaceutical management in coordination with other partners (Global Health Supply Chain–Technical Assistance [GHSC-TA] and Integrated Health Program [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 and CCSs).

CUMULATIVE PERFORMANCE TO DATE

The MNCH and FP/RH, portfolios of the USAID MTaPS Program contribute to DRC's efforts in achieving the SDGs and the targets for ending preventable child and maternal deaths by providing technical assistance at all levels (DPSs, HZs, health facilities, CDRs, and community organizations). This assistance contributes to building stewardship, technical, and managerial capacities to reduce barriers to access to essential MNCH and FP/RH products and supplies in the North Kivu and Ituri provinces in eastern DRC and to strengthen management of medical products and the pharmaceutical system in general. During previous years (FY20, FY21, and FY22) MTaPS supported the medicines TWGs in Nord Kivu and Ituri to strengthen their stewardship roles. This support was essential for the establishment of a MNCH subgroup with a special focus on MNCH health products, and resulted in achievements including the effective use of the national supply chain system by partners for medicines distribution as well as more effective collaboration with donors and implementing partners (USAID, Global Fund [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.). To date the medicines TWGs are fully functional and are fulfilling their role of coordinating partner support. Thanks to the TWGs' leadership, action has been taken to ensure the effective redistribution or reallocation of commodities close to expiry and mitigate the risk of waste (the value of commodities at high risk of expiry at the ASRAMES CDR in Nord Kivu was estimated at $179,740.27).

Similar to its support during FY20, FY21 and FY22, MTaPS provided support for 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 supported the DPS in Nord Kivu and Ituri to enhance community engagement in the promotion of medicine management and use, specifically, issues pertaining to the transportation and distribution of medicines, findings from the stock taking, and any other medicines management issues. Thanks 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 raising the alert on issues with the availability and management of medicines. Other key results to date include the establishment of good collaboration between health center managers and community health workers in Nord Kivu, improved transparency in managing health commodities and finances, and improved accountability in medicines management through the effective participation of the community in inventory management. There has also been an improvement in the reporting rate, with an average level of completeness of over 80% for all health facilities at certain HZs, specifically the reporting rate improved from its previous level of 69% and is now 85%, i.e., the average level of completeness for all health facilities at Karisimbi HZ is over 80%.

QUARTER 1 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.2: Support the functioning of provincial medicines TWGs in Nord Kivu and Ituri

On November 23, 2022, MTaPS supported the Nord Kivu DPS to organize a supply chain and stock management review session during the provincial medicine TWG meeting. During the meeting, participants reviewed and approved the distribution plans for malaria, HIV-AIDS, TB, and MNCH products, as well as for COVID-19 PPE for the fourth quarter of 2022. Additionally, the TWG members discussed the stock status of certain essential medicines, including oral rehydration salts (ORS), which have a high risk of expiry. This stock-taking revealed that the available stock of ORS at ASRAMES (provided by UNICEF in collaboration with SANRU) represented 110 months of stock (MOS) with the expiration dates of February and April 2024 for two respective batches/lots.

To mitigate the risk of wasting a large quantity of ORS (around 95 MOS), MTaPS collaborated with others partners to recommend redeploying the stock in all the 34 HZs of the province of Nord Kivu instead of keeping the stock with high risk of expiry only in the 6 UNICEF-supported HZs, where the iCCM program is being implemented, As a result, the available stock would thus represent only 12 MOS, thereby significantly reducing the risk of expiry. In addition to ORS, about 50 other items with a total value of $179,740.27 were at high risk of expiry at the CDR as well. The provincial medicines TWG recommended all the stakeholders to advise HZs and health facilities to place their orders for these medicines at half price, and to extend this offer to private facilities as well.

On December 13, 2022, MTaPS, in collaboration with the stakeholders (CORDAID, Care International, UNFPA, *Programme National de Santé de la Reproduction* [PNSR], DKT, and *Société Congolaise de la Pratique Sage-Femme* [SCOSAF]), organized a monthly meeting of the MNCH-FP subgroup to improve the management of contraceptives and MNCH products at the provincial level. This meeting was an opportunity to identify and conduct a mapping of partners involved in the FP response to the humanitarian crisis in eastern DRC and to present the FP products quantification results carried out at the national level with UNFPA support. The CDR was authorized to distribute the oxytocin overstock at risk of expiry to private facilities in Goma. Additional TWG meetings took place in Ituri and Nord Kivu on December 22

and 24, 2022, respectively. Participants included representatives from partner organizations, the DPS, members from the TB, malaria, RH, and HIV programs, and civil society members. During these meetings, participants validated the orders from HZs for malaria, TB, and HIV, as well as the distribution plan for FP products at 15 HZs supported by the MOMENTUM project in Ituri Province.

Activity 1.2.1: Enhance the role of CODESAs and community outreach units (CAC) in health commodities management at the health center and community levels

To expand community engagement in health product management and build communities' capacity to manage health products, MTaPS supported the DPSs to hold quarterly meetings with CODESAs in MTaPS-supported HZs in Ituri and Nord Kivu. The latest meetings took place this quarter in Karisimbi, Nyiragongo, and Kirotshe HZs in Nord Kivu, and Gety, Rwampara, and Lita in Ituri Province. A total of 96 participants, including both community members and health center managers, attended these meetings. Meeting participants reported the following findings:

CODESA meeting at Karisimbi HZ.
Photo credit: Cesar Kasongo, MTaPS

- The effective participation of the community in the transportation, reception, and inventory management of medicines in the respective health areas has contributed to good collaboration between health center managers and CODESA members, as well as improved accountability in medicines management.
- HZ management teams regularly remind health facilities and community members on the role of CODESAs in the co-management of medicines and other health resources. Accountability and medicines management have improved, and HZs are taking responsibility for their work. The meeting also focused on the CODESAs' role in encouraging and mobilizing community members to use health services.
- The reporting rate has improved, with an average level of completeness of over 80% for all health facilities in most of the HZs.
- Specifically, the reporting rate improved from its previous level of 69% to 85%, i.e., an average level of completeness of over 80% for all health facilities at Karisimbi HZ.

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

Activity 3.2.1: Assist the DPS and HZs to strengthen the data collection system to improve the availability, quality, visibility, and use of logistics data for decision making

MTaPS supported the National Medicine Supply Program (PNAM) to begin the process to establish Technical Logistic Management Units (*Unités Techniques de Gestion Logistique* [UTGL]) in Nord Kivu and Ituri provinces. During this quarter, MTaPS provided technical and financial support to the central-level members of UTGL to organize a series of preparatory meetings to review the methodology and TORs and to lay the groundwork for the establishment. Given the UTGLs' role in improving logistics data collection and analysis, MTaPS presented UTGL members with the techniques to analyze data and the tool (spreadsheet) that provides information about the quality of consumption data through indicators such as standard deviation and coefficient of variation.

Due to the challenge of persistent security issues in Nord Kivu, MTaPS only supported a 2-day workshop on December 17 and 19, 2022, in Bunia, attended by 11 participants, including 8 DPS managers and 3 participants from the Bunia and Rwampara HZs. The workshop resulted in the following:

- DPS managers in Ituri improved their capacity in logistic data analysis according to the following protocol:
  - The LMIS DPS and HZ ratio verification (completeness)
  - The promptness report visualization
  - Completeness of the data in the reports
  - Stock supply management indicators verification
  - The consumption data quality verification
- The problems regarding ill-informed data/indicators identified during the preparatory meetings at the central level have been resolved in 20 HZs out of the 36 HZs of the Ituri DPS.
- Access to the Infomed platform was granted to 14 people, including 4 Polyvalent provincial supervisors, 3 HZ data managers, 1 HZ secretary and 5 Caritas Data and LMIS managers.
- DPS executives and core team of HZs were informed about their responsibility over the visibility and quality of logistics data. They committed to further improve the completeness and exhaustiveness of the data in 2023, from 47% in October 2022 to 90% with support from MTaPS and other partners.

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

Activity 5.1.1: Support DPS to implement recommendations from the survey on the consumption of contraceptives in the private sector to fill the information gap on contraceptive couple-years of protection in Nord Kivu and Ituri

MTaPS continued to discuss with the Directorate of Family Health and Specific Groups (DSFGS) and prepare for the implementation of recommendations of the survey conducted in the previous year on the consumption of contraceptives in private sector. DSFGS management requested that the same survey be conducted in the public sector to obtain a holistic understanding of contraceptive consumption and couple-years of protection in both sectors. In response to this request, MTaPS supported the DSFGS to develop terms of reference. The methodology and design for the survey will be finished during the next quarter.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Regular consultation meetings between health center managers and CODESA members are a good platform for discussions and experience sharing, and they can improve transparency around the management of medicines and other resources and increase accountability at health facilities and within the community.
- Clearly defined accountability regarding the implementation of recommendations expedites and facilitates the resolution of issues with medicines stock management.
- Good collaboration with all partners involved with monitoring the stock status of medicines at high risk of expiration (such as ORS and oxytocin) allowed a quick redeployment of these products to other HZs in need, including to private facilities.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Work with DPM toward the establishment of an autonomous pharmaceutical regulatory agency in DRC for sustainable registration of essential medicines, especially for MNCH, FP/RH, and TB medicines	March 2023
Activity 1.1.2: Support the functioning of provincial medicines TWGs in Nord Kivu and Ituri	March 2023
Activity 1.2.1: Enhance the role of CODESAs and CACs in health commodities management at the health center and community levels	February 2023
Activity 3.2.1: Assist the DPS and HZs to strengthen the data collection system to improve the availability, quality, visibility, and use of logistics data for decision making	February 2023
Activity 5.1.1: Support DPS to implement recommendations from the survey on the consumption of contraceptives in the private sector to fill the information gap on contraceptive couple-years of protection in Nord Kivu and Ituri	March 2023

Table 10. Quarter 1, FY23, Activity Progress, DRC—MNCH

Activity	MTaPS Objective(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Work with the DPM toward the establishment of an autonomous pharmaceutical regulatory agency in DRC for sustainable registration of essential medicines, especially for MNCH, FP/RH, and TB medicines **Activity description:** Continue to provide technical support to the DPM to strengthen medicines registration to facilitate the timely registration of needed MNCH, FP/RH, TB, and other essential medical products, as well as to update and disseminate the *Directory of Registered Medicines* to support customs control and inspectorate functions.	1.1,1,1.1.1	1.1	MTaPS has been supporting ACOREP (formerly the DPM) in various areas including governance pharmaceutical management and the fight against antimicrobial resistance. To ensure sustainability of DPM operations as well as its self-reliance, MTaPS, in collaboration with other partners, supported the DPM to work toward the timely establishment of the autonomous agency ACOREP.
Activity 1.1.2: Support the functioning of provincial medicines TWGs in Nord Kivu and Ituri **Activity description:** Continue to highlight MNCH, FP, and TB issues as important topics to be discussed at medicine TWG and related subgroup meetings. The provincial medicines TWGs include IPs as members. Strengthening the functionality of the provincial medicines TWGs provides an opportunity for the DPS to steward and coordinate partners' support, and to provide appropriate recommendations to address supply chain issues.	1.1.1.1.1.2	1.1	MTaPS continues to support the medicines TWG and subgroups in collaboration with other stakeholders. This quarter, MTaPS supported the medicine TWG meetings, in which all issues pertaining to medicine management were presented and addressed.
Activity 1.2.1: Enhance the role of CODESAs and CACs in health commodities management at the health center and community levels **Activity description:** Continue working with DPS in Nord Kivu and Ituri provinces to organize quarterly one-day meetings in each supported HZ to increase the engagement of communities and civil society groups in managing health commodities and their capacity to participate effectively in oversight and other activities, and include community members in field support supervision (FSS) visits to increase community engagement in health commodity management.	1.1.2.1.2.1	1.2	In order to maintain the performance achieved; MTaPS continued working with DPS in Nord Kivu and Ituri provinces to organize quarterly one-day meetings in each supported HZ. This is helping strengthen community participation in the oversight of medicines management for MNCH and FP services.
Activity 3.2.1: Assist the DPS and HZs to strengthen the data collection system to improve the availability, quality, visibility, and use of logistics data for decision making **Activity description:** Work with PNAM, the DPS, and other partners to facilitate the establishment of the newly created Logistic Management Unit (LMU) or UTGL in Nord Kivu and Ituri provinces. MTaPS will continue assisting HZs and facilities in improving LMIS data collection and reporting using the existing paper-based system and facilitating data capture in DHIS2 at the HZ level for migration into and visualization in Infomed, particularly for MNCH, FP/RH, and TB commodities.	3.2.2.3.2.1	3.2	MTaPS has already supported the establishment of the UTGL in Ituri Province and will support the same activity in Nord Kivu in this quarter, additionally MTaPS will support the LMU Ituri data analysis, for improving LMIS data collection and reporting. MTaPS will advocate for other partners to support the DPS in filling the gap and replenishing the stock of paper-based tools to ensure uninterrupted availability of these tools at HFs.

Activity	MTaPS Objective(s)	MNCH Result(s)	Activity Progress
Activity 5.1.1: Support the DPS to implement recommendations from the survey on the consumption of contraceptives in the private sector to fill the information gap on contraceptive couple-years of protection in Nord Kivu and Ituri **Activity description:** Support DPS and the FP/RH coordination to implement recommendations from the contraceptive consumption survey made in private institutions that determined the proportion of missing private-sector data and use the report of the survey as an advocacy tool for the inclusion of private-sector data in the calculation of the couple-years of protection	5.5.1.5.1.1	5.1	MTaPS supported the DSFGS to develop terms of reference for the implementation of this activity in collaboration with PNSR, PNAM, and other stakeholders. MTaPS started discussing the development of the survey protocol on contraceptives use in the public sector.

F. ETHIOPIA

OVERVIEW

Ethiopia is one of the countries selected to implement AMR prevention and containment interventions through funding from the 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 provides targeted technical assistance (TA) to Ethiopian stakeholder institutions in three result areas of the AMR action package: effective MSC, IPC, and optimizing the use of antimicrobial medicines through implementation of AMS programs. These interventions are meant to support the country on its pathway towards improving its JEE scores to meet the priorities of GHSA relative to the baseline JEE conducted in 2016, where the country scored limited capacity level 2 for both the IPC and AMS components.

CUMULATIVE PERFORMANCE TO DATE

MTaPS Ethiopia has worked in close collaboration with the MOH and RHBs to implement priority actions of the WHO Benchmarks for IHR capacities on MSC, AMS, and IPC. In the area of MSC, MTaPS' support during PY1, PY2, and PY4 contributed to the completion of 100% of capacity level 2, 100% of capacity level 3, and 100% of capacity level 4 actions. MTaPS supported the revision of the NAP-AMR and the establishment of an AMR unit within the MOH. To strengthen the operational capacity of NAMRAC, MTaPS facilitated the committee's restructuring, which included updating its membership to ensure broader stakeholder participation and revising its TOR. Support was also provided in the development of TOR for its IPC and AMS TWGs.

In AMS, MTaPS supported the practical implementation of interventions at selected hospitals and the revision of the NEML and national STG for general hospitals based on the WHO AWaRe categorization of antibiotics for the first time in Ethiopia. As of September 2022, MTaPS' support contributed to improving AMS by completing 75% of capacity level 2, 50% of capacity level 3, and 14% of capacity level 4 benchmark actions.

As part of improving the country's capacity in IPC and emergency response to COVID-19, MTaPS supported the revision of the IPC reference manual and training materials and built the capacity of IPC focal persons at the national, regional, and facility levels by providing training to 2,712 HCPs. MTaPS also supported the MOH in the identification of gaps in the national IPC program, using the WHO's national IPCAT2 and the design of a central-level IPC improvement plan, and provided technical support to HFs to improve their IPC performance using the WHO IPCAF tool. An initial group of 21 hospitals conducted IPCAF self-assessments with support from MTaPS. A later assessment conducted at four of the hospitals showed substantial improvement in those hospitals' IPCAF scores. One of the four progressed from an inadequate IPC score to the higher end of the basic level score range, and a second moved from the basic to the intermediate level. The other two hospitals maintained their IPC levels but improved their IPC scores by 20%–25%. MTaPS' support contributed to improving Ethiopia's progress toward achieving higher JEE scores in IPC by supporting completion of 80% of capacity level 2, 83% of capacity level 3, and 40% of capacity level 4 of the GHSA benchmark actions.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

In Q1, MTaPS Ethiopia achieved the following key results:

- As part of promoting a "One Health" approach towards prevention and containment of AMR, supported the Ethiopian Environmental Protection Authority (EEPA) to organize an advocacy and sensitization workshop on AMR in November 2022, the first of its kind in the sector.
- Supported the organization and colorful celebration of WAAW 2022. As part of the WAAW event, MTaPS supported the organization of an awareness and sensitization forum where a total of 75 participants (45 female) representing various civil society organizations, including the women's federation and youth federation, attended.
- Officially launched during the WAAW 2022 event the sector-specific AMR action plan for the human health, animal health, and environment sectors, previously developed with MTaPS' support.
- Supported the MOH in the development of technical guidance documents for the health care-associated infection (HAI) surveillance system and establishment of IPC COEs at supported health facilities.
- Provided TA to the Ethiopian Health Insurance Services (EHIS) of the MOH in the review and validation of the HIML.
- As part of strengthening the country's AMS and IPC programs, initiated a quality improvement (QI) initiative in collaboration with the MOH, focusing on the use of antimicrobials for surgical-site infection prophylaxis and hand-hygiene practices.

RESULT AREA 1: EFFECTIVE MSC OF AMR

Result 1.1: Governance for MSC strengthened

Activity 1.1.1: Support MOH and National AMR MSC stakeholders to implement and monitor progress of the National AMR Prevention and Containment Strategic Plan

A "One Health" approach with integrated actions across human, animal, and environmental health sectors is central to preventing and containing AMR. However, the environmental dimension of AMR has received less focus than human and animal health. To address this, on November 10–11, 2022, MTaPS supported the EEPA in organizing the very first advocacy and sensitization workshop on AMR in the sector. Thirty-two participants (8 female/25%) representing relevant EEPA directorates attended the workshop, which aimed to improve awareness among EEPA leadership and staff and to bring the institution up to speed on the implementation of the national AMR strategy. During workshop discussions, it was noted that AMR has a significant impact on the environment, specifically in countries such as Ethiopia, where animal manure, toilet waste, and waste from health care facilities and industries spill into the rivers. As part of the way forward, a task force comprising 10 members representing 9 EEPA directorates was established to oversee the sector's AMR prevention and containment activities.

Result 1.2: Capacity for MSC on AMR increased

Activity 1.2.1: Support MOH and National AMR MSC stakeholders to improve awareness, education, and training on AMR

MTaPS provided TA to the Ministry of Agriculture and MOH on the provision of training for media and public relations professionals on October 26–28, 2022. The training brought together 34 participants (5 female) from public and private mass media and government agencies to learn about antimicrobial use, AMR, and safe food production. The training incorporated presentations and practical field visit sessions.

MTaPS supported the organization of a colorful celebration of WAAW 2022, with the leadership of the three sectors—the MOH, Ministry of Agriculture, and EEPA—and the theme "Preventing Antimicrobial Resistance Together," on November 18–24, 2022. The event included panel discussion, an official launch of the sector-specific AMR action plan, and awareness creation among the representatives of the youth federation, women's federation, and urban health extension program. The official launch of the sector-specific AMR action plan 2022/23, which was developed with TA from MTaPS, and a panel discussion was held in Addis Ababa on November 18, 2022. The event was attended by 80 (9 female) participants representing the Ministry of Agriculture, MOH, EEPA, various agencies, media, professional associations, and international and partner organizations. The sector-specific plan is unique for the country, as well as for Africa as a whole. The document provides a detailed list of activities, drawn from the five-year AMR strategic plan, to be implemented by each sector (animal health, human health, agriculture, and the environment) during the current planning period. This plan assigns roles and responsibilities to activities and will help sector organizations transform "paper to action," build ownership and accountability, ensure sustainability, promote integration of sectoral plans into institutional plans (mainstreaming), and mobilize resources needed for implementation. The contribution of MTaPS in the prevention and containment of AMR was recognized through the award of a certificate (signed by her excellency the Minister, Dr. Lia Tadesse,) to Workineh Getahun, MTaPS Senior Technical Advisor, for his outstanding contribution to this effort.

Official launch of the sector-specific plan 2022/23, Ethiopia, November 18, 2022. Photo credit: WHO Communications

As part of WAAW 2022, MTaPS supported the organization of an awareness and sensitization forum for civil society organizations on November 24, 2022. A total of 75 (45 female) participants representing various civil society organizations, including the women's and youth federations, attended the event. The event presented a great opportunity for participants to increase their understanding of AMR and learn how to contribute to the national prevention and containment efforts by increasing the awareness of their organizations' members and the community through the use of various platforms, such as coffee ceremonies and *Edirs*. All attendees pledged their commitment to be part of the national effort in addressing AMR.

RESULT AREA 2: IPC

Result 2.2: Institutional and HR capacity to manage IPC strengthened

Activity 2.2.1: Support MOH and selected HFs to regularly track information on IPC and use it for CQI

As a member of the national IPC TWG, MTaPS participated in a workshop organized by the MOH and supported the development of a technical guidance document for the HAI surveillance system (October 4, 2022) and establishment of IPC COEs at health facilities (November 7–11, 2022). A final draft of the HAI surveillance system technical guidance document was submitted to the MOH for further validation and endorsement. In addition, as part of the support MTaPS provides to target facilities, a field visit was conducted to Tibebe Ghion hospital (October 6–8, 2022) along with the MOH. The purpose of the visit was to validate the IPC baseline assessment findings and support the facility level IPC team to prioritize the identified IPC gaps and develop an annual IPC improvement/action plan. Furthermore, the team and hospital management discussed the identified IPC gaps and agreed on the subsequent courses of action to address those gaps.

Result 2.5: IPC practices and services improved

Activity 2.5.1: Support MOH to sustain IPC improvement practices at national, regional, and facility levels (CQI)

MTaPS supported MOH/PMED and Korean Hospital to provide an induction training on IPC and AMS programs for health care professionals. The training held November 24–26, 2022, was organized by MOH/Korean Hospital with the objective of building the knowledge and skill of health care providers and strengthening the hospital's AMS and IPC programs. A total of 29 participants (18 female), comprising physicians, nurses, pharmacists, and laboratory technicians, attended the training.

Validation of self-assessment result at MCM Korean Hospital, Ethiopia, December 15, 2022. Photo Credit: MTaPS

As part of site level support, IPC and AMS senior technical advisors from MTaPS visited Korean and Eka Koebe hospitals on December 15, 2022, to support the generation of baseline data on surgical-site prophylaxis and hand-hygiene practices. Accordingly, a validation of baseline self-assessment results was conducted, and a discussion was held with hospital management on the findings and the need for leadership support to implement QI interventions.

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

Result 3.1: Governance for AMS strengthened

Activity 3.1.1: Support adherence to the STG, EML, and other related AMS standards

MTaPS provided TA to EHIS of the MOH in the review and validation of the HIML by participating in a four-day consultative workshop (September 29–October 2, 2022). The HIML was also reconciled with the NEML and the STG. Antimicrobials are a key component of HIML, and the event provided a good opportunity to ensure the alignment of requirements for prioritization indicated under the STG based on AWaRe classification. The workshop was attended by 30 participants (12 female) drawn from PMED, WHO, The Clinton Health Access Initiative, MTaPS, EHIS, Ethiopian Pharmaceutical Supply Services, the Ethiopian Food and Drug Authority, RHBs, health facilities, and chains of community pharmacies (including Red Cross and Kenema pharmacies).

Result 3.2: Institutional and HR capacity to manage AMS strengthened

Activity 3.2.1: Improve awareness and knowledge of AMR to achieve behavioral change in antimicrobial prescribing and use

MTaPS supported the MOH and the Ethiopian Public Health Institute (EPHI) in the provision of a TOT course on integrated antimicrobial stewardship and diagnostic stewardship programs. The TOT was organized for health care professionals drawn from the five hospitals serving as surveillance sites for EPHI, with the objective of building the knowledge and skill of health care providers on AMS and diagnostic stewardship programs. The October 24–27, 2022, training was organized by MOH/EPHI. A total of 23 participants (5 female) comprising physicians, pharmacists, and microbiologists attended.

Result 3.5: AMS practices and services improved

Activity 3.5.1: Strengthen AMS implementation at targeted HFs

As part of strengthening AMS and IPC programs, MTaPS, in collaboration with the MOH, has launched a QI initiative focusing on the use of antimicrobials for surgical-site prophylaxis and hand-hygiene practices. A workshop was organized to introduce the QI plan and familiarize participants with the tools and guidelines developed for use by target hospitals. The QI initiative took place in two phases. The first was a consultative meeting on December 7, 2022, attended by 15 participants (2 female), including physicians, anesthetists, and pharmacists from the five MTaPS-supported hospitals, to validate the guidelines and assessment tools that will be used to collect baseline data. The second phase was the training of IPC and AMS focal persons, managers, and data collectors on hand hygiene and AMS assessment tools and guidelines identified for the QI project. A total of 43 members (15 female) of the hospitals' AMS and IPC teams, including managers and QI officers from the 5 MTaPS-supported hospitals, attended the training.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

As part of communicating results and sharing best practices, MTaPS presented two abstracts, one orally and one in the form of a poster, at the American Public Health Association Annual Meeting in Boston, Mass., on November 6–9, 2022. The presentation highlighted approaches deployed by the MOH and MTaPS to strengthen the IPC program at the national and sub-national levels and detailed how achievements gained in IPC system strengthening contributed to the prevention of COVID-19 and the response to the COVID-19 outbreak.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Support MOH and national/regional AMR MSC stakeholders to implement and monitor progress of the national AMR prevention and containment strategic plan	January–March 2023
Support PMED to conduct regular meetings of AMR stakeholders, including those from the animal health and environmental protection sectors (activity continuing from FY22)	January–February 2023
Support MOH and national AMR MSC stakeholders to improve awareness, education, and training on AMR	January–March 2023
Support adherence to the STG, EML, and other related AMS standards	January–March 2023
Improve awareness and knowledge on AMR to achieve behavioral change in antimicrobial prescribing and use; develop an eLearning module on AMS	January–March 2023
Strengthen AMS implementation at targeted HFs	January–March 2023
Provide onsite training on IPC to MTaPS-supported hospitals	January–March 2023
Support IPC improvement activities in MTaPS supported hospitals	January–March 2023

Table 11. Quarter 1, FY23, Activity Progress, Ethiopia

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Support MOH and national AMR MSC stakeholders to implement and monitor progress of the national AMR prevention and containment strategic plan **Activity Description:** Support to the MOH and national AMR MSC stakeholders to implement and monitor progress of the revised national AMR prevention and containment strategic plan	5.4	1.1	MTaPS supported the EEPA to conduct an advocacy and sensitization workshop on AMR for the authority's management and experts, the first of its kind to the sector. The event was organized to create awareness among the relevant directorates of the EEPA on the issue of AMR.
Activity 1.2.1: Support MOH and national AMR MSC stakeholders to improve awareness, education, and training on AMR **Activity Description:** Support to improve the community's awareness on AMR, as well as that of professionals and policymakers, through evidence-based information sharing, communication, and education	5.4	1.2	MTaPS supported the national AMR multisectoral collaboration body to celebrate WAAW 2022 with the theme "Preventing Antimicrobial Resistance Together" and the overarching slogan "Antimicrobials: Handle with Care." Training on AMR, launching of the sector-specific plan, and mass mobilization were the main activities held during the week-long event.
Activity 2.2.1: Support MOH and selected HFs to regularly track information on IPC and use it for CQI **Activity Description:** Provide TA to selected hospitals for orientation, guidance, and mentorship on using the national IPC assessment tool for CQI of IPC; training on CQI; support HFs to undertake annual IPC assessments as part of their regular review cycle; support MOH in implementing the national HAI surveillance guidance at selected hospitals	5.4	2.2	Technical support for design of a QI project on AMS and IPC for five target MTaPS-supported hospitals to improve IPC practices, followed by orientation for the facility health care workers; data collection training; and baseline assessment, the findings of which are being used to develop IPC improvement plans. MTaPS supported MOH to develop a draft HAI surveillance guidance document that will be used by the MOH to initiate HAI surveillance at selected hospitals on a phase-based approach.
Activity 2.5.1: Support MOH to sustain IPC improvement practices at national, regional, and facility levels **Activity Description:** Advocate and support MOH and RHBs to create model IPC sites (COEs) to showcase best practices and serve as learning sites for others; includes TA to establish criteria for identifying the sites and provide targeted support to selected hospitals to build their capacity for IPC and help them fulfill the requirements for model sites	5.4	2.5	MTaPS provided TA to the MOH to develop a guidance document for establishing COEs on IPC at health care facilities. The guidance document will be used to identify potential hospitals for the implementation of IPC interventions to help them become COEs in IPC.
Activity 3.1.1: Support adherence to the STG, EML, and other related AMS standards **Activity Description:** Support to popularize and disseminate both EML and STG to larger audiences in the human health care system	5.4	3.1	MTaPS provided technical assistance to the MOH EHIS in the review and validation of the HIML. This review also helped to validate and/or reconcile the draft medicine list with the NEML, STG, and the previously prepared Health Insurance Benefit Package.

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 3.2.1: Improve awareness and knowledge on AMR to achieve behavioral change in antimicrobial prescribing and use **Activity Description:** Support PMED and the RHBs in building the capacity of health professionals and HF management to enhance their knowledge and skills on AMS program design and implementation and thereby to strengthen implementation of AMS programs at the designated HFs	5.4	3.2	MTaPS supported the MOH/PMED and EPHI in the provision of TOT on integrated antimicrobial stewardship program and diagnostic stewardship. MTaPS also provided technical assistance to the MOH/PMED and Korean Hospital to provide training course on AMS and for an infection prevention program for health care professionals at Korean Hospital. This helped build the knowledge and skill of the health care providers on AMS and IPC.
Activity 3.5.1: Strengthen AMS implementation at targeted HFs **Activity Description:** Support in developing and/or adapting job aids, such as audit and feedback tools, SOPs, AMS data collection tools for drug use evaluation, antimicrobial use and consumption surveys, and training on AMS core components; support also includes standardization of implementation approaches in a few hospitals as models to optimize antimicrobial use	5.4	3.5	MTaPS supported MOH to initiate implementation of a CQI program on SSI prophylaxis and infection prevention at selected hospitals. As part of this effort, MTaPS collaborated with MOH and organized a consultative and expert review session on the resources of the AMS/IPC CQI initiative and provided advocacy and data collectors' training to implement antimicrobial stewardship and infection prevention quality improvement interventions at the selected hospitals.

G. INDONESIA

FIELD SUPPORT ACTIVITIES

OVERVIEW

Promoting transparency and accountability is a prerequisite for improving access to essential medicines and strengthening health systems to achieve UHC. MTaPS seeks to build Indonesia's pharmaceutical systems by strengthening their ability to institutionalize transparent and evidence-based decision making, and their capacity to use robust information to define and cost pharmaceutical coverage, promote pharmaceutical expenditure tracking to improve purchasing value, and strengthen pharmaceutical-sector governance.

CUMULATIVE PERFORMANCE TO DATE

Since beginning operation in Indonesia in June 2021, MTaPS has achieved strong results in supporting the MOH in HTA and pharmaceutical expenditure (PE) activities. MTaPS Indonesia has completed seven deliverables, as follows:

1. Virtual pre-conference HTAsialink report
2. Report documenting the literature review, stakeholder engagement, and observations on collaboration in HTA topic selection process
3. Summary of the PE data sources
4. High level aggregated figures of PE
5. Incorporation of national-level PE data into overall HA data and inclusion in National Health Account (NHA) reports 2021 in the PE section.
6. Report documenting recommendations and potential intervention to strengthen HTA topic selection processes, use, uptake, and impact
7. 9th HTAsialink Conference digest book

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS won an award for second best oral presentation at the 10th HTAsialink in Pattaya, Thailand, November 30–December 3, 2022. The MOH disseminated two technical/operational documents which were developed with MTaPS technical assistance, the first of which is the NHA Report 2021 which contains a chapter on PE (on December 6, 2022). The expenditure tracking showed that Indonesia's total pharmaceutical expenditure (TPE) at current prices in 2021 is 175.2 trillion Indonesian rupiahs (IDR) (USD 12.2 billion), or 25.6% of total health expenditure in Indonesia. The second document is the revised HTA manual, which covers the principals of HTA topic selection and HTA appraisal (December 20, 2022).

Significant achievements this quarter include the following:

- Higher profile in the region for HTA in Indonesia as a result of MTaPS' winning an award for second best oral presentation at the 10th HTAsialink conference. The presentation was on Indonesia's experiences with the HTA topic selection process.
- With MTaPS support, Indonesia implemented PE data source landscaping and tracking for the first time, with results meeting standards of the SHA 2011. The process was carried out with the NHA team, Pusjak PDK, and MOH Directorate General of Pharmaceutical and Medical Devices to ensure

transfer of knowledge and skills on tracing, mapping, organizing, and analyzing PE data. The PE data helped the MOH to support the Indonesia AMR Report and to track the availability of 40 essential medicines at the primary health care level in Indonesia.

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

Activity 1.1.1: Strengthen the topic selection process for the HTA committee, InaHTAC

To strengthen HTA activities, MTaPS continued to assist Pusjak PDK and InaHTAC in redefining the criteria for HTA topic selection, where the agreed six criteria (volume, impact of technology, cost, policy alignment, cost saving potential, and public acceptance) became components for a MCDA tool.

Calls for topics were open from mid-October to early November 2022, and 41 HTA topics were submitted by stakeholders. All topics went through a verification process that resulted in 19 topics being eligible for the scoring process. As of the end of December 2022, InaHTAC planned to select 5 topics for 2023. On December 21 and 22, 2022, InaHTAC members deliberated on the results with the aim of identifying 5 topics for the year 2023. However, at the meeting, InaHTAC was unable to decide on topics for 2023 because it still needed time to analyze these topics. It has been agreed that InaHTAC will determine the HTA topics for 2023 in January or February 2023. In the meantime, MTaPS has assisted InaHTAC in making the topic selection process more transparent and measurable.

Activity 1.1.2: Build capacity of key stakeholders on HTA methods

In December 2022, MTaPS carried out hands-on capacity-building sessions for Pusjak PDK and researchers on the real-world data (RWD) calibration method for Trastuzumab research. This calibration method is used to produce the output that is closest to available empirical data, i.e., cancer registry data. The sessions consisted of building understanding on essentials of the calibration method, sharing the example of it in Excel/TreeAge, running it using the Trastuzumab study model, and supporting the research team with data analysis. MTaPS purchased an annual license for the TreeAge app, a tool for building decision trees, Markov models and event-based simulations, for Pusjak PDK and the research team of Gajah Mada University (UGM).

Activity 1.1.4: Strengthen the appraisal process for the HTA committee, InaHTAC

At the HTA guidance dissemination meeting on December 20, 2022, an InaHTAC representative explained that the appraisal process consisted of two main parts: appraisal of the HTA assessment results carried out by HTA agents and appraisal of other aspects of health technology that are becoming HTA topics and are important in answering policy questions. This explanation was in accordance with the MTaPS' input into the appraisal process. MTaPS also reviewed and provided recommendations on how to improve the series of appraisal processes, including formation of an ad hoc panel, which represents stakeholders and helps to avoid conflict of interest; and holding a meeting to decide on the appraisal result and set it forth in the form of an agenda, signed by the InaHTAC and the ad hoc panel.

Activity 1.1.5: Writing the HTAsiaLink Conference digest and publications

Regarding MTaPS' scientific paper production, InaHTAC approved one paper entitled "A Framework to an Improved Collaboration on HTA in the Asia-Pacific Region: a Role for HTAsiaLink." That paper is

currently awaiting approval by the HTAsialink Board. A second scientific article, based on material from the 9th HTAsiaLink 2021 conference, "Practicing Real-World Evidence for Health Technology Assessment in Asia: Lessons from HTAsiaLink Countries," is still under review by InaHTAC and Pusjak PDK. Two additional papers are currently being written by MTaPS and the Pusjak PDK team and one invitation paper from HTAsialink board is currently being outlined.

Additionally, a delegation from Indonesia and MTaPS, participated in the 10th HTAsialink Conference in Pattaya, Thailand, from November 30 to December 2, 2022. One oral presentation from Indonesia on Application of MCDA using Analytical Hierarchy Process Approach in Weighting the HTA Topic Selection Criteria in Indonesia' received the second-place award for the category "Evidence synthesis, systematic review, data science, real world evidence." Also during the conference, the Indonesian and MTaPS participants attended a meeting on adaptive HTA, HTA research plans on telemedicine in Indonesia, and a follow-up on the Indonesia HTA topic selection process.

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

Activity 2.1.2: Support the health account team to compile secondary PE data at the national level

The MOH presented national-level PE results, compiled with TA from MTaPS, at the National Health Account dissemination meeting held on December 6, 2022. The results show that total health expenditure (THE) 2021 has increased by 22.1%, from IDR 561.84 trillion in 2020 to IDR 682.3 trillion in 2021. The proportion of THE to GDP has also increased by 0.4%, from 3.6% in 2020 to 4% in 2021.

There has also been an increase in Indonesia's total health spending, which is now close to that of ASEAN countries. In the past two years, a significant increase in public sector health spending has been due to the additional budget for intervention and response to COVID-19. The proportion of private insurance is relatively small in THE, and out-of-pocket (OOP) spending at the community level continues to decline.

The proportion of TPE to Indonesia's THE in 2021 was 25.7%. In general, low-income countries have a higher proportion of TPE to THE (30.4%) compared with high-income countries (19.7%).

Based on Indonesia's population of 274 million in 2021, TPE per capita was IDR 640.0 (USD 44.7). In comparison with countries that tracked PE in 2021, Indonesia's TPE per capita was about 2 times higher than Burkina Faso (USD 16.95) and Benin (USD 24.26).

Activity 2.1.3: Organize, map and analyze national-level PE data

MTaPS, Pusjak PDK, and the HA team undertook PE tracking. The exercise included the following activities: development of landscaping data sources, development of PE databases, mapping, analysis, and making national aggregate figures of pharmaceutical expenditure, including identified generic drug names and coding based on Anatomical Therapeutic Chemical (ATC) WHO and ATC European Pharmaceutical Market Research Association (EphMRA) classification in the type of disease.

MTaPS provided TA to the NHA team to compile and analyze PE data for 2021(Figure 6). Some highlights of results from the analysis are as follows:

- THE in Indonesia in 2021 reached IDR 682.3 trillion and TPE at 2021 prices is IDR 175.2 trillion (USD 12.2 billion). This includes spending on COVID-19 vaccine, which was estimated to be IDR 45.6 trillion.
- The noncommunicable group of diseases absorbed the highest proportion of PE, namely digestive system diseases (IDR 12.0 trillion) and cardiovascular (IDR 9.9 trillion), endocrine and metabolic disorders (IDR 8.4 trillion).
- Hospitals are the largest providers of pharmaceutical products, reaching IDR 103.6 trillion or around 59% of TPE in 2021. Meanwhile, health spending at hospitals is IDR 350.9 trillion, so the proportion of PE to THE by hospital providers is 29%.
- The MOH manages the largest PE, spending up to IDR 75.4 trillion or 43.2%. Pharmaceutical spending on the OOP financing scheme is the second largest proportion in Indonesia in 2021, which is IDR 53.4 trillion, or 30.5%. Almost half of total PE comes from the state budget, which is 47.7% of TPE (IDR 83.6 trillion).

The 20 Largest Pharma Expenditures according to ATC Digit 2

1 J07 – VACCINES	47.4	27.1
2 N02 – ANALGESICS	18.8	10.7
3 J01 - ANTIBACTERIALS FOR SYSTEMIC USE	12.2	6.9
4 A02 - DRUGS FOR ACID RELATED DISORDERS	8.7	4.9
5 M01 - ANTIINFLAMMATORY AND ANTIRHEUMATIC PRODUCTS	6.7	3.8
6 A10 - DRUGS USED IN DIABETES	6.3	3.6
7 B01 - ANTITHROMBOTIC AGENTS	4.8	2.8
8 A11 - VITAMINS	4.6	2.6
9 R06 - ANTIHISTAMINES FOR SYSTEMIC USE	3.5	2.0
10 C10 - LIPID MODIFYING AGENTS	3.5	2.0
11 B03 - ANTIANEMIC PREPARATIONS	2.9	1.7
12 J05 - ANTIVIRALS FOR SYSTEMIC USE	2.8	1.6
13 L01 - ANTINEOPLASTIC AGENTS	2.6	1.5
14 C09 - AGENTS ACTING ON THE RENIN-ANGIOTENSIN SYSTEM	2.5	1.5
15 G03 - SEX HORMONES AND MODULATORS OF THE GENITAL SYSTEM	2.5	1.5
16 R03 - DRUGS FOR OBSTRUCTIVE AIRWAY DISEASES	2.4	1.3
17 R05 - COUGH AND COLD PREPARATIONS	2.0	1.2
18 N07 - OTHER NERVOUS SYSTEM DRUGS	2.0	1.1
19 B05 - BLOOD SUBSTITUTES AND PERFUSION SOLUTIONS	1.9	1.1
20 D07 - CORTICOSTEROIDS, DERMATOLOGICAL PREPARATIONS	1.9	1.1
TOTAL	**139.97 (79,9% from Total PE)**	

Total Pharmaceutical Expenditure by Type of Disease, 2021

DIS.1.9 COVID-19	45.6
DIS.4.nec Other and unspecified noncommunicable diseases (n.e.c.)	36.4
DIS.1.nec Infectious and parasitic diseases	12.8
DIS.4.6 Diseases of the digestive	12.0
DIS.4.3 Cardiovascular diseases	9.9
DIS.4.2 Endocrine and metabolic disorders	8.4
DIS.1.4 Respiratory infections	6.3
DIS.nec	5.4
DIS.3 Nutritional deficiencies	5.1
DIS.2.1 Maternal conditions	4.7
DIS.4.4 Mental & behavioural disorders, and Neurological conditions	4.5
DIS.4.1 Neoplasms	3.4
DIS.1.1.1 HIV/AIDS and Opportunistic Infections (OIs)	2.8
DIS.2.3 Contraceptive management (family planning)	2.0
DIS.1.7 Vaccine preventable diseases	1.8
DIS.1.5 Diarrheal diseases	1.4
DIS.1.2 Tuberculosis (TB)	1.3
DIS.4.8 Sense organ disorders	1.2
DIS.1.8 Hepatitis	1.0
DIS.4.7 Diseases of the genito-urinary system	0.9
DIS.2.nec Unspecified reproductive health conditions (n.e.c.)	0.3
DIS.1.6 Neglected tropical diseases	0.3
DIS.1.3 Malaria	0.1
N/A	7.4

Figure 6. Pharmaceutical expenditure in Indonesia according to ATC and type of disease

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Application of MCDA and a Delphi survey for selection of HTA topics enabled wider stakeholder engagement in eliciting, redefining, and weighting topic selection criteria for HTA research.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Dissemination of HTA topic selection results	February 2023
Meeting on HTA appraisal results and capacity building	February–March 2023
RWE and MCDA capacity-building activities	February–March 2023
Scientific papers HTAsialink approval and publication	February–March 2023
PE training	February 21–25, 2023
HTA stakeholders meeting	March 15–17, 2023

Table 12. Quarter 1, FY23, Activity Progress, Indonesia—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1 Strengthen the topic selection process for the HTA committee, InaHTAC	1.1	In October 2022, InaHTAC and Pusjak PDK open opportunities for stakeholders to submit proposed HTA topics for 2023. MTaPS has provided TA in the form of systematic development of HTA topic selection flow, development of weighting criteria for HTA topic selection, and development of digital forms for proposed HTA topics from stakeholders, as well as using MCDA tools to perform scoring and weighting of HTA topics that have been submitted.
		According to the schedule for the topic selection process, in early November 2022, 41 HTA topics were collected from stakeholders through a digital form developed jointly by Pusjak PDK, InaHTAC, and MTaPS. As a next step to carry out administrative verification, on November 16, 2022, an evaluation of the verification implementation was carried out, and it is hoped that next year the verification procedure will be even better through a clear division of work groups. During the meeting, it was agreed that there would be short-term follow-up, which included completing the verification checklist and compiling a response email to the proposer. Apart from that, at the meeting, Pusjak PDK staff were also assigned as person-in-charge for the next stage of the topic selection process (verification, prioritization, discussion, and publication). MTaPS participated in a workshop organized by the CGD and the World Bank on adaptive HTA. MTaPS is also expected to explore the possibility of installing additional steps in topic selection to screen proposed topics that are suitable for the HTA adaptive method.
		The HTA topic selection activity in December 2022 was the topic verification processes for 41 topics submitted by the stakeholders. It resulted in 19 topics eligible for the next steps for scoring by InaHTAC. During this process, MTaPS supported Pusjak PDK in conducting initial verifications and preparing the MCDA scoring tool and ready-to-use manual. The scores for each criterion can be generated from summarizing the justifications provided by the applicants and external relevant data such as the cost per service and volume, pharmaceutical expenditure data as a reference for the cost saving, etc. On December 21 and 22, 2022, through this MCDA tool, InaHTAC and Pusjak PDK determined 5 HTA prioritized topics for the HTA next studies/assessment in 2023.
		On December 20, 2022, InaHTAC and Pusjak PDK conducted a dissemination meeting on HTA guidance revision to the stakeholders. Regarding HTA topic selection, the guidance adopted MTaPS recommendations for topic selection criteria: ▪ Volume ▪ Impact of technology on health ▪ Cost ▪ Conformity with government policy priorities ▪ Potential cost savings that can be achieved if the technology is used ▪ Public acceptance. The use of an electronic form for topic proposal from stakeholders and a verification process using the MCDA tool were also included in the HTA guideline revision.

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.2 Build capacity of key stakeholders on HTA methods	1.1	Weekly meetings have been held between InaHTAC, Pusjak PDK, and the research team from UGM, and MTaPS. The implementation of capacity building related to the RWE calibration method was done through weekly meetings. At the weekly meeting on October 19, 2022, it was agreed that there would be capacity building from a team of experts for HTA studies from universities to be carried out offline, especially for primary and secondary data analysis. MTaPS, in carrying out capacity building for Pusjak PDK and researchers, held a meeting on survival analysis (Kaplan-Meier) on November 9, 2022. This activity was part of MTaPS support on use of RWD in the Trastuzumab evaluation study. Prof. Sabarinah, an expert on the Indonesian cancer registry from the University of Indonesia (UI), gave a special presentation on the basics of survival analysis. RWD capacity-building sessions provide hands-on learning in survival analysis. This session was attended by the Trastuzumab research team (UGM and Pusjak PDK). MTaPS, Pusjak PDK and the UGM research team held a refresher discussion on 23 November 2022 using the Kaplan-Meier analysis and discussed step by step the survival curve using cancer registry data. MTaPS in carrying out hands-on capacity building for Pusjak PDK and researchers, held a serial meeting on the RWD calibration method for the Trastuzumab study. The calibration method is used to produce the output that is closest to the available empirical data, i.e., cancer registry data. During December 2022, the meetings consisted of building understanding of the essentials of the calibration method, sharing the example of the calibration method in Excel/TreeAge, and running the calibration method using the Trastuzumab study model.
Activity 1.1.4. Strengthen the appraisal process for the HTA committee, InaHTAC	1.1	At the HTA guidance dissemination meeting on December 20, 2022, representatives from InaHTAC explained that the appraisal process consisted of two main parts, namely: 1) appraisal of the HTA assessment results carried out by PTK agents, and 2) appraisal of other aspects of health technology that are becoming HTA topics and are important in answering policy questions. This explanation is in accordance with the MTaPS review's input for the appraisal process. Furthermore, the series of appraisal processes includes: 1) formation of an ad hoc panel, and 2) appraisal meeting to decide on the appraisal result and set it forth in the form of an agenda, signed by the PTK Committee and the ad hoc panel.
Activity 1.1.5 Writing the HTAsiaLink Conference digest and publications	1.1	A second scientific article based on material from the 9th HTAsiaLink 2021 conference still in review process by InaHTAC and Pusjak PDK. This draft is entitled, "Practicing Real-World Evidence (RWE) for Health Technology Assessment in Asia: Lessons from HTAsiaLink Countries," and reviews HTAsiaLink member countries in implementing the RWE method, especially Indonesia and Taiwan. Challenges and opportunities have been explored, and a regional collaborative framework will be offered. Through this paper, MTaPS recommended that HTAsiaLink be able to offer perspective for networking, integration, and development when it comes to applying reliable RWE in the decision-making process/generation of evidence-based policies; particularly as the HTA regional network in Asia. Results from the 10th HTAsialink Conference in Pattaya, from November 30 to December 2, 2022: one oral presentation from Indonesia on "Application of Multicriteria Decision Analysis (MCDA) Using an Analytical Hierarchy Process (AHP) Approach in Weighting the HTA Topic Selection Criteria In Indonesia" received the second place award for the category "evidence synthesis, systematic review, data science, real world evidence." During the conference, the Indonesian delegation, including participants from MTaPS, attended a meeting on adaptive HTA, an HTA study on telemedicine, and follow-up for the Indonesia HTA topic selection process. Six experts (three from MTaPS, one from Pusjak PDK, and two from InaHTAC) attended the conference.

Activity	MTaPS Objective(s)	Activity Progress
Activity 2.1.3: Organize, map, and analyze national-level PE data	2.1	In October 2022, MTaPS added PE data derived from the Special Access Scheme (SAS) data for drugs and has recalculated the wastage rate. At the time this report was prepared, the Indonesian Food and Drug Administration (FDA) had not yet submitted SAS data for vaccines. Related to the mapping and analysis of PE, in October 2022, MTaPS compiled the ATC Code to be classified based on its active and generic content, its designation for types of diseases, and its therapeutic, pharmacological, and chemical properties. In addition, to synchronize with the NHA report, the team has also mapped provider schemes and pharmaceutical spending funding flows. This activity is expected to be completed by the end of November 2022. In November 2022, MTaPS completed the preparation of PE data and presented it to Pusjak PDK on November 16, 2022. In carrying out PE calculations, MTaPS, the NHA team, and Pusjak PDK have compiled PE information source maps, collected data from various sources, especially from the Directorate General of Pharmaceuticals and Medical Devices, identified generic drug names and coding based on ATC WHO and ATC EphMRA classification in the type of disease. The MOH conducted a meeting on the dissemination of the NHA report 2021 on December 6, 2022. This report included information on PE. From the report, pharmaceutical spending in 2021 has been mostly on vaccines (27.1%) and drugs for noncommunicable diseases, such as analgesics (10.7%), drugs for acid-related disorders (4.9%), anti-inflammatory and antirheumatic products (3.8%), and drugs used in diabetes (3.6%). Drugs for infectious diseases that are associated with a large PE include systemic antibacterials (6.9%), systemic antivirals (1.6%), drugs for obstructive airways disease (1.3%), and cough and cold preparations (1.2%). Based on the classification of diseases, pharmaceutical spending in 2021 has been carried out to address, among others, COVID-19, infectious and parasitic diseases, digestive diseases, cardiovascular diseases, including HIV/AIDS, tuberculosis, hepatitis, and malaria. Based on service providers, pharmaceutical spending was the largest at hospitals (59%), and then at first level health facilities (23%) and drugstores including pharmacies (18%). The MOH is the largest contributor in pharmaceutical spending (43%), but the concern is that the second rank is pharmaceutical spending by the community (OOP) at 30.5% and health insurance at 14.2%.
Activities completed:	Activity 1.1.3 Support HTAsiaLink 2021 Activity 2.1.1 Conduct landscaping of PE data sources in Indonesia Activity 2.1.2: Support the HA team to compile secondary PE data at the national level	

H. JORDAN

FIELD SUPPORT ACTIVITIES

OVERVIEW

MTaPS Jordan's overall goals are to improve pharmaceutical-sector governance, institutional capacity for pharmaceutical management and services, patient safety, and AMR. To address the needs of the pharmaceutical sector in Jordan, MTaPS adopted the USAID's PSS approach.

CUMULATIVE PERFORMANCE TO DATE

Reform in procurement legislation resulted in momentum among key stakeholders for improving practices that will result in increased availability of vaccines and pharmaceuticals at more competitive prices. A comprehensive supply chain assessment was conducted with the MOH and its recommendations, aiming to improve procurement and supply chain practices, are integrated in the program's work plan. MTaPS Jordan supported standardized IPC training across sectors and developed a certified program for providers according to national recommendations.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS Jordan has developed specific clinical protocols for the MOH, and Royal Medical Services (RMS) using a collaborative approach to address AMR and improve IPC practices. A national Multidrug Resistant Organisms (MDRO) Policy has been developed with a training program implemented in both public and private sectors. AMR awareness among school children has been launched with excellent results, and counterparts have requested expansion of the program to cover all 14 health directorates (12 governorates) in the country.

OBJECTIVE 1: STRENGTHEN PHARMACEUTICAL-SECTOR GOVERNANCE

Activity 1.1.1: Provide technical and planning support to the multistakeholder National Vaccines Procurement Modernization Committee (NVPMC)

MTaPS facilitated a technical workshop that included the following stakeholders from the NVPMC: GPD, JFDA, WHO, and Communicable Diseases Directorate (CDD) of the MOH. MTaPS presented the findings of an assessment of the WHO prequalified vaccines procurement. The JFDA attended this meeting but did not make or take decisions accordingly. Thereafter, the JFDA informed the WHO and MTaPS that they are not willing to participate in additional collaboration. MTaPS informed USAID Jordan accordingly.

Activity 1.1.2: Provide technical assistance to the GPD in institutionalizing framework agreement procedures

MTaPS supported the GPD in conducting an FA implementation training workshop for 39 staff (20 females and 19 males) from the GPD, MOH, RMS, and university hospitals, which built capacities enabling staff to engage in and implement FA. Based on the success of this training workshop, the GPD director saw potential for improving practices of other GPD units responsible for the procurement of goods and services other than pharmaceuticals/vaccines and requested additional support from MTaPS in

the form of training for other GPD units. MTaPS facilitated training for 32 GPD staff (8 females, 24 males) with the GPD main focal point leading provision of the training.

MTaPS advocated for the establishment of a TWG, led by the GPD, that includes procurement representatives from the public health sector—MOH, RMS, and university hospitals to improve collaboration and coordination of procurement and of implementing FAs. An official governmental communication was produced by the Ministry of Finance (MOF), which houses the GPD, to the other entities requesting nomination of representatives to this TWG.

Activity 1.1.3: Provide technical assistance to the GPD in developing procurement negotiation procedures

Implementation of this activity is scheduled to start next quarter.

Activity 1.2.1: Conduct pharmaceutical procurement training to stakeholders using the MTaPS procurement training curriculum

MTaPS supported training of 54 staff (24 females and 30 males) from the PSD and the Vaccines Department of the MOH on public procurement management; two FA training sessions as mentioned in the activity 1.1.2; and two training sessions on the Competition Law in collaboration with the Ministry of Industry and Trade (MOIT), which included 52 participants (28 females and 24 males) from the GPD, MOH, RMS, and university hospitals. The curriculum is designed to strengthen capacities of stakeholders involved in procurement of pharmaceuticals.

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

Activity: 2.1.1: Update and/or develop priority PSD policies

In close technical collaboration with the PSD, MTaPS developed seven operational policies addressing the main recommendation from the FY22 MTaPS Supply Chain Assessment Report. These policies were submitted to the Institutional Development and Quality Control Directorate (IDQCD), as required by the MOH, for review and institutional approval. The IDQCD recommended making the policies more concise and further developing detailed SOPs for their implementation.

Activity 2.1.2: Develop a three-year organizational strategic plan for the PSD

Implementation of this activity is scheduled to start next quarter.

Activity 2.1.3: Support the MOH in strengthening the forecasting of needed pharmaceuticals for annual procurement

MTaPS supported the development of specific quantification policies and procedures as described in activity 2.1.1.

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

Activity 3.1.1: Develop and implement the "financial management for pharmaceutical procurement" training module

Implementation of this activity is scheduled to start next quarter.

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

Activity 4.1.1: Support the RMS in the implementation of the Comprehensive Antimicrobial Stewardship Program (ASP)

With MTaPS support, the central RMS AMR committee completed the development of 27 protocols and implementation procedures for prophylaxis, treatment, and management of priority ICU infections. The protocols will be submitted for approval and subsequent official dissemination systemwide, standardizing provision of care. MTaPS provided support to the RMS Quality Department in developing an audit tool which can be used to monitor adherence to protocol implementation.

MTaPS drafted a set of TORs for the Al-Hussein Hospital Central AMR Committee which covers its ASP-related functions. Next quarter, MTaPS will review and finalize these TORs with the central AMR committee.

Activity 4.1.2: Conduct an assessment of RMS information systems relative to ASP activities

Using the key performance indicators (KPI) and the protocols described in activity 4.1.1, the Quality and IT Departments of the RMS can evaluate the ability of their electronic medical record (EMR) and IT systems in capturing required documentation information and aggregating and producing KPI reports. The Quality Department assessed protocol documentation steps relative to their EMR.

Activity 4.1.3: Support the MOH in rationalizing the use of antimicrobials at select health facilities

In collaboration with the MOH Central AMS committee, MTaPS facilitated three technical workshops with the AMS committees of the Al Salt Hospital and Al Mafraq hospital resulting in the development of antibiotic prophylactic protocols for four surgical procedures (i.e., hernia repair, appendectomy, orthopedic surgery, and arthroplasty) and one antibiotic management protocol for urinary tract infections (UTI).

Technical workshop with the AMS committees of Al Salt Hospital, Jordan, November 30, 2022. Photo credit: MTaPS

MTaPS advocated for, and succeeded in, engaging the MOH Laboratory Directorate (LD) in rational antimicrobial use-related efforts, given their integral role in AMS activities. During the workshops described above, a representative from the LD provided a presentation on sample management (collection and culture) which opened discussions about related challenges the hospital team faces in their facilities. Next quarter, MTaPS will evaluate potential support to the LD.

Activity 4.2.1: Provide technical and logistic support to the multisectoral ACIPC in overseeing the implementation of IPC interventions according to the NAP-AMR

MTaPS continued developing training material and delivering training focused on the national MDRO Policy. MTaPS supported six training workshops to IPC focal points from the public and private sectors. These workshops have provided a training platform for a total of 168 IPC focal points (114 females and 54 males) from 164 hospitals across Jordan who can now cascade the training to the facility staff. The training has been linked with national continuous professional development efforts and accounts for certified training hours.

The classroom portion of the MTaPS-supported health care infection prevention training was completed with 35 IPC focal points (21 females and 14 males) from the MOH and 28 IPC focal points (19 females and 9 males) from the RMS receiving the training. This will be followed by a practical part of the training and then exams for participants, with certification awarded to those who successfully pass the exam.

Activity 4.2.2: Support the MOH in conducting dental IPC assessments for priority clinical units in health facilities

MTaPS began developing draft IPC assessment tools tailored to dental clinics and hospitals based on available resources and templates from the WHO and other references.

Activity 4.2.3: Conduct basic IPC training for IPC focal points in MOH Primary Health Care Centers

Implementation of this activity is scheduled to start next quarter.

Activity 4.3.1: Support the MOH in raising community awareness on AMR and RUA

Implementation of this activity is scheduled to start next quarter.

Activity 4.3.2: Continue to support the SHD in raising awareness on AMR among school students

MTaPS implemented the CASS on AMR in 8 schools from 3 health directorates reaching a total of 1,125 students and 24 teachers.

MTaPS Awareness Session on Antimicrobial Resistance for School Students, Ibn Abbas School Secondary for Boys in Amman, Jordan, October 13, 2022. Photo credit: Transparency for Printing and Design

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

■ Participants in the MTaPS' workshop on antibiotic management protocol for the UTI identified laboratory sample management and transportation as main challenges. In response, MTaPS is planning additional meetings to discuss recommendations, establish next steps, and facilitate implementation.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Provide technical assistance to FA, TWG, and GPD in developing institutional procedures for implementing FA	January–March 2023
Draft priority SCM policies for PSD—for their approval and institutionalization	January–March 2023
Finalize PSD Strategic Plan inception report and conduct technical workshops	January–March 2023
Develop design and outline for the Financial Management for MOH pharmaceutical procurement—training module	January–March 2023
Finalize the TORs for the Al-Hussein Hospital RMS AMR Central and hospital-based committee	January–March 2023
Conduct technical discussion meetings with Jordanian American Physicians association and the RMS Central AMR Committee	January–March 2023
Evaluate the RMS EMR and system's ability to capture required documentation information and to aggregate and produce KPI reports	January–March 2023
Finalize and disseminate the RUA developed protocols with the PCPD at selected health facilities	January–March 2023
Develop KPIs for the RUA developed protocols with the PCPD at selected health facilities	January–March 2023
Developing the dental clinic assessment tools and selecting facilities	January–March 2023
Recruit a consultant for the IPC basic training	January–March 2023
Update the basic IPC training material	January–March 2023
Conduct a TOT for trainers at Health Affairs Directorate on the developed communication and awareness materials for CASS	January–March 2023
Conduct CASS activities	January–March 2023

Table 13. Quarter 1, FY23, Activity Progress, Jordan—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity: Provide technical and planning support to the multistakeholder NVPMC **Activity description:** coordinate technical and planning activities of the NVPMC	1	Facilitated a technical workshop to present and discuss the WHO prequalified vaccines procurement assessment findings.
Activity: Provide technical assistance to the GPD in institutionalizing framework agreement procedures **Activity description:** Provide technical and logistical support to the TWG to implement the drafted action plan	1	Facilitated communication and technical coordination between the WHO and the JFDA to organize a technical discussion concerning the JFDA registration requirements of WHO pre-qualified vaccines in relation to procurement by the GPD.
Activity: Provide technical assistance to the GPD in developing procurement negotiation procedures **Activity description:** Develop procurement negotiation procedures and needed tools for GPD staff.	1	Developed Guidelines for Procurement Negotiations in collaboration with GPD.
Activity: Conduct pharmaceutical procurement training to stakeholders using the MTaPS procurement training curriculum **Activity description:** build capacities in procurement best practices	1	54 staff (24 females and 30 males) from the PSD and the Vaccines Department of the MOH and 52 participants (28 females and 24 males) from the GPD, MOH, RMS, and university hospitals
Activity: Update and/or develop priority PSD policies **Activity description:** Review the developed PSD policies with the IDQCD	2	Finalized 7 priority policies and drafted related SOPs with the PSD.
Activity: Support the MOH in strengthening the forecasting of needed pharmaceuticals for annual procurement **Activity description:** Standardize practices and procedures of quantification including how to determine data requirements	2	Supported the drafting of a specific forecasting policy and procedures.
Activity: Support the Royal Medical Services (RMS) in the implementation of the Comprehensive ASP **Activity description:** Develop antimicrobial treatment guidelines for Al Hussain RMS Hospital	4	Developed 27 protocols and implementation procedures for prophylaxis, treatment, and management of priority ICU infections.
Activity Support the MOH in rationalizing the use of antimicrobials at select health facilities **Activity description:** Develop the MOH RUA antimicrobials prophylaxis protocols in selected health facilities	4	Developed antibiotic prophylactic protocols for 4 surgical procedures.
Activity Provide technical and logistic support to the multisectoral ACIPC in overseeing the implementation of IPC interventions according to the NAP-AMR **Activity description:** Provide technical and logistic support for ACIPC regarding the implementation of IPC interventions	4	Completed classroom part of the training to the ACIPC.
Activity Support the MOH in conducting dental IPC assessments for priority clinical units in health facilities **Activity description:** provide technical support for ACIPC and related stakeholders, including the Dentistry Directorate to conduct IPC assessments for priority clinical units in health facilities.	4	Drafted IPC assessment tool for dental clinics
Activity: Support the MOH HCAD in raising awareness on AMR and RUA **Activity description:** Conduct AMR awareness sessions for school students	4	Implemented the CASS on AMR in 8 schools from 3 health directorates, reaching a total of 1,125 students and 24 teachers.

I. KENYA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The MTaPS Kenya team is supporting three result areas in the AMR action package: optimizing the use of antimicrobials through AMS, strengthening IPC practices, and strengthening MSC through the NASIC and CASIC One Health platforms.

The activities for PY 5 are built on the work done in PYs 1 to 4. MTaPS will focus on supporting the sustainability of AMR containment activities at the national, county, and health care facility (HCF) levels. This will be through strengthening the core governance structures for AMR containment at all levels and applying a structured CQI approach with ongoing mentorship of all relevant work plans. MTaPS will continue to support implementation of activities that have been jointly prioritized by counties and health facilities, with a focus on ensuring that sustained AMR programs are built at the health facilities for control of health care–associated infections (HAI), containment of AMR, and improved patient safety.

CUMULATIVE PERFORMANCE TO DATE

As of September 2022, MTaPS helped country counterparts in Kenya improve the JEE score by supporting 48% (30/62) of the benchmark actions. In improving the JEE score for MSC/AMR, MTaPS supported 50% (2/4) of capacity level 2 actions, 75% (2/4) of capacity level 3 actions, 100% (4/4) of capacity level 4 actions and 40% (2/5) of capacity level 5 actions. MTaPS is supporting these activities at both the national level and at the subnational/county level in its focus counties. Strengthening of the MSC structures at national (NASIC) and county (CASIC) levels, development and dissemination of standardized AMR communique and bulletins to One Health stakeholders, as well as development of the NAP-AMR M&E framework have been key activities supported by MTaPS.

In improving the JEE scores for IPC, MTaPS supported 80% (4/5) of capacity level 2 actions, 67% (4/6) of capacity level 3 actions, and 60% (3/5) of capacity level 4 actions. MTaPS focused on strengthening of the IPC governance structures at national and county levels, development/review of the IPC guidelines in human health, application of IPC assessment tools, training of HCWs as well as monitoring implementation of IPC and WASH activities using a CQI approach in the focus counties and HCFs. MTaPS IPC activities in Kenya are only within the human health sector.

In improving JEE scores for AMS, MTaPS supported 75% (3/4) of capacity level 2 actions, 83% (5/6) of capacity level 3 actions, and 14% (1/7) of capacity level 4 actions. MTaPS AMS interventions in Kenya mainly focused on strengthening of AMS governance structures at the national level and in the focus counties and HCFs, review of the Kenya Essential Medicines List (KEML) to incorporate the AWaRe categorization of antibiotics, development and dissemination of the national AMS guidelines, development and dissemination of regulatory guidance to HCWs 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 HCWs on AMS, and monitoring implementation of AMS activities using a CQI approach in the focus counties and HCFs. MTaPS AMS activities in Kenya are also within the human health sector only.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS, in collaboration with the MOH and other partners, supported the commemoration of the 2022 WAAW at the national level and in the MTaPS focus counties of Kisumu, Nyeri, Kilifi, and Murang'a. In addition, the team provided technical advice (TA) and mentorship to 11 of the MTaPS focus facilities with collecting, analyzing, and presenting AMC/AMU data, which will be used to inform the facilities' AMS program interventions as they work toward optimizing antimicrobial usage.

MTaPS, in collaboration with MOH, supported the implementation of the NAP-AMR M&E reporting through the online Kenya Health Information System (KHIS), the review of IPC-related guidelines and IEC materials, the training and capacity building of health care providers on IPC and health worker safety. MTaPS collaborated with professional associations in delivery of IPC updates to health care professionals and provided support to strengthen professional association institutional structures.

MTaPS collaborated with counterparts in the counties to jointly conduct supportive supervision in 11 health facilities, hold mentorship sessions for 3 hospital IPC committees, and review HCF AMS and IPC CQI work plans. Achievements were documented and recommendations were made to address challenges. SOPs on HCWM, cleaning and disinfection, reprocessing reusable medical devices, and linen management were disseminated to promote adherence to best IPC practices in all 20 health facilities where MTaPS supports IPC activities.

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Continue strengthening NASIC for coordination, policy direction, review, and M&E of the national AMR plan and help to move toward sustainable capacity

MTaPS provided TA in two NASIC secretariat workshops, held in Nakuru in October and November 2022, to consolidate comments and proposals from stakeholders for the review of the 2017–2022 NAP-AMR and the review of its M&E framework. The team also provided TA to the NASIC secretariat with the planning and implementation of the 2022 WAAW national launch and symposium held from November 17 to 18, 2022. Furthermore, the team provided financial and technical assistance to the MTaPS focus counties (i.e., Kisumu, Kilifi, Murang'a, and Nyeri) with the planning and implementation of their WAAW activities, which included presenting at the national WAAW launch, holding CASIC meetings (in Nyeri, Kisumu, and Kilifi), raising awareness of AMR through radio talk shows (in Kilifi, Murang'a, and Nyeri), an AMR symposium in Murang'a, and patient health talks and CMEs across the MTaPS counties (i.e., Kilifi County Referral Hospital [CRH], Malindi Sub-County Hospital [SCH], and Mariakani SCH in Kilifi; Nyakach SCH, Jaramogi Oginga Odinga Teaching and Referral Hospital [JOOTRH], and St. Elizabeth, Chiga in Kisumu; PCEA Tumutumu and Karatina SCH in Nyeri; and Murang'a CRH and Maragua SCH in Murang'a). Through the CMEs, 379 HCWs (211 females, 168 males) and several patients were trained.

RESULT AREA 2: IPC

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

MTaPS continued to support national-level coordination at the MOH divisions of Patient and Health Worker Safety, HCWM, Environmental Change, and OSH on IPC. In collaboration with the MOH, MTaPS offered technical advice in national advisory committees for emerging and re-emerging diseases.

In addition, MTaPS supported strengthening M&E of IPC indicators by offering technical support in revision of the M&E tools, cascading training to counties and with the review of reported indicators through the national M&E dashboard (on KHIS). MTaPS also supported the review of the National Guidelines on HCWM, revision of HCWM IEC materials, revision of the IPC/OSH package, and the national dissemination of IPC/OSH packages.

The MTaPS team, in collaboration with Nyeri County leadership, organized and conducted mentorship sessions for hospital IPC committees in three hospitals (public, private, and faith-based organizations). These sessions aimed to strengthen the IPC governance at the HCF level and targeted committees in the county that had been revitalized following the exit of several members through transfers or due to staff turnover. A total of 30 (19 female, 11 male) IPC committee members were taken through the committee terms of reference, reoriented on the IPC CQI tools and provided with guidance on updating the IPC CQI plans.

Activity 2.2.1: Strengthen and scale up health care human resource capacity for IPC through pre-service, in-service, and CPD trainings

MTaPS supported the National Nurses Association of Kenya (NNAK) in developing a concept for the establishment of a training academy integrated with IPC/AMS components. This initial step is aimed at providing a sustainable, self-reliant platform that will be offering CPD-certified courses for nurses across the country. In collaboration with other professional associations (the Infection Prevention and Control Network [IPNET]-Kenya; Morticians and Allied Professionals Association of Kenya [MAPAKE]), MTaPS provided TA to support the running of professional education sessions on IPC for HCWs.

Activity 2.5.1: Continue to support county-, subcounty-, and facility-level IPC, OSH, and WASH activities for sustainable capacity

MTaPS, in collaboration with the MOH division of OSH, conducted a 3-day IPC/OSH TOT for county health management teams (CHMT), bringing together 55 participants (33 female, 22 male) from the MTaPS focus counties to support further integration efforts of OSH into IPC programs. IPC/OSH abstracts and SOPs on health care waste segregation were distributed across all health facilities in focus counties. County-led cascade training commenced, and training sessions are ongoing in the MTaPS focus counties (i.e., Kilifi, Kisumu, Murang'a, and Nyeri). Quarterly IPC CQI supportive supervision and mentorship sessions were conducted in 11 health facilities in 3 counties (Kilifi, Kisumu [except JOOTRH], and Murang'a). Additionally, CME sessions, induction of students/interns, and sensitization sessions were conducted in 6 health facilities (Murang'a CRH, Kilifi CRH, Maragua SCH, Chulaimbo SCH, Naromoru health center, and Kisumu CRH) under the leadership of HCF IPC focal persons to increase compliance with IPC practices. IPC and patient safety recording and reporting tools were distributed to all 16 MTaPS focus HCFs for IPC from the two counties (Nyeri and Kisumu) that had participated in the pilot and that had been sensitized on the tools.

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

Activity 3.1.1: Continue to strengthen AMS governance structures at the national and county levels for sustainable capacity

The MTaPS team, in collaboration with the PPB, continued to support the development of national tools for AMC surveillance in a 3-day workshop (October 26–28, 2022) with 14 participants (9 male, 5 females) in attendance. A manual compilation of the tool was completed and will serve as the blueprint for digitizing the tool.

Activity 3.1.2: Continue to strengthen institutionalization of the AWaRe categorization of antibiotics

The MTaPS team provided a final review of the KNMF as the last stage in finalizing the document. This is the country's first medicines formulary manual and incorporates the AWaRe categorization. It will support health care provision in the country through guidance for the appropriate prescribing of medicines, including antimicrobials, in the management of various conditions. MTaPS will support the launch of the formulary manual in PY5.

Activity 3.2.1: Continue to strengthen and scale up health care human resource capacity for AMS through pre- and in-service trainings

The MTaPS team participated in a 2-day consultative meeting in November 2022, organized by the PPB, which brought together key experts to review the Pharmacy and Pharmaceutical Technologists core curriculum guides. During the meeting, MTaPS presented an AMR/AMS unit for incorporation into the generic curriculum. In addition, MTaPS, in collaboration with the National University Pharmacy Students Association, facilitated an AMR sensitization webinar during the 2022 WAAW. The webinar was attended by 129 (69 male, 60 female) students from Kenya and other countries.

Activity 3.5.1: Continue support to county-, subcounty-, and facility-level AMS activities for sustainable capacity

MTaPS continued to provide TA and mentorship in AMS to the focus counties and facilities. This included support to JOOTRH with the compilation of findings from AMR surveillance and AMS intervention implementation, an outpatient department (OPD) prescribing audit at Nyakach SCH, compilation of Gertrude's Children's Hospital's PPS findings, Kilifi County's Rational Drug Use research, and an OPD prescribing standards audit at Kilifi County Referral Hospital. These key AMS interventions support the identification of gaps in prescribing practices, patient care, and in-facility AMS readiness, and subsequently assist them with developing specific MTC/AMS actions to mitigate these gaps. In addition, the team, in collaboration with Murang'a County, conducted an AMS quarterly supportive supervision exercise in Murang'a CRH and Maragua SCH on November 22, 2022.

QUARTER 4 BEST PRACTICES/LESSONS LEARNED

■ Influencing policy at the national level supports the adoption and implementation at county and HCF levels.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Continue strengthening NASIC for coordination, policy direction, review, and M&E of the national AMR plan and help to move toward sustainable capacity ▪ Participate in Nyeri CASIC work plan end-term review meeting and development of next CASIC work plan ▪ Finalization and launch of Kisumu CASIC work plan ▪ NAP-AMR and M&E framework finalization ▪ Support the dissemination/implementation of the M&E framework in MTaPS focus counties ▪ Support the compilation and dissemination of the AMR bulletin ▪ Continue supporting and providing TA during CASIC meetings in MTaPS focus counties	January–March 2023
Activity 2.1.1: Continue strengthening governance bodies for IPC at the national, county, and facility levels for sustainable capacity ▪ Dissemination/implementation of the IPC M&E framework to MTaPS focus counties and facilities ▪ Review and document lessons learnt in phase one of implementing the IPC M&E framework ▪ Offer technical support at national level to MOH divisions on IPC matters, including National IPC Advisory Committee (NIPCAC) meetings ▪ Finalize and support dissemination of the revised IPC guidelines to HCWs ▪ Continue supporting and providing technical assistance during County IPC Advisory Committee (CIPCAC) meetings in 4 counties ▪ Provide technical support and mentorship to hospital IPC committees based on their IPC CQI action plans and during supportive supervision and mentorship sessions	January–March 2023
Activity 2.2.1: Strengthen and scale up health care human resource capacity for IPC through pre-service, in-service, and CPD trainings ▪ Training and capacity building of HCWs on IPC focusing on emerging and re-emerging infections and health worker safety ▪ Support establishment of frameworks for sustainability among professional organizations for training and capacity building	January–March 2023
Activity 2.5.1: Continue support to county-, subcounty-, and facility-level IPC, OSH, and WASH activities for sustainable capacity ▪ Review abstracts written from the counties and HCFs highlighting best practices, lessons learned, and achievements ▪ Quarterly supportive supervision ▪ Hold IPC performance review meetings for the 20 focus HCFs ▪ Sensitization on and dissemination of IPC M&E recording and reporting tools in 2 counties ▪ Sensitization of surgical teams on surgical site infection prophylaxis in the 4 counties	January–March 2023
Activity 3.1.1: Continue to strengthen national and county AMS governance structures for sustainable capacity ▪ Conduct MTC/AMS refresher trainings in Nyeri and Kisumu counties ▪ Review of the KEML with updating of the AWaRe categorization ▪ Support finalization of the AMC surveillance tools and their rollout within the MTaPS focus counties	January–March 2023
Activity 3.1.2: Continue to strengthen institutionalization of AWaRe categorization of antibiotics ▪ Dissemination of practical guides for AWaRe implementation in MTaPS focus counties; and the monitoring of and support to implementation of these guides	January–March 2023
Activity 3.2.1: Continue to strengthen and scale up health care human resource capacity for AMS through pre- and in-service trainings ▪ Continue to support the incorporation of pre-service training through supporting finalization of core curriculum guides and planning for trainings in PPB-targeted training institutions ▪ Conduct quarterly CPD training sessions with professional associations	January–March 2023
Activity 3.5.1: Continue support to county-, subcounty-, and facility-level AMS activities for sustainable capacity ▪ Conduct quarterly AMS supportive supervision visits in the four focus MTaPS counties ▪ Conduct Kilifi mid-term AMS assessment ▪ Support to focus facilities on compiling and reporting on AMS indicators as part of integrated reporting ▪ Support for documentation of lessons learned and best practices	January–March 2023

Table 14. Quarter 1, FY23, Activity Progress, Kenya—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)
Activity 1.1.1: Continue strengthening NASIC for coordination, policy direction, review, and M&E of the national AMR plan and help to move toward sustainable capacity. **Activity description:** Support NASIC in implementing the NAP-AMR M&E framework; review progress with the NAP AMR 2017–2022 as prelude to the review of the next NAP; support CASICs in four target counties	5.4	1.1	Provided TA to NASIC, counties, and facilities with planning and commemoration of WAAW 2022 activities, including: ▪ Nyeri, Kilifi, and Kisumu presentations at National WAAW launch ▪ CASIC meetings in Nyeri, Kisumu, and Kilifi ▪ Radio talks show in Kilifi, Murang'a, and Nyeri ▪ AMR symposium in Murang'a ▪ Patient health talks and CMEs in hospitals in Kilifi, Kisumu, Nyeri, and Murang'a counties ▪ Supported review of NAP-AMR and finalization of Kisumu CASIC work plan
Activity 2.1.1: Continue strengthening governance bodies for IPC at the national, county, and facility levels for sustainable capacity **Activity description:** Support the MOH in implementation of the National IPC M&E Framework; development/review of relevant SOPs (with a focus on HAIs); meetings of National IPC TWG and NIPCAC; monitoring implementation of county and HCF action plans	5.4	2.1	Conducted a 3-day IPC/OSH training of trainers for CHMTs IPC/OSH abstracts and SOPs on health care waste segregation distributed to 20 HCFs in the 4 counties. Quarterly IPC CQI supportive supervision and mentorship sessions conducted in 11 health facilities in Kilifi, Kisumu and Murang'a. CMEs on IPC and induction of students/interns and sensitization sessions conducted in 5 HCFs. AMS/IPC/patient safety indicator reporting tools distributed to 16 MTaPS focus HCFs in Nyeri and Kisumu.
Activity 2.2.1: Strengthen and scale up health care human resource capacity for IPC through pre-service, in-service, and continuing professional development trainings **Activity description:** Continue to roll out the IPC CPD course in collaboration with health professional associations; collaborate with national MOH IPC team and stakeholders in introduction of IPC agenda/courses in training institutions	5.4	2.2	MTaPS undertook development of a concept for the establishment of a training academy integrated with IPC/AMS components in collaboration with NNAK. MTaPS also collaborated with professional associations (IPNET-Kenya, MAPAKE) on professional education sessions on IPC for HCWs.
Activity 2.5.1: Continue to support county-, subcounty-, and facility-level IPC, OSH, and WASH activities for sustainable capacity **Activity description:** Support county and HCF IPC champions to implement and review IPC CQI action plans, report on key IPC indicators through the KHIS; disseminate and implement existing and newly prioritized IPC guidelines, SOPs, and job aids; document and share best practices and lessons learned	5.4	2.5	MTaPS conducted supportive supervision and mentorship in 11 health facilities across 3 counties. Additionally, MTaPS distributed SOPs on health care waste segregation and OSH abstracts in all facilities in 4 focus counties.
Activity 3.1.1: Continue to strengthen AMS governance structures at the national and county levels for sustainable capacity **Activity description:** Support to the PPB in finalization and utilization of the national AMC surveillance tool; mentorship for county and facility AMS focal persons to report AMR indicators to KHIS	5.4	3.1	In collaboration with the PPB, MTaPS supported a 3-day workshop (October 26–28, 2022) for the development of national tools for AMC surveillance; 14 participants (9 male and 5 females) were in attendance. A manual compilation of the tool was completed and will serve as the blueprint for digitizing the tool.

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)
Activity 3.1.2: Continue to strengthen institutionalization of AWaRe categorization of antibiotics **Activity description:** Support revision of the KEML 2019 with AwaRe categorization; support development and implementation of relevant select SOPs, tools, and job aids; support dissemination and utilization of the practical guide for AwaRe implementation	5.4	3.1	MTaPS supported the finalization of the KNMF through a final technical review, and start of revision of the KEML
Activity 3.2.1: Continue to strengthen and scale up health care human resource capacity for AMS through pre- and in-service trainings **Activity description:** Work with the PPB to incorporate AMR and AMS in the core pre-service curriculum for pharmacy training programs; provide ongoing AMS CPD curriculum in collaboration with professional bodies; support the development of a PPS training package; promote patient/public education sessions through multipronged approaches	5.4	3.2	MTaPS participated in a PPB consultative meeting (November 1–2, 2022), with the aim of incorporating an AMR/AMS unit into the core curriculum guides. In addition, the team, in collaboration with the National University Pharmacy Students Association, facilitated an AMR sensitization webinar on November 19, 2022. In attendance were 129 (69 males, 60 females) students from Kenya and other countries.
Activity 3.5.1: Continue support to county-, subcounty-, and facility-level AMS activities for sustainable capacity **Activity description:** TA, mentorship, and support to focus county AMS focal persons for implementation of patient-centered AMS interventions, including in their respective CASIC and HCF work plans; monitoring implementation of HCF AMS CQI action plans; development/revision and dissemination of prioritized AMR/AMS IEC materials; AMS supportive supervision; documenting and sharing best practices and lessons learned	5.4	3.5	Supported AMS interventions in JOOTRH with the compilation of findings from AMR surveillance and AMS ward rounds, an OPD prescribing audit at Nyakach SCH, compilation of Gertrude's Children's Hospital's PPS findings, Kilifi county's rational use of drugs research, and prescribing standards audit at Kilifi CRH OPD. In addition, MTaPS, in collaboration with Murang'a county, conducted an AMS quarterly supportive supervision in Murang'a CRH and Maragua SCH on November 22, 2022.

J. MALI

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

MTaPS Mali's strategy is to base the program implementation on guidance from the WHO benchmarks for IHR 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 AMR. MTaPS advocates for a systematic and comprehensive approach to support IPC and AMS activities for AMR containment with the support and oversight of the MSC body on AMR and its IPC and AMS TWGs. In Mali, this MSC body is called the National MSC Group on AMR (GCMN-RAM). AMR activities in Mali span the national, facility, and community levels.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' primary goal is to support the country move up to the next JEE level across the 3 result areas by supporting the completion of WHO IHR benchmark actions. As of September 2022, MTaPS has supported the completion of 24 (39%) of the 62 total WHO benchmark actions—7 contributing to MSC/AMR, 12 to IPC, and 5 to AMS—while 3 other benchmark actions are at various stages of completion (ongoing).

During FY19–22 MTaPS worked with the GCMN-RAM to develop TORs for the group, as well as for its IPC and AMS subcommittees. The GCMN-RAM committed to meet quarterly, while the IPC and AMS TWGs planned to meet monthly. With MTaPS support, the GCMN-RAM has been able to organize 7 coordination meetings out of the 12 initially planned to monitor progress on implementing the NAP-AMR. Additionally, MTaPS supported the IPC and AMS TWGs to organize their respective meetings, and the IPC TWG organized 6 meetings. The IPCAT2 tool has been used once per year since 2020 to evaluate IPC core components at the national level. IPCAT2 results in 2022 showed that 2 components improved since 2021, and Mali had a score of greater than or equal to 50% on 4 of the 6 IPC components assessed at the national level. The AMS TWG also organized 3 meetings. During 2021, the AMS TWG evaluated AMS core components at the national level using the WHO checklist of essential national core elements for AMS programs in LMICs. One AMS core component (regulations and guidelines) had a score of 50%, while the other 3 components (national plan and strategy; awareness, training, and education; supporting technology and data) had a score greater than 75%.

MTaPS supported the DGSHP and the DPM (which are involved in the GCMN-RAM) to establish DTCs and IPC committees in 16 MTaPS-supported health facilities. Following their establishment, the committees developed action plans for continued improvement of IPC and AMS practices. MTaPS assisted the GCMN-RAM and DGSHP to organize 3 virtual meetings to monitor the implementation of IPC activities in the 16 facilities' action plans. Additionally, MTaPS supported 3 supervision visits to the HFs. MTaPS supported the DPM and National Hospital Evaluation Agency (ANEH) in organizing 5 virtual meetings and in conducting 1 DTC supervision visit to 16 HFs. MTaPS supported the National Institute of Public Health (*Institut National de Santé Publique* [INSP]), DGSHP, and the DPM (which are involved in

the GCMN-RAM) to develop major national AMR-related documents, including the 2023–2027 NAP-AMR, the 2021–2025 AMS action plan, and the 2023–2027 IPC strategic plan.

Additionally, MTaPS supported the development and implementation of e-Learning courses on IPC and AMS in Mali; MTaPS-supported e-Learning platforms are now installed and operational at both the DGSHP and the Faculty of Medicine (*Faculté de Medicine et d'Odonto Stomatologie* [FMOS]).

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

In Quarter 1 of FY23, the implementation of MTaPS-supported activities allowed Mali to improve the percentage of WHO IHR benchmark actions completed for the MSC and AMS components.

Support to the country's progress toward these benchmark actions included the following:
- MTaPS supported the revision of the NAP-AMR (which is being implemented) and the monitoring of antimicrobial use at health facilities (including virtual meetings with DDTCs and site visits to facilities).
- WHO supported the monitoring of antimicrobial use and consumption.

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1. Provide technical and operational support to the GCMN-RAM and its two subcommittees (IPC and AMS)

MTaPS supported the IPC TWG and DGSHP in organizing an online quarterly meeting, which was attended by 17 IPC stakeholders (including 4 women), from the human health and environment sectors of the One Health Platform. At the end of the meeting, the following recommendations were made for the DGSHP: advocate for decision makers to prioritize the establishment of a national IPC program and organize a meeting with partners to discuss how to organize the national WASH baseline assessment.

Activity 1.2.1: Support the GCMN-RAM to celebrate WAAW

In December 2022, MTaPS supported the GCMN-RAM to organize the celebration of WAAW in collaboration with the FAO Emergency Centre for Transboundary Animal Diseases (ECTAD). The observation of WAAW in Mali included an awareness-raising conference at the Faculty of Pharmacy for pharmacists and other stakeholders, as well as students, on the proper use of antimicrobials. In total, 211 people (56 women) from the four key health sectors (animal, human, environmental and agricultural), participated in WAAW activities supported by MTaPS. Participants at the WAAW conference recommended strong advocacy and diligence to politically adopt the revised NAP-AMR, to support the efficient mobilization of resources for its implementation, and to strengthen government's partnership with community pharmacists to boost efforts to fight AMR.

Awareness day for students and doctors on the proper use of antimicrobials, Mali. Photo credit: MTaPS

RESULT AREA 2: IPC

Activity 2.5.1: Support the IPC TWG and DGSHP in monitoring implementation of IPC practices at health facilities

On December 16, 2022, MTaPS supported a virtual monitoring meeting on IPC activities with MTaPS-supported health facilities. This monitoring showed that 100% of the supported IPC committees are functional (indicator IP6); i.e., they hold regular meetings. Among the 16 health facilities assessed with the WHO COVID-19 scorecard tool, 14 (87.5%) health facilities attained at least the "advanced" level (Scorecard >75%). All the health facilities other than the Dermatological Hospital of Bamako have started to implement their action plans, and 15 of the 16 facilities (94%) are implementing CQI to improve IPC (indicator IP5).

Activity 2.5.2: Strengthen capacity of three local training institutions to manage e-Learning on IPC and AMS for both pre- and in-service health care workers

MTaPS supported the DGSHP, FMOS, and FAPH to monitor the use of the DGSHP and the FMOS e-Learning platforms from October to December 2022 and prepare a monitoring report. Monitoring revealed the following results:

- A total of 250 people is registered on the DGSHP and FMOS e-Learning platforms, including 183 people for the IPC course, 66 for the COVID-19 course, and 1 participant for the AMS course.
- A total of 34 people obtained their certificate of course completion, including 26 standard IPC certificates and 8 COVID-19 IPC certificates.

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

Activity 3.5.2: Support the GCMN-RAM, the National Agency for the Assessment and Accreditation of Health Facilities (Agence Nationale d'Evaluation et d'Accréditation des Etablissements de Santé [ANAES]), and DPM in monitoring implementation of AMS practices at health facilities

On December 21, 2022, MTaPS supported the GCMN-RAM and DPM to organize a virtual meeting of DTCs to monitor progress in the implementation of their action plans. Out of the 16 supported facilities, 14 participated in this meeting, which was attended by 42 people (8 women) from human health sector, The action plans assessment revealed that 13 out of 16 (81%) DTCs implemented AMS improvement plans during the current quarter (indicator AS2). Additionally, 81% of MTaPS-supported health facilities (13/16) have implemented CQI to improve AMS during this quarter (indicator AS4).

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- The commitment of the Hospital Department strengthens the implementation of DTCs and IPC committees' action plans. This is exemplified by the case of Mère-Enfant Hospital "*le Luxembourg,*" which stands out as a successful example of IPC action plan implementation. After each update of the IPC action plan at Mère-Enfant Hospital, the IPC committee shares it with hospital management, who allocate financing to support activity implementation.

- The involvement of each of the four health sectors (human health, animal health, environment, and agriculture) is decisive in the fight against AMR. Antibiotics are added to grower feed for poultry, contributing to the overuse of antibiotics in general. The National Directorate of Veterinary Services (*Direction Nationale des Services Vétérinaires* [DNSV]) has set up a regulatory framework to reduce antibiotics use in grower feed and is sensitizing stakeholders to address this issue.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Provide technical and operational support to the GCMN-RAM and its two TWGs (IPC and AMS) Support the GCMN-RAM and its two technical working groups (IPC and AMS) to hold quarterly meetings.	AMS TWG: January 2023 IPC TWG: March 2023 GCMN-RAM: March 2023
Activity 2.1.1: Support the IPC TWG to disseminate the national IPC strategic plan for the human health sector Support the DGSHP to print and disseminate 500 copies of the national IPC strategic plans to regional health directorates, health districts, hospitals, and all partners involved in IPC activities in Mali.	March 2023
Activity 2.5.2: Strengthen capacity of three local training institutions to manage e-Learning on IPC and AMS for both pre- and in-service health care workers Orient health workers on the e-Learning platforms. Produce a monitoring report, including the number of participants registered and who have completed the courses.	March 2023
Activity 3.5.1 (year 4): Support the DPM to develop and disseminate a DTC training toolkit Disseminate the toolkit, including the guidelines.	February 2023

Table 15. Quarter 1, FY23, Activity Progress, Mali—GHSA

Activity	MTaPS Objective(s)	GHSA 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 GCMN-RAM to hold the following meetings: ▪ The 24th meeting of the One Health platform with four sectors (human health, animal health, agriculture, and the environment) was held on October 5, 2022. A total of 47 participants attended this meeting in-person, including 10 women (21%). The IPC TWG quarterly meeting was held (online) on November 23, 2022, with the participation of two sectors (human health and environment) under the leadership of the DGSHP.
Activity 1.2.1: Support the GCMN-RAM to celebrate WAAW	5	5.4	MTaPS supported the GCMN-RAM to celebrate WAAW. Activities funded by USAID partners including MTaPS and FAO-ECTAD were highlighted during WAAW; the collaboration of these partners allowed the country to organize this year's celebration. WAAW activities were led by INSP.
Activity 2.5.1: Support the IPC TWG and the 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 monitoring meeting on IPC activities on December 16, 2022, with the health facilities supported by the project. This meeting was attended by 35 people (9 women) from human health sector.
Activity 2.5.2: Strengthen capacity of three local training institutions to manage e-Learning on IPC and AMS for both pre- and in-service health care workers	5	5.4	MTaPS continued to support the FMOS/FAPH and the DGSHP to manage e-Learning on IPC and AMS through the following activities: ▪ Routinely reminding participants at MTaPS-supported meetings and events about the e-Learning courses and sharing the link with them to access the courses ▪ Uploading the AMS e-Learning course developed with support from MTaPS on the institutions respective Moodle e-Learning platforms ▪ Following up with the DGSHP, FMOS and FAPH for data on the enrollment on and use of their e-Learning platforms
Activity 3.5.2: Support the GCMN-RAM, ANAES, and DPM in monitoring implementation of AMS practices at health facilities	5	5.4	MTaPS supported the GCMN-RAM and DPM to organize a virtual meeting of DTCs to monitor progress in the implementation of their action plans. Out of 16 facilities, 14 participated in the meeting.

MATERNAL, NEWBORN, AND CHILD HEALTH ACTIVITIES

OVERVIEW

MTaPS Mali's MNCH goal includes strengthening pharmaceutical regulatory systems focusing on registration or marketing authorization for all products generally, 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

From December 2021 to April 2022, MTaPS supported the DPM to conduct a 3-day training session to build the capacity of the data entry team to use the PRO-E-MED data entry tool, which is the DPM's electronic platform for medicines registration. During this period, 5,518 medicine registration dossiers were completely recorded in the tool, representing a completion rate of 110% of the previously noted backlog of an estimated 5,000 unrecorded medicine registration dossiers; 1,162 of these dossiers were for registration renewals.

In May 2022 and September 2022, MTaPS helped the DPM to organize two sessions of the CNAMM in Mali, during which 786 dossiers (including 103 for MNCH) were examined. As such, MTaPS supported a total of two meetings of the CNAMM in FY4. After the update of the Directory of Registered Medicines and Medical Products in Mali (May 2022 edition), 3,606 different medicines listed by form, dosage, and presentation had valid registration in Mali. Additionally, MTaPS supported the DMP to set up a website.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the DPM to set up and operationalize an official website (https://dirpharma.ml/index.php/fr/) to make data related to the directory of registered medicines available to customs officials, inspectors, medicine manufacturers, and health professionals. Additionally, the DPM set up a Facebook page including a link to the website.

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

Activity 3.1.6.2. Assist the DPM to set up an operational website (FY4 activities)

To start the development of the website, the DPM and the national agency for telehealth and medical information (Agence National de Télésanté et d'Informatique Médicale [ANTIM]) signed a purchase order including the scope of work for ANTIM identified by MTaPS and the DPM during a ceremony chaired by the director of the DPM with the participation of the deputy director of ANTIM, the agent in charge of the website design, and the MTaPS team. After the ceremony, MTaPS supported the following activities:

- A working session with the DPM on the design of the website and the appointment of design monitoring managers
- A review of the website design timeline
- The training of site administrators on website development techniques

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Deputy Director of ANTIM opens a training workshop, Mali. Photo credit: Boubacar Dembele, MTaPS

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- To make up for lost time from earlier implementation delays, the website menus were developed during the training of site administrators. This allowed training participants the opportunity to practice their knowledge and contributed to establishment of an operational website at the end of the training.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 3.1.6.2: Assist the DPM to set up an operational website (FY4 activities) MTaPS will support the DPM to finalize the website design and organize a website launch ceremony.	January and February 2023
Activity 5.2.8: Support the DPM to evaluate the use of medicines within the NEML in health facilities MTaPS will support the DPM to evaluate the procurement and use of medicines within the NEML among health service providers. This evaluation will also focus on the analysis of prescription trends to assess the NEML's effects on the appropriate use of medicines, including MNCH tracer medicines.	January, February, and March 2023
Activity 5.4.6: Support the DPM to build the capacity of health practitioners on infectious disease treatment guidelines and appropriate prescribing: ▪ Development of a training module on the infectious disease treatment guidelines Training session for health care practitioners	February and March 2023

Table 16. Quarter 1, FY23, Activity Progress, Mali—MNCH

Activity	MTaPS Objective(s)	MNCH Result(s)	Activity Progress
Activity 1.1.2: Streamline registration of essential medicines, including MNCH products (FY4 activity)	1	1.1	MTaPS supported the DPM to review its revised procedural manual. This consisted of comparing elements in the procedure manual revised by the DPM with the official Economic Community of West African States (ECOWAS) guidelines for the preparation and submission of files in common technical document (CTD) format for the registration of pharmaceutical products for human use and the African Union (AU) Model Law on the Regulation of Medical Products. This analysis revealed that the revised manual meets subregional and international approval standards in terms of governance (power and function of the NMRA); registration procedure and composition of application files (first registration, renewal, and modification); and administrative appeal procedures (Complaints, appeals). In addition, the revised procedure manual considers the WHO collaborative approach for medicines registration.
Activity: 3.1.6.2: Assist the DPM to set up an operational website (FY4 activity)	3.1	3.1	After website design, MTaPS supported the training of DPM staff on the management of the website. The training focused on practical cases, including simulation exercises and real cases on the website. The practical exercises covered topics including: ▪ Access to the administration features of the website (two new administrators have been added to the site) ▪ The creation of usernames and passwords (how to add new users as an administrator) ▪ The administration panel and the various menus ▪ The creation and categorization of content, etc.

K. MOZAMBIQUE

FIELD SUPPORT ACTIVITIES

OVERVIEW

The overall goal of MTaPS is to enable Mozambique to strengthen the pharmaceutical regulatory system to ensure equitable, sustainable access to safe, effective, quality-assured, and affordable essential medicines and medicine-related pharmaceutical services. This includes an effective medical products vigilance system at *Autoridade Nacional Reguladora de Medicamento, Instituto Publico* (ANARME, IP) supporting the detection, assessment, understanding, and prevention of AEs or any other medical product–related safety problems to ensure the achievement of intended health outcomes while minimizing medication harm.

Establishing an effective and sustainable regulatory system under ANARME, IP's leadership is a high priority for Mozambique's pharmaceutical sector. MTaPS is working with ANARME, IP and other stakeholders to strengthen the regulatory system to provide safe and effective antiretroviral and other related medicines, promote rational use of antimicrobials, and increase accountability and transparency. This includes strengthening the active PV system and updating the PV management information system by implementing the electronic PViMS tool. The HIV and TB programs need an active PV system that enables systematic monitoring of AEs of TPT regimens. MTaPS is supporting ANARME, IP, the national HIV program, and the national TB program to implement the ongoing active safety surveillance for patients on TPT.

CUMULATIVE PERFORMANCE TO DATE

In PY2, the National Bioethics Committee on Health approved the protocol for implementation of ASM of the dolutegravir-based TLD regimen. ANARME, IP and the HIV program, with support from MTaPS, conducted training of 292 HCW (204 male, 88 female) as well as 18 participants from the central level on the protocol, SOPs, and proper data collection. Following the training, 9 of the 10 selected HFs commenced enrolling both treatment-naïve HIV/TB co-infected patients and patients transitioned from nevirapine-based regimens to TLD into the cohort in April 2020. The 10th facility was being used as a COVID-19 treatment center, so it did not enroll patients. In PY3, further support included patient enrollment and follow-up, and quarterly on-site and virtual supervisions by ANARME, IP and the HIV program to the 9 study sites. This supervision served to continuously mentor and support the site HCWs to implement the protocol, identify challenges, develop action plans to address gaps, and undertake corrective actions. In addition, MTaPS, in collaboration with ANARME, IP and the programs, generated quarterly progress update reports on the enrolled patient numbers, number of follow-up visits, AEs reported, findings of the supervision visits, strengths and challenges in the implementation of the program, and recommendations to alleviate them. By the end of the study on February 28, 2022, there was successful enrollment of the targeted sample size of 3,000 people living with HIV with 8,366 patient follow-up visits reported. MTaPS supported ANARME, IP, in a data cleaning exercise to improve the quality of data collected during the patient follow-up visits. Their unique patient records were entered into PViMS. A total of 95 AEs were reported; however, none were severe. MTaPS supported ANARME, IP to organize a virtual review meeting with all site teams to present the progress report

with a focus on enrolled patient follow-up. During Q2 of PY4, MTaPS supported ANARME, IP, to physically visit the study sites to advise on how to close the active surveillance activity and submit all their study materials (tablets; filled in data collection forms A, B, and C; and informed consent forms) to ANARME, IP at the central level for final storage and analysis. MTaPS supported capacity building on causality assessment for 9 ANARME, IP internal staff (4 male, 5 female), including a practical session on the use of PViMS to conduct the causality assessment. Data cleaning and analysis for TLD implementation were completed.

Mozambique is implementing the use of a once-weekly dose of 3HP for 12 weeks for TPT and continuing use of a once-a-day dose of INH for 6 months preventive treatment. In PY3, MTaPS built upon the ongoing support to ANARME, IP and the HIV program on active TLD safety surveillance to establish a similar safety surveillance system to actively monitor patients using INH and 3HP for TPT. ANARME, IP, and the national HIV and TB programs, with support from MTaPS, developed a protocol for TPT active surveillance, data collection forms, SOPs, and training materials that were approved by the National Bioethics Committee on Health, with further approval from the CDC in PY4 Q2 (March 2022). Five HFs (four health centers and one hospital) across two provinces (Gaza and Maputo City) were selected as study sites. During PY4, there was also periodic engagement with different stakeholders, and management. In April 2022, a TOT was conducted for 10 central-level focal persons (4 female, 6 male) from ANARME and staff from CCS and EGPAF. In July 2022, MTaPS supported ANARME, IP to train provincial and district focal persons on the TPT protocol, SOPs, and data collection including ANARME, IP, the NTP, USAID Mission, CDC and its IPs *Centro de Colaboração em Saúde* (CCS) and Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), and the Aurum Institute, to plan for implementation. MTaPS procured some of the hardware (tablets) required for facility-level data collection forms, followed by cascade training to the HF HIV, PV, and TB focal persons from the 5 study sites with a focus on the protocol, SOPs, and data collection forms. Patient enrollment was initiated in August 2022. The PViMS tool was updated with TPT data collection forms. A coordination meeting was conducted with ANARME, IP focal persons, national HIV program, and CCS and EGPAF focal persons to discuss implementation status and challenges and to develop action plans to overcome them.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

By December 2022, 4 AEs (all mild) had been reported from 138 follow-up visits which have taken place to date of the 157 patients enrolled into TPT active surveillance across the 5 implementing facilities. A supportive supervision exercise undertaken by ANARME, IP, working with the provincial focal persons, assessed progress of implementation at the Gaza province sites and made recommendations to the provincial focal persons to address the identified gaps. These gaps included poor understanding of the inclusion criteria for patients; irregular filling of the follow-up form (Form B) for patient follow-up visits, which contributed to a low number of complete Form Bs; and also incomplete filling of the data collection forms for some critical data such as age or gender.

Activity 3.1.1: Provide technical assistance to implement an active PV program for safety monitoring of TPT scale-up in Mozambique (activity continuing from FY22)

MTaPS facilitated a coordination meeting between ANARME, IP staff and representatives from CCS and EGPAF to plan the next steps regarding TPT ASM implementation. At the meeting, participants came to agreement on dates for the PViMS TOT and training of the site teams, as well as on the composition of the supervision teams and the need for the central-level ANARME, IP focal persons to make monthly calls to the provincial focal persons (PV, TB, HIV) to assess activity progress at the study sites. The calls were initiated in September 2022 and served as a regular coordination mechanism with the provincial focal persons. The calls were crucial to ensure constant monitoring of implementation, collection of information (data related to implementation, total patient inclusion, total follow-up visits and AEs reported, identification of challenges and development of plans to mitigate the challenges), and complemented the supervision visits. During the quarter, MTaPS facilitated a virtual training of 7 ANARME, IP focal persons (4 male, 3 female) as trainers of trainers on the use of PViMS for TPT ASM data collection. Working with ANARME, IP, MTaPS supported the cascade of training on the use of PViMS for data entry to the two Gaza province sites, i.e., Chilembene HF and Mandlakazi Hospital, and the provincial-level focal persons. A total of 12 health providers (7 male, 5 female) were trained from December 19 to 23, 2022. The PViMS training for the three Maputo City sites is planned for the next quarter. This will enable improved use of PViMs which in turn will allow for improved monitoring of any AEs reported by the enrolled TPT patients, leading to improved decision making on the safety of the medicines based on quality data.

To monitor the progress of TPT ASM implementation and support the study sites, MTaPS, in coordination with ANARME, IP and representatives from CCS and EGPAF, planned supportive supervision of the Gaza Province sites, i.e., Chilembene HF and Mandlakazi Hospital. The supervision was through in-person site visits, from December 19 to 23, 2022, carried out by ANARME, IP working with the provincial level. The findings of the supervision showed that there were gaps in filling out of the data collection forms A and B; low number of follow-up visits by patients, as some patients did not return for their appointments; some health workers had not filled out the follow-up form B for all patient visits; and the facilities had inadequate capacity to provide the requisite lab tests for the patients. The supervisory teams made the following recommendations to address the gaps:

- The provincial focal persons should support the HF focal persons in ensuring the completion of the missing data in form A and the informed consent form.

The provincial PV focal person from Gaza province, Mozambique, takes part in a supportive supervision for TPT ASM implementation at Mandlakazi Rural Hospital. Photo credit: Dr. Iazia Fernandes, Provincial Health Services, Gaza province

- ANARME, IP should instruct clinicians at the HFs on the need to continue to follow-up with patients after enrollment and complete Form B at each follow-up visit, even if there are no reports of AEs.
- The provincial focal persons should identify the nearest HF that has availability of lab reagents and testing capacity and get approval from the provincial health directorate for the referring of patient lab samples for the relevant lab tests.

In addition, during the quarter, MTaPS supported ANARME, IP to prepare a letter to National Bioethics committee on Health requesting an extension of the TPT study given the recent slow and low patient enrollment of 157 by December 2022 (table 17), compared with the target of 736. The committee approved the request to extend the study period until August 31, 2023. ANARME, IP has advised the provincial focal persons to work with local teams to actively identify TPT-eligible patients who meet criteria for inclusion in active monitoring. The local teams can then work together with patients to overcome issues related to the differentiated models of HIV care that may be interfering with the decisions that patients make on whether to continue being part of the active monitoring.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- None to report.

Table 17: Patients enrolled in TPT active surveillance system as of December 2022 (Mozambique)

Health Facility	Location (district, province)	Month that patient enrollment commenced	No. of enrolled patients as of December 2022 (Form A)	No. of patient follow-up visits as of December 2022 (Form B)	No. of reported AEs as of December 2022
Xipamanine	Maputo, Maputo City	Sep 2022	15	7	
Albasine	Maputo, Maputo City	Sep 2022	7	2	
1 de Junho	Maputo, Maputo City	Sep 2022	29	26	
Chilembene	Chokwe district, Gaza province	Sep 2022	34	55	2
Mandlakazi Rural Hospital	Chokwe district, Mandlakazi province	Sep 2022	72	48	2
Total			157	138	4*

*All reported AEs are mild

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Y4 Activity 3.1.1/Y5 Activity 3.1.2: Implement an active PV program for safety monitoring of TPT scale-up in Mozambique • Supervision of the 3 study sites in Maputo City (Xipamanine, Albasine and 1 de Junho) • Training on use of PViMS for the Maputo City sites • Onsite support to the 5 HFs on PViMS data entry and data quality check; start of data cleaning • Continued monthly coordination meetings led by ANARME, IP • Support ANARME, IP to start causality assessment using PViMS • Preparation of quarterly report on progress of TPT active surveillance implementation, showing number of patients enrolled and followed up, AEs reported, strengths and challenges in implementation of the study, and recommendations to alleviate them	January–March 2023
Y4 Activity 3.1.1: Provide technical assistance to establish an active surveillance system for newly introduced medicines in HIV and TB programs • Undertake dissemination of the findings and results of the TLD implementation, including lessons learned and recommendations	January–March 2023

Table 18. Quarter 1, FY23, Activity Progress, Mozambique—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 3.1.2: Implement an active PV program for safety monitoring of TPT scale-up in Mozambique (activity continuing from FY22) **Activity description:** Working with ANARME, IP, the TB program, IPs, and MTaPS global expert University of Washington, continue to support activities to ensure successful implementation and completion of TPT ASM, assist in analysis and interpretation of data, and disseminate results; periodic cleaning and data quality checks; periodic statistical analysis of the data obtained; generate quarterly progress update reports and final report consisting of the findings of the active surveillance, along with lessons learned and recommendations.	5.3	7 TOTs (4 male, 3 female) at central level trained in use of PViMS in December 2022; as well as 12 health providers (7 male, 5 female) of the 2 Gaza province sites. PViMS training for the Maputo site teams is planned for Q2. Supportive supervision was undertaken in December 2022, for the Gaza TPT sites and planned for Maputo City sites in February 2023.

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The 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 AMR. This goal is consistent with USAID's strategic objective on slowing the emergence of resistant microbes and preventing the spread of resistant infections and is also a priority area for the National Action Plan for Health Security (*Plano nacional de accao para Segurança sanitaria* [PASS, formerly PNASS]). 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 system-strengthening approach in three technical areas pivotal to containing AMR: MSC on AMR (JEE 2.0 indicator P.3.1), IPC (JEE 2.0 indicator P.3.3), and AMS (JEE 2.0 indicator P.3.4). Recently the new version of the JEE tool version 3 was developed, and MTaPS will be aligning activities to this version as much as possible without disrupting measurement of progress made so far.

CUMULATIVE PERFORMANCE TO DATE

In Mozambique, the JEE was conducted in 2016. The country received a score of 3 for IPC and a score of 1 for AMS capacities. There was no baseline score on MSC because this indicator was not included in the WHO JEE 1.0 tool used in 2016, but it was included in the revised 2018 JEE 2.0 version. Through its PY3 and PY4 work plans, MTaPS supported country stakeholders to achieve progress in MSC/AMR by supporting 50% of level 2 benchmark actions with 1 action completed outside MTaPS support in this level, 50% of level 3 benchmark actions with the remaining 50% of benchmark actions at this level achieved outside MTaPS support, and 25% of level 4 benchmark actions. On IPC, MTaPS supported the National Directorate of Medical Assistance's Department of Nursing (DNAM-DE)'s IPC team to complete 4 of 5 (80%) benchmark actions for capacity level 2 and 4 of 6 (67%) benchmark actions for capacity level 3. Through PY4 on AMS, MTaPS supported 2 out of 4 (50%) benchmark actions for capacity level 2; 3 out of 6 (50%) in level 3; and 1 out of 7 actions (14%) in level 4.

Since PY3, MTaPS has been collaborating with the Ministry of Health (MISAU), ANARME, and the National Institute of Health (INS) to establish a multisectoral coordinating structure for AMR in the country. In PY3, MTaPS supported the government to draft the TOR for the MCC and its secretariat and TORs for the AMS and IPC TWGs. The MCC membership structure was validated by MISAU and animal health stakeholders. The TORs of the IPC and AMS were updated while TORs for the new communication, education, and awareness (*comunicação, educação, e consciencialização*; CEC), and surveillance and research (*vigilancia e pesquisa*; VP) TWGs were developed, and all TORs were validated. The AMR MCC now has four TWGs, namely, IPC, AMS, VP, and CEC. MTaPS support contributed to participation of key stakeholders in AMR MCC meetings, more coordination among the relevant ministries (human health, animal health, environment), agenda items being more aligned with the NAP, updates on AMR-related activities undertaken by IPs, and the IPC and AMS TWG meetings more focused on the use of WHO tools. The health ministry appointed a focal point for AMR MCC and for each TWG to lead the secretariat and TWGs respectively, and AMR activities saw more coordination among the relevant ministries (human health, animal health, and environment). Also included in the

agenda of meetings were items related to the availability of in-country data on AMR and the prioritization of the implementation of the NAP activities by all sectors.

To date, with MTaPS support, three AMR MCC meetings as well as two IPC TWG and two AMS TWG meetings have been held. During PY4, the IPC TWG had one meeting; the VP and CEC TWGs, having been recently established, did not hold a meeting; and there were no AMS TWG meetings, despite MTaPS' follow-up with the AMS TWG focal point and the AMR MCC secretariat. The AMS TWG last met in September 2021, focusing on 2021 WAAW planning. In PY4, two IPC TWG meetings were held, where the IPC TWG reviewed its performance against its plan of action and adapted guidance on implementing a CQI approach for use in the local context. This guidance will be used to orient HFs on implementation of CQI to improve IPC practices.

In PY2 and PY3, COVID-19 funds from USAID were leveraged for IPC training in all provinces to bolster the IPC response to the pandemic. Seven HFs (Inhambane Provincial Hospital [PH], Tete PH, Xai-Xai (Gaza) PH, Lichinga PH, Pemba PH, Chimoio PH, and Matola PH) were targeted for focused support in the use of standard tools for monitoring IPC and informing programmatic improvement. MTaPS also supported the central-level IPC program to identify gaps using the WHO IPCAT2 and to develop an action plan. MTaPS also assisted the 7 HFs in improving their IPC performance using WHO's IPCAF tool. In PY4 Q1, to strengthen the capacity of provincial IPC teams, MTaPS trained 44 master trainers (21 female, 23 male) on IPC and conducted a repeat IPCAT2, with the central-level IPC team using the results to help identify priority areas that needed strengthening, such as surveillance of HAIs.

MTaPS, in collaboration with the DNAM Department of Hospital Therapeutics (DTH), ANARME, and INS, implemented hospital-level AMS interventions in three selected provincial hospitals (Inhambane PH, Tete PH, and Xai-Xai PH) of the seven priority HFs that had been trained on AMS in February 2020. Given the COVID-19 pandemic, although the three hospitals had established AMS committees with TORs, the committees had ceased functioning. Instead of in-person visits, MTaPS also facilitated virtual introductory meetings with the hospitals and remotely supported their initial organizational activities. The hospital directors and provincial authorities remained eager to initiate AMS activities in their hospitals. In PY4, MTaPS, in collaboration with ANARME and INS, supported the DTH to design and implement an AMS program in the three provincial hospitals (Tete, Gaza, and Inhambane). A baseline assessment was conducted using the WHO AMS Toolkit. The results were used to develop facility AMS action plans working with the HF staff. MTaPS also supported ANARME to initiate the process of categorization of antibiotics into WHO AWaRe categories, with the aim of inserting this update into the EML and national medicines formulary (*formulario nacional de medicamentos*; FNM). In addition, MTaPS, in collaboration with ANARME, undertook a rapid AMS assessment via desk review of country AMS policies, regulations, and SCM for the human health sector. Based on the findings, a draft NAP for AMS was developed. MTaPS supported ANARME in developing a draft regulation for prescription-only sales for key antibiotics, which is pending stakeholder validation. These regulations will help establish a firm foundation for AMS in the country by creating a solid regulatory framework to control the use of antimicrobials in the country. This effort complements the USAID MTaPS field support work plan, which from PY1 to PY3 supported revision of laws and regulations pertaining to the role of ANARME as the national regulatory authority.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

During the first quarter of PY5, MTaPS supported the Government of Mozambique (GRM) and other partners by contributing to the organization of the 2022 WAAW that took place from November 18 to 24, 2022. MTaPS supported DNAM/DTH to undertake AMR awareness campaigns on optimal use of antimicrobials at the three MTaPS-supported facilities; and the sensitization of students and staff of the *Instituto de Ciencias e Tecnologias de Mocambique* (ICTEM), a higher education academic institution in Maputo City on the "impact of antimicrobial resistance on public health."

In IPC, MTaPS worked with DNAM-DE and the IPC TWG to develop a draft guideline for surveillance of HAIs in Mozambique. This will address the earlier identified gap noted in HAI surveillance from the IPCAT2 assessments.

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Continue to support the governance and organizational capacity of the AMR MCC, gearing toward sustainability

During the first quarter of PY5, MTaPS worked with the GRM and other partners to contribute to the organization of the WAAW that took place from November 18 to 24, 2022. MTaPS supported the government to perform the following activities:

- Organization of public events to disseminate key messages on AMR containment for the public in general. MTaPS contributed specifically to the development of messages and supported printing of t-shirts with AMR messaging.
- DNAM/DTH, in collaboration with provincial and facility leadership, organized awareness campaigns on optimal use of antimicrobials at the three MTaPS-supported facilities: Xai-Xai PH, Inhambane PH, and Tete PH.
- Sensitization of students and staff of ICTEM on the "impact of antimicrobial resistance on public health"

Question and answer session during the sensitization at ICTEM (Mozambique). Photo credit: Helio, ICTEM

There has been a challenge with leadership on AMR issues between the OHP, which implements AMR through the PASS, and the AMR MCC, which is overseeing implementation of the NAP-AMR. To improve coordination and collaboration between the AMR MCC and the OHP, MTaPS previously facilitated meetings and conversations that identified information including documentation to be shared between the two governance structures. MTaPS provided support to the MCC secretariat to share this information with the OHP. Discussions have been going on to define the different roles of the OHP and the MCC. On

November 29, 2022, MTaPS supported the GRM to organize a workshop chaired by the Deputy Director of INS, Dr. Eduardo Samgudo, to discuss ways to further enhance the collaboration between AMR MCC and OHP. Forty participants representing MISAU, the Ministry of Agriculture and Rural Development, the FAO, MTaPS, and USAID, took part in the event. Prior to the workshop, the government identified the priority activities in the PASS that were discussed by groups during the workshop, and additional priorities were raised by GRM. Workshop participants agreed that as one of its next steps, OHP will share its additional priorities with USAID and partners for consideration for potential funding.

RESULT AREA 2: IPC

Activity 2.2.1: Enhance and sustain governance for IPC

MTaPS worked with DNAM-DE and the IPC TWG to develop a draft guideline for surveillance of HAIs in Mozambique and is supporting development of a tool for data collection to accompany the draft guideline. MTaPS worked with DNAM-DE to draft an IPC protocol/SOP for implementation of the national IPC manual that was updated post-COVID-19. IPC stakeholders are using the manual in the review of IPC training materials. MTaPS will then support an update of the e-Learning IPC training course using these revised IPC training materials to ensure harmony with the current IPC guidance before the course is uploaded into the online Moodle platform for access by HCWs.

Additionally, MTaPS participated in a DNAM-organized workshop focused on planning for IPC data collection and the development of a national IPC plan.

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

Activity 3.5.1: Continue to support the design and implementation of AMS interventions in priority HFs

MTaPS supported the DTH to develop a plan on implementation of AMS at provincial HFs covering both virtual support and onsite supportive supervision visits to Xai-Xai PH, Tete PH, and Inhambane PH to take place in February 2023. A focal point for AMS site virtual support was identified. The upcoming site visits will cover audits of prescription practices, antibiotic consumption analysis, and the evaluation of implementation of the CQI approach for iteratively improving AMS at the three sites.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

(Addressed under the Objectives/Health Areas sections of the report.)

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Continue to support the governance and organizational capacity of the AMR MCC gearing toward sustainability ▪ Organize a workshop to strengthen effective communication, coordination, and collaboration between the OHP and the AMR MCC, working with WHO and USAID Mission. ▪ MTaPS, with support from WHO and with USAID. ▪ Provide technical assistance to support one meeting per TWG and one workshop of the AMR MCC with documented agendas, distribution of meeting minutes, and follow-up on action items.	January–March 2023

Activity and Description	Date
Activity 2.2.1: Enhance and sustain governance for IPC ▪ Support DNAM-DE and the IPC TWG in development of a national IPC plan and the development of HAI-surveillance training materials (adapted from references from other MTaPS-supported GHSA countries). ▪ Organize a workshop to review and validate the draft national IPC protocols/SOPs and the draft national IPC plan. ▪ Support DNAM-DE's IPC team in review of IPC e-Learning training course contents to align with the recently updated IPC reference manual, prior to re-upload into Moodle platform.	January–March 2023
Activity 2.5.1: Continue to support the implementation of prioritized IPC interventions in selected HFs ▪ Provide technical assistance to DNAM-DE and provincial focal persons on selected IPC interventions based on action plans for the three intervention hospitals, including ongoing support on hand-hygiene self-assessment; expand IPCAF remote assessment to more health facilities; follow-up on progress of implementation of facility IPC action plans; implement CQI through the IPC TWG and provincial focal persons.	January–March 2023
Activity 3.1.1: Continue to strengthen the governance of the AMS program at the national level ▪ Support the validation workshop for AWaRe classification and the workshop to validate the draft regulation on prescription-only sales of key antibiotics and draft provision for appropriate use of antimicrobials. ▪ Work with ANARME, PI and AMS TWG to validate the rapid AMS assessment report and to review the draft national AMS plan.	January–March 2023
Activity 3.5.1: Continue to support the design and implementation of AMS interventions in priority HFs ▪ In collaboration with DTH, ANARME, PI, and INS, continue to provide virtual support to the focus HFs in reviewing their progress on AMS action plan implementation, and advise them on interventions to guide improvement in AMS practices. ▪ Undertake supportive supervision to the three intervention sites.	January–March 2023

Table 19. Quarter 1, FY23, Activity Progress, Mozambique—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Continue to support the governance and organizational capacity of the AMR MCC gearing toward sustainability **Activity description:** Continue to support the holding of MSC meetings and the functionality of the AMR MCC and its IPC and AMS TWGs; commemorate the 2022 WAAW through organization of public events, symposia, and display of products showcasing progress; identify and implement opportunities to utilize stakeholder dialogues, roundtables, and other forums.	5.4	1.1	MTaPS supported the GRM and other partners by contributing to the organization of the 2022 WAAW, which took place from November 18 to 24, 2022, These partners included DNAM/DTH, which undertook AMR awareness campaigns on optimal use of antimicrobials at the three MTaPS-supported facilities. MTaPS supported the GRM to organize a workshop to discuss further ways to enhance the collaboration between AMR MCC and OHP.
Activity 2.2.1: Enhance and sustain governance for IPC **Activity description:** Support the IPC TWG in organizing routine review meetings; review implementation status of the IPC TWG's action plan; monitor the strengthening of the core components of the IPC program using the WHO tools; develop a protocol for surveillance of HAIs and surveillance training materials; review the IPC e-Learning modules' content against the revised National IPC Manual.	5.4	2.2	MTaPS worked with DNAM-DE and the IPC TWG to develop a draft guideline for surveillance of HAIs. A draft IPC protocols/SOPs document was developed with reference to the updated national IPC reference manual. MTaPS participated in a DNAM-organized workshop focused on planning for IPC data collection and the development of a national IPC plan.
Activity 3.5.1: Continue to support the design and implementation of AMS interventions in priority HFs **Activity description:** In collaboration with DTH, ANARME, PI, and AMS TWG, provide onsite and remote technical assistance to the three intervention hospitals; support the implementation of AWaRe categorization at the facility level.	5.4	3.5	MTaPS supported the DTH to develop a plan on implementation of AMS at provincial health facilities, covering both virtual support and onsite supportive supervision visits to Xai-Xai PH, Tete PH, and Inhambane PH, to take place in February 2023. A focal point for AMS site virtual support was identified.

L. NEPAL

FIELD SUPPORT ACTIVITIES

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 MOHP, the DOHS, and the DDA. MTaPS Nepal supports the policy, legislative, and system revision and implementation at the DDA and in the private sector. There are many interlinked challenges, and the selected implementation strategies focus on evidence-based prioritized problems and WHO best practices, operationalized by multipronged interventions implemented with broad stakeholder involvement, including the private and public sectors.

CUMULATIVE PERFORMANCE TO DATE

Over the past two years, MTaPS contributed to significantly increasing the maturity of the DDA; as of January 2022, 67% (n=55) of the WHO Global Benchmarking Tool recommendations targeting maturity level 2 have been finalized and the remaining 33% (n=18) are in progress. Further DDA progress in many functions is dependent upon adoption of the new Drug and Health Product Act, for which the Cabinet Secretariat of the Government of Nepal has just provided approval to replace the existing 1978 Drug Act. The new Act remains under review by the Ministry of Law and Parliamentary Affairs. Also under review, by the DDA and the MOHP, is the Code on Sale and Distribution, which includes WHO-aligned GPP and GSDP, the standards of which are planned to be made mandatory for the future registration of pharmacies and wholesalers. After a successful demonstration, the DDA has agreed to a live test of the DDA-Management Information System (DDA-MIS) module for registering pharmacies and wholesalers, developed by MTaPS over the past two years. The MTaPS-supported training plan for national and regional DDA staff is being rolled out to strengthen technical competency within the agency. With MTaPS support, the quality manual and standards of practice have been finalized and agreed upon for instituting a QMS in the agency, an important step for ISO 9001:2015 certification. MTaPS finalized and submitted the remaining Year 4 deliverables and one Year 5 deliverable.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.1: Assist DDA in organizational restructuring

The DDA training plan will continue to be implemented in PY5 to strengthen the DDA's competency in priority areas such as report writing, health technology product (HTP) notification, risk management training and QMS audits.

Activity 1.2.1: Update the regulations, rules, and guidelines

MTaPS Nepal and DDA officials are advocating for expediting the process for submitting it to the cabinet and the need to have the Act updated also to the new minister. The cabinet secretariat, Government of Nepal, has given consent for the approval for replacing the current Drug Act. A revised drug act is critical

for improving the ML of DDA; furthermore, it will start regulation of the HTP and PV functions. The Director General of DDA has given assurances that the Codes on Sale and Distribution will shortly be submitted to MOHP for approval. Assisted by an international consultant, MTaPS completed a preliminary literature review of existing pricing policies and regulations in Nepal. The report was shared with DDA, and wide stakeholder consultation was initiated as input to a situation analysis.

Activity 1.2.2: Revise and update the Nepal National Medicines Policy

MTaPS finalized the NMP with inputs from participants of the workshop held September 22–24, 2022, and shared the draft implementation plan with the DDA, the MOHP, and WHO. MTaPS is reviewing an indicator-based monitoring plan in collaboration with DDA before submission to the MOHP. The planned review meeting with the MOHP did not take place this quarter. The updated 1995 policy details new much-needed strategies to ensure access to safe, efficacious, and quality-assured medicines and health technologies in Nepal.

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

Activity 2.2.1: Strengthening regulatory capacity and maturity

MTaPS drafted TORs for the coalition of interested parties to strengthen the regulatory system for medical products and health technologies and shared them with WHO. After meeting with the DDA and PQM+ from November 1 to 3, 2022, MTaPS supported the DDA to update the corrective and preventive actions, based on their institutional development plan and MALAP document and with the aim to reach regulatory maturity (ML 2) this year.

Activity 2.2.2: Strengthen regulatory systems for medical products registration

MTaPS procured shelves for DDA to store dossiers, files, and regulatory materials. The shelves will be installed next quarter. The technical report on the medicine registration module was drafted and sent to the home office editorial team for final review. MTaPS continued evaluating six additional modules to share with the Drug Advisory Committee for final approval.

Activity 2.2.3: Strengthen regulatory system for medical devices registration

MTaPS finalized and submitted a technical report on HTP registration guidance. MTaPS drafted the Pharmadex registration module report for HTP and shared it with the home office and started planning implementation of the HTP notification system. This will allow for regulation of new medical devices in Nepal.

Activity 2.2.4: Strengthen PV at national and provincial levels

From December 3 to 7, 2022, MTaPS conducted three PV training sessions, including good PV practice for 43 staff members from regional PV centers (34 male and 9 female); signal detection, analysis, and risk management in PV for 3 DDA staff (2 male and 1 female); and PV in the government health care system and public health care programs for 14 staff (9 male and 5 female). This training is crucial for improving the reporting of adverse drug events from regional PV centers and public health programs to the DDA. The script for the three modules in the PV e-Learning course was completed and shared with the home office for quality assurance.

Activity 2.2.5 and 2.2.6: Strengthen GPP and GSDP

The DDA approved the multipronged GPP and GSDP implementation strategies to improve pharmacy and wholesaler practices. In collaboration with the DDA, and with input from stakeholders, MTaPS finalized the GPP and GSDP e-Learning modules. The e-courses will be mandatory to register new and renew existing pharmacies and wholesalers. MTaPS requested approval from the National Information Technology Center for a virtual private server and subdomain. To help pharmacies and wholesalers get ready for future GPP and GSDP inspections, MTaPS recruited two private-sector service providers to conduct capacity building and assessments on GPP and GSDP in collaboration with DDA.

Activity 2.2.7: Strengthen GHPP

MTaPS continued to support the Curative Service Division (CSD) in revising the contents of the capacity-building package for hospital pharmacists and updating the hospital pharmacy directive through the TWG, which has held three meetings to date to revise the documents.

Activity 2.2.8: Assist the DDA in developing a QMS

With MTaPS support, the DDA now has the foundation for an operational QMS. On December 5 and 16, 2022, the QMS TWG finalized SOPs and reviewed the QMS manual. Once signed off by the Director General of the DDA, the internal audit can be conducted next quarter, an important step toward the DDA's ISO 9001:2015 certification.

To strengthen the clinical trial function at the DDA, MTaPS drafted an inspection checklist for clinical trial site inspection and discussed it with a DDA pharmacy officer for finalization. In addition, MTaPS is supporting the drafting of clinical trial regulations and guidelines as part of increasing the maturity level 2 in clinical trial function.

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

Activity 3.1.1: Implement pharmaceutical management information system, Pharmadex, for registration, inspection, importation and exportation, and PV

Following the DDA-MIS demonstration (https://mis.dda.gov.np), the DDA requested that all registration modules (pharmacy, wholesalers, manufacturers, medicines, and HTP) be finalized and demonstrated for them again before deciding whether to adopt the DDA-MIS. The DDA agreed to pilot the DDA-MIS starting with pharmacy and wholesaler registration and renewal modules. MTaPS Nepal used a data visualization tool (Google Looker Studio) to create a dashboard for the pharmacy and wholesale registration modules to optimize data use for the DDA's decision making. To meet the DDA's requirements regarding pharmacy names and photo dimensions, name-checker and photo-cropper tools were added to the DDA website.

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

Activity 5.1.1: Strengthen medicines management in government-sector health facilities

MTaPS trained the remaining 10 MMS from two pilot districts (five each from Makwanpur and Parsa) in a 5-day practical training session. To improve MMS performance (the 60 fully trained MMS have conducted only 32 supervisory visits to date), MTaPS signed a letter of intent with the CSD, who has new leadership, and hired a coordinator and 3 technical advisors to oversee and advance SPARS pilot study implementation. MTaPS dispatched medicines management tools, such as supervision books, stock books, and bin cards, to all 60 MMS for them to distribute to health care facilities participating in the SPARS pilot study. Recognition items such as white boards, calculators, fire extinguishers, and refrigerators will be based on need and distributed to well-performing SPARS health facilities in future months. MTaPS continued developing a SPARS management report format to track MMS and district-, provincial-, and national-level performance. The electronic SPARS assessment tool was finalized after updating the tracer medicines as the CSD suggested.

Activity 5.3.1: Improve AMR containment

MTaPS Nepal formally initiated an AMR containment program after receiving MOHP approval. The MOHP and MTaPS Nepal jointly held an AMR workshop, "Multisectoral activities in Nepal—where we stand," on November 13, 2022. The workshop served as a forum for stakeholders to evaluate the AMR landscape mapping of agencies, their AMR scopes, and achievements so far and to help MOHP identify duplication of ongoing AMR activities. The workshop featured participation from 49 stakeholders (31 male and 18 female) from different agencies, and it included 17 presentations. Additionally, MTaPS collaborated with the MOHP, WHO, the UN FAO, and other stakeholders to raise public awareness of AMR, at the Dharahara historical tower in Kathmandu on November 24 to commemorate WAAW 2022.

MTaPS Nepal participated in the AMR Public Awareness Walkathon organized by the MOHP, Government of Nepal, held on Nov 24, 2022, to celebrate WAAW 2022. Photo Credit: Manoj Bohara, International Youth Organization Summit Nepal

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

(Addressed under the Objectives/Health Areas sections of the report.)

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Assist the DDA in organizational restructuring • Finalize and hand over the remaining key job descriptions to DDA staff.	January–March 2023
Activity 1.2.1: Update the regulations, rules, and guidelines • Draft Inspection and Investigation Regulation, Codes on Cosmetics. • Plan a national-level consultation meeting with stakeholders to finalize the draft of pricing regulation then prepare a final version of the situation analysis report with pricing policy/regulation alternatives.	January–March 2023
Activity 1.2.2: Revise and update the Nepal NMP • Advocate for NMP approval. • Finalize NMP implementation plan.	January–March 2023
Activity 2.2.1: Strengthening regulatory capacity and maturity • Regularly update to the DDA MALAP and take part in coalition of interested parties organized by WHO.	January–March 2023
Activity 2.2.2: Strengthen regulatory systems for medical product registration • Procure and install shelves at the DDA to store dossiers, files, and regulatory materials.	January–March 2023
Activity 2.2.3: Strengthen regulatory system for HTP registration • Finalize the HTP directive amendment. • Prepare e-Learning material for HTP registration/notification.	January–March 2023
Activity 2.2.4: Strengthen PV at national and provincial levels • Continue equipping national and regional PV centers and public health programs with information resources on PV. • Finalize the three e-Learning modules on PV. • Finalize the information, education, and communication materials on PV.	January–March 2023
Activities 2.2.5 and 2.2.6: Strengthen GPP and GSDP • Select the vendors to conduct the GPP and GSDP capacity-building assessment. • Start training stakeholders on GPP and GSDP guidelines. • Upload the GPP and GSDP e-Learning course in the DDA website and link it the pharmacist registration requirement. • Finalize the community awareness strategy on GPP and GSDP.	January–March 2023
Activity 2.2.7: Strengthen GHPP • Train hospital pharmacists using the finalized orientation package. • Initiate approval process for draft hospital directives and drafting of GHPP guidelines.	January–March 2023
Activity 2.2.8: Assist the DDA in developing a QMS • Support the DDA to implement QMS internal audit and QMS software.	January–March 2023
Activity 3.1.1: Implement pharmaceutical MIS, Pharmadex, for registration, inspection, importation and exportation, and PV • Pilot the DDA MIS system starting with pharmacy and wholesaler registration and renewal. • Develop different e-Learning modules on the DDA MIS.	January–March 2023
Activity 5.1.1: Strengthen medicine management in government-sector health facilities • Conduct a provincial-level meeting and refresher training for MMS. • Support MMS to make SPARS visits.	January–March 2023
Activity 5.3.1: Improve AMR containment • Conduct the AMR sensitization workshop for journalists.	January–March 2023

Table 20. Quarter 1, FY23, Activity Progress, Nepal—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Assist DDA in organizational restructuring **Activity description**: Implement selected training.	1.1	As part of the DDA competency mapping and training plan, MTaPS trained 60 participants from regional PV centers, national regulatory authority, and public health programs on PV from December 3 to 7, 2022. The DDA training plan will continue to be implemented in PY5 to strengthen the DDA's competency in priority areas such as report writing, HTP notification, and QMS audits.
Activity 1.2.1: Update Drug Act, regulations, rules, and guidelines **Activity description**: Finalize Drug Act, Code on Sales and Distribution, and selected and prioritized regulations and guidelines.	1.2	The draft Drug and Health Product Act is being reviewed by top-level government entities. The Cabinet Secretariat approved replacing the current Drug Act, 1978. MTaPS Nepal supported the drafting of the Drug and Health Product Registration Regulation and Drug and Health Product Consultative Council Regulation. The DDA is reviewing the draft Codes on Sale and Distribution, and the Director General of the DDA stated it will be approved soon.
Activity 1.2.2: Revise and update the NMP **Activity description:** Finalize draft NMP.	1.2	The NMP was finalized with inputs from participants of the workshop held September 22–24, 2022 and the draft implementation plan shared with the DDA, the MOHP, and WHO. An indicator-based monitoring plan was drafted and is being reviewed by the DDA before being submitted to the MOHP. The planned review meeting with the MOHP did not take place this quarter.
Activity 2.2.1: Strengthen regulatory capacity and maturity **Activity description:** Implement regular MALAP updates toward maturity level.	2.2	MTaPS supported the DDA to update the corrective and preventive actions based on their institutional development plan and the MALAP document, with the aim to reach regulatory maturity (ML 2) this year. MTaPS drafted the HTP registration module and shared it with the DDA. 15 of 26 maturity level 1 indicators and 10 of 15 maturity level 2 indicators are finalized/awaiting approval; the remaining 30 indicators have all been initiated.
Activity 2.2.2: Strengthen regulatory systems for medical products **Activity description:** Finalize strategy for product registration, update SOP, and implement revised practices.	2.2	MTaPS procured shelves for the DDA to store dossiers, files, and regulatory materials. The shelves will be installed in the next quarter. The technical report on the medicine registration module was drafted and sent to editorial for final review. MTaPS continued evaluating six additional modules to share with the Drug Advisory Committee for final approval in this quarter.
Activity 2.2.3: Strengthen regulatory system for medical device registration **Activity description:** Organize a stakeholder meeting, develop standard specifications of selected medical devices, and finalize draft registration guidelines in line with Pharmadex.	2.2	MTaPS finalized and submitted a technical report on HTP registration guidance. MTaPS drafted and shared the Pharmadex registration module report for HTP with the home office and started planning how to implement the HTP notification system.
Activity 2.2.4: Strengthen PV at the national and provincial levels **Activity description:** Streamline PV reporting and finalize SOP with associated tool to increase maturity level.	2.2	From December 3 to 7, 2022, MTaPS trained 60 DDA national and regional staff on different aspects of PV program activities to improve the quality and quantity of the reporting of adverse drug events from regional PV centers and public health programs to the DDA. Work on the PV e-Learning course was completed and shared with the home office for quality assurance.

Activity	MTaPS Objective(s)	Activity Progress
Activity 2.2.5: Strengthen GPP **Activity description:** Develop GPP e-Learning course and initiate implementation of GPP strategy, including community awareness. **Activity 2.2.6:** Strengthen GSDP **Activity description:** Finalize GSDP guidelines, inspection tool, and e-Learning material to train wholesalers.	2.2	The DDA approved the multipronged GPP and GSDP implementation strategies. With the DDA and stakeholders, MTaPS and the home office finalized the GPP and GSDP e-Learning modules. MTaPS requested approval from the National Information Technology Center for a virtual private server and subdomain. MTaPS recruited two private-sector service providers to conduct training and assessments on GPP and GSDP in collaboration with the DDA.
Activity 2.2.7: Strengthen GHPP **Activity description:** Update GHPP directive and guidelines and develop GHPP capacity-building strategy.	2.2	MTaPS continued to support the CSD in revising the contents of the capacity-building package for hospital pharmacists and updating the hospital pharmacy directive through the TWG, which has held three meetings to date to revise the documents.
Activity 2.2.8: Assist the DDA in developing a QMS **Activity description:** Finalize QMS manual and SOP toward ISO 9001:2015 certification.	2.2	With MTaPS support, the QMS TWG finalized SOPs and reviewed the QMS manual. Once signed off by the Director General of the DDA, the internal audit can be conducted next quarter. MTaPS drafted an inspection checklist for clinical trial site inspection and is supporting the drafting of clinical trial regulations and guidelines as part of increasing the maturity level 2 in clinical trial function and ISO 9001:2015 certification.
Activity 3.1.1: Implement pharmaceutical management information system Pharmadex for registration, inspection, importation and exportation, and PV **Activity description:** Finalize and implement Pharmadex registration module.	3.1	Following the successful demonstration of the DDA-MIS, the DDA requested that all registration modules be demonstrated before the DDA decides on whether to adopt the DDA-MIS. DDA agreed to pilot the pharmacy and wholesaler registration and renewal modules. MTaPS Nepal configured a reporting dashboard and report format for the pharmacy and wholesale registration modules in Google data studio to meet DDA requirements.
Activity 5.1.1: Strengthen medicine management in government-sector health facilities **Activity description:** Implement SPARS in selected districts.	5.1	MTaPS completed the practical training of 10 MMS from two pilot districts. MTaPS signed a letter of intent with the CSD and hired a coordinator and 3 technical advisors to oversee the SPARS pilot study implementation. MTaPS dispatched medicines management tools to all 60 MMS for them to distribute to health care facilities participating in the SPARS pilot study. The electronic SPARS assessment tool was finalized following CSD inputs.
Activity 5.3.1: Improve AMR containment **Activity description:** Hire a senior technical advisor—AMR, implement situation analysis, and support revision of national plan.	5.3	MTaPS Nepal formally initiated the AMR containment program by approving the activities through the MOHP. A joint workshop on "Multisectoral activities in Nepal—where we stand" was held on November 13, 2022. MTaPS, in collaboration with the MOHP, WHO, the FAO, and other stakeholders, supported activities to raise public awareness on AMR at the Dharahara historical tower in Kathmandu on November 24, 2022.

M. NIGERIA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

PORTFOLIO GOAL

MTaPS Nigeria's approach includes supporting the country to improve its JEE scores in all three result areas. In this regard, the capacity-strengthening approach is targeted at providing the necessary skills to members of the AMR 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 OH approach to tackling the AMR containment challenges in the country. MTaPS has worked with NCDC to establish state-level AMR committees and TWGs that mirror the national organization. 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.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' primary goal is to support the country move up to the next JEE level across the 3 result areas by supporting the completion of WHO IHR benchmark actions. As of September 2022, MTaPS has supported the completion of 10 (18%) of the 62 total WHO benchmark actions—4 contributing to MSC/AMR, 4 to IPC, and 2 to AMS—while 10 other benchmark actions are at various stages of completion (ongoing).

In MSC, the country has completed all benchmark actions in capacity level 2 (with support of other partners) and 3 in level 3 (with MTaPS supporting 2 of the 4 actions). MTaPS, in collaboration with the AMR TWG secretariat, is also supporting 75% of benchmark actions at capacity level 4. The country is on track with MTaPS support to complete 100% of level 4 and 80% of level 5 benchmark actions by the end of FY23 (PY5). With MTaPS support, National IPC and AMS subcommittees were revitalized with terms of reference and work plans developed. MTaPS also supported the establishment of state-level committees in Enugu and Kebbi, mirroring the federal committees with terms of reference and state plans. MTaPS support to the national AMR TWG has improved the 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 improved working relationship between the human health, animal health, and environment sectors. The MTaPS-supported performance review of the 2017–2022 NAP-AMR has been completed and the development of a new 2022–2028 NAP-AMR commenced. At the subnational level, MTaPS supported the successful inauguration of the first state AMR TWG in Kebbi state with the development of a state AMR plan to guide the implementation of the state AMR program.

In IPC, MTaPS support is helping to move the country closer to JEE level 3, with MTaPS contributing to 3 (60%) out of the 5 benchmark actions in level 2 and 4 (66%) of the 6 actions at level 3. MTaPS supported the AMR TWG secretariat to develop the national IPC strategic plan in FY22, a capacity level 3 benchmark action. This follows MTaPS' earlier support to the AMR TWG secretariat to review the

2013 national IPC policy and national IPC SOPs for facility-level use. The updated IPC SOPs have been incorporated into the national guidelines. The guidelines were printed and disseminated to all MTaPS-supported facilities. MTaPS then supported training on the guidelines in four out of seven supported facilities. At the state level, MTaPS, in collaboration with NCDC, supported the development of subnational state IPC plans in Enugu and Kebbi. MTaPS' key achievements at the facility level include the establishment of IPC programs in seven supported private and public facilities in Enugu and Kebbi states. Key outcomes include baseline assessments conducted using WHO IPCAT2 to assess the state-level program and IPCAF/HH tools to assess facility-level programs. Guided by the result of the baseline assessment, MTaPS supported seven facilities to develop improvement plans with a CQI approach for monitoring improvements. State and facility IPC committees and teams in Enugu and Kebbi states were inaugurated in collaboration with the state ministry of health (SMOH) and facility management. Through an in-person competency-based training approach, MTaPS supported 59 members (21 male, 38 female) of 7 facility teams in building their capacity on key technical, managerial, and leadership components for effective coordination and management of the IPC program across the state, including the use of WHO assessment tools for self-assessment and development of improvement plans. As a result, step-down training was conducted by the facility teams with about 550 staff. MTaPS provides ongoing monitoring of these programs remotely and through mentoring visits to the facilities.

In AMS, MTaPS supported the country's AMR TWG secretariat to implement two benchmark actions at capacity level 2, with two benchmark actions remaining in-process. The country is now on course to achieve 100% completion of level 2 benchmark actions to achieve JEE level 3 by the end of FY23.

At the state level, the AMS program was established across three selected health care facilities in Enugu state and four health care facilities in Kebbi state. Following the establishment of the AMS programs in the supported facilities, AMS/IPC hybrid committees were established in Enugu and Kebbi states. The hybrid committees are to ensure regular meetings and effective oversight of IPC and AMS activities in the facilities and avoid the repercussions of multiple, 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 one of the seven supported facilities has developed a hospital formulary to guide the procurement and prescription of essential antibiotics at the facility level. Local formularies were not in use in any of the supported facilities before MTaPS intervention. The laboratories at the facilities in Enugu state and Federal Medical Center (FMC) Birnin Kebbi (B/K) have begun developing hospital antibiograms to help streamline antibiotics prescription in the facility and guide empirical prescribing of antibiotics at the HCF. MTaPS supported the antimicrobial use point prevalence survey (AMU-PPS) in six supported facilities. The outcome detailed the prescribing pattern of health care providers and established a baseline for antibiotics use in the facilities, thus identifying specific areas for AMS team intervention. All the facilities surveyed reported use of antibiotics in the Access group in the range of 18%–53%, which is less than the WHO target minimum of 60%. Feedback on the outcome of the AMU-PPS was provided to facility AMS teams during monitoring and supportive supervisory visits for use in updating their facility AMS plans.

A critical step in establishing an AMS program in a country is the development of the WHO AWaRe categorization of essential antibiotics used in the country to help control the misuse of lifesaving antibiotics. Following the inauguration of the TWG on AWaRe with MTaPS support, a consultant engaged by MTaPS began data collection from sentinel sites and other laboratories in the country; this

work is ongoing, though faced with access issues due to bureaucratic delays. The collected data will be presented to the AWaRe TWG committee in a workshop to initiate the categorization of antibiotics in the country based on WHO AWaRe groupings. MTaPS also supported the country's AMR TWG in development of the national OH AMS plan. This document will provide strategic direction for AMS activity design and implementation across the health care levels in both the human and animal health sectors in Nigeria.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Support the National AMR secretariat to develop 2023–2028 NAP-AMR with costed implementation plan.

MTaPS engaged a consultant to review the 2017–2022 NAP-AMR in Q1 FY23. Following this review and subsequent presentation of the report to the AMR coordinating committee chair, four multisector meetings were held from October 19 to December 22, 2022, to kickstart the process for the development of the new NAP-AMR 2023–2028. One of the key outcomes of these engagements was the development of a draft SOW for the consultant that will lead the development of the new NAP.

Activity 1.2.1: Continue to build managerial capacity within the AMR TWG and its subcommittees

MTaPS supported the successful inauguration and training of the subnational AMR TWG in Kebbi state from November 7 to 9, 2022. Following the inauguration, members of the national AMR TWG secretariat led the training of 29 (26 male, 3 female) persons representing the leadership of the tripartite sectors of human health, animal health, and environment. The training focused on the components of AMR programs, including the relationship between the sectors and linkages to AMR containment. Additionally, participants built their skills on AMR plan development, costing, and monitoring. A SWOT analysis was conducted during the training, leading to the development of a draft state work plan, which will guide implementation of the state AMR program in Kebbi.

RESULT AREA 2: IPC

Activity 2.1.2: Support the development of national IPC VHF guidelines for safety of health workers in health facilities

MTaPS engaged the NCDC on the need to review the IPC guidelines for VHF, which caters to the safety of health workers in the country, and it received commitment from the national IPC coordinating team to include this MTaPS activity in their consolidated EVD preparedness plan for the last quarter of 2022. Updating the guideline has been added to the EVD preparedness plan and modalities for the proposed review of the manual on IPC for VHF are being finalized.

Activity 2.1.3: Strengthen HCAI surveillance in human health sector

In Q1 FY23, MTaPS engaged with the NCDC, in a meeting with the chair of the national IPC coordinating team, on details of the HCAI-surveillance activities being proposed for PY5 and received its buy-in on the assessment of HCAI types and subsequent development of a protocol to study a select type of HCAI, based on the outcome of the assessment. The proposed activities will allow MTaPS to

contribute to HCAI-surveillance actions by the NCDC, which currently includes preliminary work on surgical site infections for caesarean section in pilot facilities in the country. This engagement resulted in a commitment from the NCDC to work collaboratively with MTaPS on the SOWs and details of the proposed HCAI activity to be led by an MTaPS consultant.

Activity 2.2.1: Strengthen capacity of health care providers to implement IPC guidelines using multimodal strategies

MTaPS, in collaboration with the national AMR TWG secretariat, supported a workshop to build capacity of 23 (12 male, 11 female) members of IPC teams at four MTaPS-supported facilities from December 21 to 22, 2022, in Kebbi State. During the workshop, the IPC teams strengthened their skills in multimodal strategies for implementing sustainable IPC programs. National IPC guidelines were adopted by the state, and copies were provided to the IPC teams, who applied these tools for the development of targeted interventions for their facilities. The process of implementing their plans will follow the sessions.

Activity 2.5.1: Strengthening IPC core components and the functionality of IPC committees in supported hospitals

MTaPS, in collaboration with the national AMR TWG secretariat, conducted monitoring visits across supported facilities in Enugu and Kebbi states from November 10 to 25, 2022, to review progress of facility IPC program implementation and provide ongoing support to facility IPC teams. Key outcomes of the visits include notable implementation of facility IPC improvement plans by the IPC teams and self-provision of locally made job aids to support IPC at the facility.

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

Activity 3.1.1: Strengthen institutional and HR capacity to manage AMS program

With MTaPS support, the systematic review and meta-analysis of the essential antibiotics sensitivity/resistance profile in Nigeria will be completed by the end of February 2023. Following the review, MTaPS will support workshops for the categorization of antibiotics into the AWaRe categories by the TWG.

Activity 3.5.1: Strengthen the implementation of AMS programs in all MTaPS-supported facilities

MTaPS, in collaboration with the national AMR TWG secretariat, conducted monitoring visits in seven supported facilities in Enugu and Kebbi states from November 10 to 25, 2022, to review progress of facility AMS program implementation and provide ongoing support to facility AMS teams. Key activities of the visits include mentoring on CQI methods and provision of feedback on the AMU-PPS results and analysis for incorporation into their facility work plans. The result of the AMU-PPS indicated that

A member of AMR TWG secretariat IPC team leads a capacity-strengthening session on the use of IPC guidelines. Photo Credit: Onwuliri Chinemerem, MTaPS

supported facilities have not achieved the expected target of 60% for Access categories of antibiotics. Annunciation Specialist Hospital, Enugu State University Teaching Hospital, Mother of Christ Specialist Hospital, FMC B/K, Kebbi Medical Center, and Sir Yahaya Memorial Hospital posted 18.6%, 33.6%, 53.1%, 48.1%, 44% and 46.8%, respectively. With this result, engagement of facility AMS teams with prescribers will be more effective and targeted.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Pooling members of facility teams from different hospitals to share knowledge and experience on AMR program implementation in their facilities is highly effective in improving the outcome of interventions. For example, the shared experience of formal recognition of AMR team members by the tertiary facility management boosted the commitment of their team members to AMR program implementation, and this practice provided an example for other facilities to follow.
- Results of the AMU-PPS and feedback to facility teams serve as a tool for engaging prescribers in an evidence-based manner and getting their buy-in on key AMS interventions in their facilities. For example, their engagement with prescribers in FMC B/K is now tailored to the results from the AMU-PPS.
- Continuous monitoring and supportive supervision of facility AMR programs is necessary for strengthening the capacity of the teams and sustainability of the programs. For example, availability of local AMS experts in Enugu that provide ongoing support to facility AMS teams is crucial for the success of the programs.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Adaptation of national IPC guidelines and subsequent IPC training on guidelines for HCWs at supported facilities	January–February 2023
National Agency for Food and Drug Administration (NAFDAC) zonal GSDP workshop	February 2023
Engagement of consultants to support capacity building of M&E officers	February 2023
Engagement of consultant for HCAI surveillance assessment and protocol	February 2023
First Workshop for AWaRe categorization of antibiotics	February–March 2023
Engagement of consultants to support the development of the new NAP-AMR	February–March 2023

Table 21. Quarter 1, FY23, Activity Progress, Nigeria—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1: Review the implementation of 2017–2022 NAP-AMR and the development of the new 2023–2028 NAP-AMR including cost of new plan. **Activity description:** Consultant to be engaged by the AMR coordinating committee (CC) with MTaPS support and in collaboration with other bilateral and multilateral partners.	5.4	1.1	This is a multi-staged activity. The review of the 2017–2022 NAP-AMR has been completed with support from MTaPS. The SOW of the consultant that will lead the development of the new 2023–2028 NAP-AMR has been developed by the tripartite sectors of the AMR TWG secretariat and other bilateral and multilateral agencies.
Activity 2: Continue to strengthen MSC and functionality of the AMR TWG and its subcommittees. **Activity description:** Engagement of a consultant that will support the AMR TWG secretariat to develop knowledge management products from MTaPS interventions and build the capacity of its members.	5.4	1.2	The support for AMS and IPC subcommittee meetings has been transitioned. MTaPS support will focus on building capacity of members of the national AMR TWG secretariat by engaging a consultant that will support the development of KMPs. The SOW for the consultant has been developed and is awaiting approval. Once approved, the engagement process will commence in close collaboration with the AMR CC chair.
Activity 3: Capacity building for M&E officers in the AMR TWG **Activity description:** This activity will support capacity building of M&E officers in the tripartite sectors for effective monitoring of work plan activities in their various sectors.	5.4	3.5	Engagement with the national AMR TWG secretariat is ongoing and the activity will commence as soon as a date is fixed.
Activity 4: Development of AWaRe categorization of antibiotics **Activity description:** The AWaRe TWG is expected to lead the categorization of essential antibiotics in Nigeria into the AWaRe categories, based on local evidence of sensitivity and resistance profile of the antibiotics to disease conditions of public health importance.	5.4	3.1	The process of reviewing grey literature and local data on the sensitivity of antibiotics to priority public health diseases is ongoing by the consultant. The department of Food and drug services (Federal Ministry of Health [FMOH]) and NCDC are providing access to AMR data at government laboratories across the country to aid the development of the AWaRe categorization of antibiotics. Following the review, a data validation workshop will be held by the AWaRe TWG committee.
Activity 5: NAFDAC zonal GSDP training **Activity description:** This is a two-day training workshop for NAFDAC field staff in two zones of the country on GSDP.	5.4	3.1	The two-day workshop was designed to build capacity of NAFDAC field staff on GSDP across two geopolitical zones in the country. Engagement with NAFDAC has commenced and the workshop will follow once a substantive date is fixed.
Activity 6: AMS mentor and resource persons **Activity description:** This activity will engage two consultants, one each in Enugu and Kebbi, to provide ongoing support to facility AMS teams.	5.4	3.5	SOWs have been developed and are awaiting approval. This will be followed immediately with the recruitment of AMS consultants.
Activity 7: Assessment of HCAI and development of protocol **Activity description:** Engage two consultants to conduct assessment on HCAI in the country and develop protocols for their implementation.	5.4	2.1	Engagement with NCDC is ongoing. SOWs are being developed and will be followed by the consultants working with NCDC.

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 8: Support the development of national IPC for VHF guidelines for safety of health workers in facilities. **Activity description:** This activity will support the development of IPC manual for VHF for health worker safety and produce copies for dissemination.	5.4	2.1	Engagement is currently ongoing with NCDC IPC team. A date for a review workshop is being finalized.
Activity 9: Strengthen capacity of health care providers to implement IPC guidelines using multimodal strategies. **Activity description:** This activity will build the capacity of HCWs to implement IPC guidelines using a multimodal approach to achieve sustainable improvement in the system.	5.4	2.2	The baseline IPCAF and IPCAT2 assessments for Kebbi facilities and the state ended in September 2022. Though the reassessment was planned for August/September 2022 in the FY22 work plan, the delay in carrying out training for the teams has made the August timeline unrealistic. A minimum of six months post–baseline assessment would be required before a repeat assessment would be meaningful.
Activity 10: IPC facility mentorship **Activity description:** This activity will support IPC teams in facilities by providing mentoring to team members on the use of a CQI approach.	5.4	2.5	Engagement with facility management and NCDC IPC team is currently ongoing.

N. PHILIPPINES

FIELD SUPPORT (TB AND FP)

OVERVIEW

MTaPS Philippines provides technical assistance and capacity building support to the DOH to institutionalize integrated and effective procurement and supply chain systems for TB, FP, and other health program commodities; establish fully functional 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.

CUMULATIVE PERFORMANCE TO DATE

In PY1, MTaPS conducted a rapid diagnosis of the PSCM system and supported the DOH to develop a three-year supply chain strategy, analyzed the draft UHC implementing rules and regulations, and facilitated the inclusion of relevant supply chain-related articles to ensure policy support for supply chain reforms. MTaPS facilitated the development of a PSCM road map in support of the UHC law implementation. MTaPS supported the DOH to assess the PSCM and PV workforce needs and develop a related workforce development plan. This has been used by the DOH in hiring new staff and developing and offering eLearning course modules to train the workforce.

MTaPS facilitated the development of system requirements and introduced an end-to-end eLMIS to enhance supply chain visibility and efficiency in managing health commodities, including COVID-19 vaccines. MTaPS also facilitated eLMIS TOT to build a pool of trainers. Essential master data such as the product and health care facilities list are now finalized and uploaded into the eLMIS application. MTaPS developed and disseminated the eLMIS deployment checklist and inventory/opening balance-capturing template for eLMIS site readiness. The eLMIS site readiness assessment checklist is a critical tool to prepare for the eLMIS rollout. The configured eLMIS is now being rolled out and used by 15 warehouses, including seven central warehouses and eight regional warehouses in Central Luzon, Western Visayas, Davao Region, and Northern Mindanao.

MTaPS also upgraded PViMS to version 2 and completed system enhancements, including interoperability with the VigiFlow system. Since the start of the PViMS rollout in FY21, MTaPS was able to reach 197 of 199 PMDT facilities—a coverage rate of 99%. Since PY3, MTaPS has supported the PD in analyzing stock information for key tracer TB, FP, and HIV commodities. As a result of the capacity building activities conducted and tools provided for stock analysis by MTaPS, the PD has been independent in processing stock data and orienting selected regions on stock data analysis.

MTaPS supported the DOH and POPCOM in updating and finalizing a warehouse operation manual and mentoring POPCOM in rolling out the warehouse monitoring checklist. MTaPS supported the long-term estimation of quantity and budget requirements for TB and FP commodities between 2019 and 2022. MTaPS has also been working with the FDA to update the national PV policy, develop guidelines on PV methods, and optimize product registration. MTaPS took part in activities with other USAID IPs and

supported the Bangsamoro Autonomous Region in Muslim Mindanao Ministry of Health to develop a PSCM action plan for the autonomous region. Figure 7 shows MTaPS' notable performance to date on trainings, eLMIS, PViMS, and quantification.
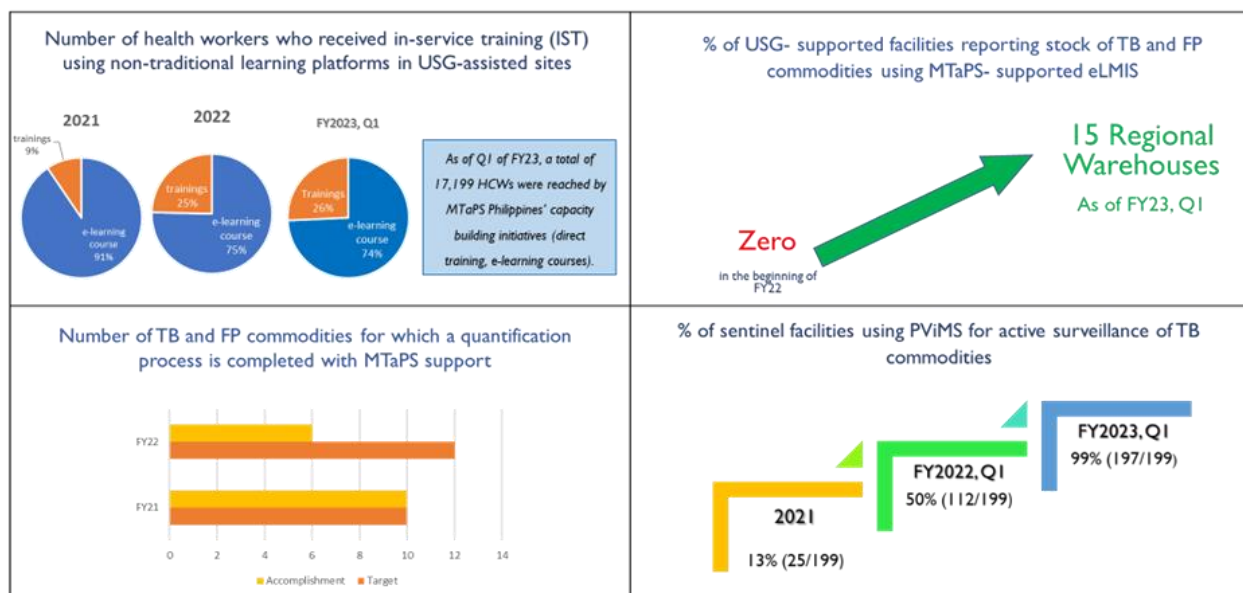
Figure 7. Selected achievements, MTaPS Philippines

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.1, Activity 1.3.1: In setting up eLMIS governance, MTaPS continuously advocated with the DOH to finalize the Joint Administrative Order with the Department of Interior and Local Government and Department of Information and Communications Technology. SCMS is leading eLMIS implementation and planning to have a consultative workshop with all stakeholders. MTaPS will continue advocating for the establishment and functioning of eLMIS governance.

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

Activity 2.1.1, Activity 1.5.1, Activity 2.2.1: PSCM, PV, Health Care Waste Management (HCWM) Capacity Building: MTaPS and the DOH supported CHD 6 in conducting a training on PSCM to build capacity of 22 (5 female, 17 male) supply officers on medical products, vaccines, and technologies from all eight UHC implementation sites in the CHD to accelerate their progress and maturity.

Activity 1.5.3: POPCOM: MTaPS trained 10 (7 female, 3 male) POPCOM staff on PSCM to equip them in outlining strategies to implement the DOH's devolution transition plan in availing FP commodities at facilities. POPCOM plays a critical role in the distribution of FP commodities in the country.

Activity 2.3.1 IPC and HCWM Capacity Building: As a result of IPC and HCWM capacity building activities organized by MTaPS and the DOH, 41 (25 female, 16 male) qualified IPC and HCWM trainers are now available in the regions to develop training rollout plans and cascade the new standards and improve practices and compliance on IPC and HCWM in their respective areas. To date, nine of 17 regions have approved training rollout plans.

Activity 2.1.1 FDA National Conference and Competency Mapping: The WHO GBT is used by the FDA to assess the functionality of its regulatory systems for medical product regulation. On December 5, 2022, MTaPS participated and made a presentation in the FDA's national conference focused on global best practices and approaches for national regulatory authorities to advance toward a higher level of WHO GBT maturity (levels 3 and 4). The conference was attended by 242 (174 female, 68 male) participants comprising Philippines FDA leaders, officers, and inspectors.

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

Activity 1.3.1 eLMIS: MTaPS supported the DOH in the initial rollout of the eLMIS in seven DOH-owned and contracted central warehouses and four regional warehouses (Regions 3, 6, 10, and 11). In every rollout, MTaPS facilitated the standardization of the logistics processes in accordance with the warehouse operations manual. MTaPS also supported the DOH in developing its master product list, which will continue to be updated as the eLMIS is rolled out in more sites. The master product list in the eLMIS will help ensure uniform and standard product profiles across the system, promote end-to-end visibility, and track inventory information uniformly. During rollout, MTaPS documented lessons learned to better inform the needed adjustments in the implementation approach for the succeeding phases.

A total of 217 (102 male, 115 female) participants were trained on the eLMIS from 11 UHC implementing sites. During the training, UHC implementation sites developed their action plans on how to implement the eLMIS in their respective areas and identified activities to be executed and challenges to be addressed to operationalize the eLMIS. The schedule of the eLMIS rollout at UHC sites is being discussed with the DOH, while the current focus is the operationalization of the eLMIS in the regions. The eLMIS is an essential information system identified as part of UHC implementation. MTaPS also facilitated the eLMIS Service Support Structure Training (Level 1/Level 2 support) to 22 (12 male, 10 female) participants from DOH bureaus and selected CHDs. MTaPS advocated and coordinated with the Philippine Business for Social Progress—the prime recipient of Global Fund for TB in the country—to leverage eLMIS hosting costs, and it has been covering the cost for eLMIS webhosting services since October 2022.

Activity 1.3.2 Quarterly Data Analysis: MTaPS supported the DOH in collecting and organizing stock data from different sources and finalizing the official October–December 2022 stock data analysis report of selected tracer products. Through this, there has been an improvement in the understanding of different DOH bureaus concerning stock-out rates among seven priority public health programs in the country to facilitate procurement decisions. In addition, the CHD National Capital Region National Drug Policy Compliance Officer has been utilizing the data analysis tool provided by MTaPS to the DOH-PD last project year to analyze regional stock data.

Activity1.3.2 Couple-Years of Protection (CYP): MTaPS, through its partner IQVIA, has completed the CYP calculation for July 2021–June 2022 using the sales and consumption data of FP commodities in the public and private sectors. The next step is to present the preliminary output of the CYP calculation to the DOH and other key stakeholders. The CYP report provides a measurement for the performance of FP programs by the public and private sectors to inform planning and allow comparison of contraceptive coverage provided by different FP methods.

Activity 2.4.1 PViMS Implementation: MTaPS introduced PViMS and is supporting its implementation. The DOH-PD has consistently been managing and monitoring PViMS implementation in all regions. From October to December 2022, 27 reports were reported by seven PMDT health care facilities through PViMS, bringing the total number of AE reported in PViMS to 208. MTaPS supported the interoperability between PViMS and VigiFlow through E2B files. The DOH submitted 145 E2B files to the FDA this quarter. The DOH-PD led a causality assessment exercise for the 42 reports submitted in PViMS, of which 33 were selected for causality assessment and 18 were assessed;15 were not assessed due to lack of relevant data. As the PViMS training is incorporated in the regular training of Lung Center of the Philippines for newly hired PMDT staff, an additional 11 newly hired PMDT doctors and nurses were trained in PViMS. The DOH-PD also visited three facilities in Batangas to provide mentoring on the use of PViMS.

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

Activity 4.1.1 (AB) Strategic Procurement (Framework Agreement): The Department of Budget and Management has approved the multiyear contracting authority (MYCA) of the DOH for procurement of adult and pediatric TB first-line drugs, TB preventive therapy for adult and pediatric, bedaquiline, and MTB/RIF GeneXpert® cartridges. MTaPS supported the DOH in mapping the procurement process through FA and proposed activity timelines and support required. Enabling the MYCA and selecting an FA mechanism for the procurement of these commodities provides the DOH flexibility in the quantity of commodities they order for every call-off/procurement, reducing the possibility of overstock or stock-out of essential TB commodities. MTaPS will continuously monitor and support the DOH to successfully procure these commodities.

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

Activity 1.3.1 Quantification: MTaPS supported the DOH in drafting a guideline on quantification of health commodities. When finalized, the guidelines will provide direction on quantification methods, processes, and types of data required in generating quantities and costs of health commodities for procurement. MTaPS has supported the DOH DCPB in developing and reviewing the quantification module in the Local Health System Playbook for Integrated Service Delivery for LGUs. The finalized playbook was published and disseminated by the DOH in December 2022 to CHDs and LGUs. This playbook will guide local health officers on operational planning and management to further improve delivery of health services in their catchment areas.

Activity 2.1.1 Product Registration: The Implementing Guidelines on the Collaborative Procedure for Accelerated Registration of WHO-Prequalified Pharmaceutical Products and Vaccines was approved under FDA Circular No. 2022-009 on October 6, 2022. This guideline will help improve the efficiency of product registration processes and facilitate the increase in the number of TB and FP products registered in the country.

Activity 2.3.1 Gender: MTaPS supported the DOH Health Policy Development and Planning Bureau (HPDPB) in outlining activities that Gender and Development planning officers of the DOH, CHDs, and hospitals could use as reference in the development of their 2023 Gender and Development plans and budgets. MTaPS focused its recommendation on the results of the role of gender in SCM, PV, and access to commodities and pharmaceutical services in the Philippines' FP and TB programs assessment conducted in 2020.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

(Addressed under the Objectives/Health Areas sections of the report.)

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Provider Integration and Engagement System (PIES) Workshop	January 2023
Framework agreement consultative meeting with Government Procurement Policy Board, DOH, and suppliers	March 2023
Presentation of preliminary computation of CYP to DOH and other stakeholders	February 2023
PViMS face-to-face training for PMDT nurses	February 2023
Phase 2 eLMIS rollout/go-live activities in multiple regions	January 30, 2023–March 31, 2023

Table 22. Quarter 1, FY23, Activity Progress, Philippines—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Support DOH to review the results of the implementation of the three-year PSCM strategy (2019–2022) and develop the three-year PSCM strategy for 2023–2026	1.2; 5.1	MTaPS discussed with the leadership of the DOH Procurement and Supply Management team the high-level timeline of implementation for this activity. Next quarter, MTaPS will start with the desk review of documents to determine the results of the implementation of the 2019–2022 PSCM strategy.
Activity 1.2.1: Capacitate a pool of local technical assistance providers (LTAPs) to support institutional capacity building of LGUs for PSCM functions	2.1, 2.2, 2.3	MTaPS visited three UHC implementation sites to initiate the LTAPs implementation and validate the feasibility of the Strategic Training Executive Program 2.0 (STEP 2.0) SCM leadership and change management course to the Philippines as an approach to LTAPs. As a result of the visit and the lessons learned, MTaPS was requested to revise the LTAPs concept to focus on building the technical skills of institutions and individuals on PSCM.
Activity 1.2.2: Engage the government to develop and disseminate a policy on outsourcing logistics services to private sector 4PL or best practice 3PL providers	2.2, 2.3	In PY4, MTaPS utilized the results of the 2022 4PL and 3PL study in the Philippines and developed an advocacy brief on building a more efficient public health supply chain through 4PL providers. MTaPS is developing a scope of work to engage an international consultant to develop an operational policy to engage best practice 3PL providers.
Activity 1.3.1: Build capacity of the DOH to operationalize and sustain the implementation of eLMIS in the country	3.1, 3.2	MTaPS supported the DOH in the operationalization of the eLMIS, including master data standardization and implementation guidelines development. MTaPS identified challenges and lessons that will be used for the next round of eLMIS rollout.
Activity 1.3.2: Support DOH and selected CHD in developing mechanisms and practices for regular data collection and analysis for programmatic and PSCM decision making	3.2	MTaPS designed a tool and established a practice of regular stock data collection, analysis, and presentation for key program products. The DOH-PD has been cascading the data analysis orientations and tool to the CHDs. The DOH-PD has started building the capacity of selected regions on stock data analysis. MTaPS began preparing for the dissemination of July 2021–June 2022 CYP analysis to the DOH and other partners.
Activity 1.4.1: Conduct pilot testing on using a digital platform to integrate public and private providers into local health care providers' networks for information exchange, cross-referral, and cost reimbursements for medical products and services to support UHC law implementation	4.1, 3.1	MTaPS and ReachHealth began preparing for the workshop with LGUs on the MyCure tool and planning for the next steps of the PIES implementation in the LGUs. MTaPS and ReachHealth began preparing to engage pharmacies to potentially be part of PIES implementation.
Activity 1.5.1: Support DOH to institutionalize the practice of evidence-based quantification of TB and FP commodities to inform procurement, supply planning and distribution	5.1	MTaPS supported the DOH in the development process for guidelines on quantification that aim to harmonize and standardize the process of quantification of health commodities at the DOH. MTaPS also reviewed and provided valuable comments to finalize the quantification playbook.
Activity 1.5.2: Support the PSCM system design considering UHC reform for individual and population-based commodities at different levels	5.1	MTaPS began a desk review and initial discussions with key stakeholders in support of initiating this activity.

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.5.3: Build the capacity of POPCOM to support supply chain management of FP commodities	5.1	MTaPS advocated to POPCOM to include Standard Days Method (Cycle Beads) as part of the regular FP inventory and monitor reports of all health facilities providing FP services. MTaPS shared the prerequisite activities and templates that POPCOM can use in preparation for the eLMIS rollout in its central warehouse and five regional hubs/warehouses (Regions 2, 5, 9, 11, and 12). POPCOM is finalizing its warehouse operations manual, which MTaPS helped it develop.
Activity 2.1.1: Build the capacity of health workers to provide support to PV and regulatory services at national and health facility level	5.2	The FDA provided clearance on the PV eLearning content that will be uploaded to the DOH Academy.
Activity 2.2.1: Support health facilities to improve practices on infection prevention and control (IPC) and health care waste management (HCWM) for climate risk mitigation (CRM)	5.3	MTaPS worked with the Health Facilities Development Bureau to develop training materials on the new IPC and HCWM standards. MTaPS is working with the DOH to monitor the training rollout action plans of the regions.
Activity 2.2.2: Strengthen capacity to conduct and use Health Technology Assessments (HTAs) to support institutionalizing transparent and evidence-based decision-making	4.2, 4.3	MTaPS and the DOH HTA Unit, DOH Medical Device Unit, and HTA Council agreed on the scope and next steps of the HTA Methods Guide, Essential Medical Device Price Reference Index, and Essential Medical Device Price List development. MTaPS will further discuss the technical assistance needed by the DOH-PD on establishing these systems.
Activity 2.3.1: Support DOH to implement standardized aDSM reporting and practice of causality assessment	5.3	MTaPS is supporting the DOH-PD implement standardized aDSM reporting and practice of causality assessment through PViMS as needed.
Activity 3.1: Collaborate with other USAID implementing partners to build the capacity of UHC IS/LGU on PSCM and PV	5.1	MTaPS is actively taking part in UHC implementation with other USAID IPs, focusing on supply chain system strengthening.
Activity 3.2: Support gender equality and women's empowerment in PSS	1.3, 2.1, 5.2	The Gender Mainstreaming in Health Planning module was finalized and endorsed by the DOH-HPDPB. MTaPS will package this module along with the two modules on sex and gender eLearning courses in PSCM and pharmaceutical services that it has developed with the HPDPB.
Strategic Procurement (Framework Agreement and Pooled Procurement)	4.3	MTaPS outlined the procurement steps with FA as a modality. MTaPS is monitoring the procurement of TB commodities under FA. MTaPS reached out to suppliers in the country to understand their interest in FA and determine their capacity to respond to the needs of the DOH. Strategic Procurement for UHC (Asia Bureau): MTaPS engaged a legal consultant to analyze the legal and policy environment for procurement in the Philippines to identify gaps and provisions to develop feasible models to introduce and pilot a mechanism for pooling demands from multiple procurement entities.

PEPFAR (HIV/AIDS)

OVERVIEW

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

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

For the PEPFAR-funded HIV/AIDS activities, MTaPS Philippines aims to accelerate progress toward controlling the HIV/AIDS epidemic by strengthening the pharmaceutical system to ensure uninterrupted access to and safe use of HIV/AIDS commodities.

CUMULATIVE PERFORMANCE TO DATE

TLD, a preferred ARV for first line ART and TDF+FTC for pre-exposure prophylaxis (PrEP) are already included in the Philippines National Formulary (PNF) as of September 2021 and January 2022, respectively. MTaPS provided technical guidance to the key players of the DOH from the public and private sectors to ensure the successful completion of HTA requirements of TLD and PrEP. MTaPS coordinated with the HTA Council to assess related literature on the use and safety profile of PrEP and TLD, which are critical requirements of the council in determining whether to include commodities in the PNF. MTaPS facilitated the completion of USAID's donation of PrEP to the government of the Philippines and coordinated with the Philippines Bureau of Customs and supported coordination of necessary FDA clearances for the arrival of ARVs for PrEP and viral load cartridges donated by USAID in the country. MTaPS supported the DPCB, Epidemiological Bureau, and other stakeholders to complete the three-year (2022–2025) quantification of adult first-line ARVs, PrEP, HIV test kits, and viral load cartridges. The results of the quantification activity will guide immediate and future solicitation and allocation of funds and procurement. In addition, MTaPS used the results of the quantification exercise to develop the PSCM support plan for TLD transition.

QUARTER 1 ACHIEVEMENTS AND RESULTS

Strategic objective 1: Strengthen PSCM of HIV/AIDS Commodities

Activity 1.1 Procurement: MTaPS provided support on the quantification of several HIV/AIDS commodities in Year 4 and in Q1 PY5 monitored the status of procurement of these commodities, including emtricitabine/tenofovir 200/300mg tablets (57,000 bottles = Php 20,976,000.00) and DTG 50mg tablets (91,300 bottles = Php 21,619,840.00). MTaPS suggested having an additional 3,629 bottles of lamivudine 150mg tablets to have sufficient stock in the country. With this, the DPCB requested 1,373 bottles (60 tablets/bottle) from partners to avoid a stock-out until February 2023, when the supplier will deliver 2,304 bottles to the country.

Activity 1.2 Distribution and Inventory Management System: MTaPS shared with 25 (10 male, 15 female) key stakeholders from the DOH, CHDs, and other IPs the results of the observations during the mentoring support visits to around 30 PEPFAR sites and recommendations on how to further improve SCM, PV, and IPC practices in those sites. Lessons from these visits will be used to draft the capacity building activities for the PEPFAR sites and enhance existing DOH tools (e.g., IPC for outpatient health facilities). MTaPS also disseminated the results of the assessment and recommended action plans to improve IPC practices in 30 PEPFAR sites comprising community-based organizations (CBOs) and social hygiene clinics (SHCs).

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

■ A central institutionalization strategy (national policies) doesn't necessarily translate to local implementation among SDPs. MTaPS conducted a consultative meeting for PEPFAR among program managers and SPDs to assess the PSCM status, needs, and challenges for the HIV program. One major observation noted during this activity was a discrepancy in SCM practices among HIV treatment hubs. This was noted even though there is a department memorandum that aims to address and standardize SCM practices among all HIV treatment sites. The team also observed that despite national policies already in place, SDPs were still using different forms and following different SCM processes.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
PSCM and inventory management training for HIV focal persons in Calabarzon and National Capital Region (3 sessions)	February 2023

Table 23. Quarter 1, FY23, Activity Progress, Philippines—PEPFAR

Activity	MTaPS Objective(s)	PEPFAR Objective(s)	Activity Progress
Activity 1.1: Support DOH in using appropriate procurement mechanisms for addressing procurement related bottlenecks for HIV/AIDS commodities	5.1	Strengthen PSCM of HIV/AIDS Commodities	As part of its support to the DOH in facilitating the arrival of the second tranche of viral load cartridges donated by USAID, MTaPS supported the quantification and is monitoring the status of the procurement of critical HIV/AIDS commodities in the country.
Activity 1.2: Support DOH in strengthening the distribution and inventory management system for HIV/AIDS commodities	5.1	Strengthen PSCM of HIV/AIDS Commodities	MTaPS worked with the DOH and other PEPFAR IPs to organize PSCM training for health workers.

CN220 (HIV/AIDS)

OVERVIEW

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

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

For the CN220-funded HIV/AIDS activities, MTaPS Philippines aims to accelerate progress toward controlling the HIV/AIDS epidemic by strengthening the pharmaceutical system to ensure uninterrupted access to and safe use of HIV/AIDS commodities.

CUMULATIVE PERFORMANCE TO DATE

MTaPS mapped the flow of HIV commodities from the DOH Central Office to CHDs to LGUs and finally to health care facilities. MTaPS also mapped the differentiated service delivery focused on the multimonth drug dispensing practices in selected HIV care sites with an emphasis on supply chain analysis. MTaPS and the FDA delivered a webinar on PV for HIV/AIDS care facilities in three USAID-supported regions (National Capital Region, 3, and 4a). MTaPS supported the DOH and FDA to orient CBOs on PV reporting using the FDA's SAR form. MTaPS supported the DOH to develop the IPC checklist tool for health facilities such as HIV/AIDS outpatient care facilities. Using this tool, MTaPS conducted the baseline and post-assessments of IPC practices in 30 HIV outpatient care facilities (CBOs) and assessed their current practices on PV recording and reporting. Additionally, MTaPS presented the baseline assessment results to key stakeholders at the national and regional levels.

QUARTER 1 ACHIEVEMENTS AND RESULTS

Service Delivery of HIV/AIDS Commodities

MTaPS, in coordination with USAID EpiC, conducted a visit to three PEPFAR sites: Bacoor SHC, Dasmarinas SHC, and Imus SHC. The purpose of the visit was to understand the practices, system, process, and forms involved in SCM practices in the SCHs. Information gathered will be used in drafting the SCM guideline for implementing multimonth dispensing and viral load testing to ensure a uniform system, process, and forms in HIV/AIDS outpatient care facilities. A consultation meeting was scheduled with CHDs in Calabarzon and the National Capital Region, the DOH, USAID EpiC, and selected HIV/AIDS facilities to align SCM practices in all types of HIV/AIDS facilities. An additional site visit is scheduled for January 2023 to gain a better understanding of SCM practices in a hospital setting.

PV of HIV/AIDS Commodities

MTaPS and the FDA developed the initial draft of the Targeted Spontaneous Reporting (TSR) SOP. MTaPS field tested this SOP in two HIV/AIDS health facilities and updated it accordingly (e.g., inclusion of AE reporting in the TSR implementation design). The next step is to agree with the DOH and stakeholders on the TSR SOP and operationalize the TSR for PrEP and TLD in the country.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Private-sector companies, even those that are assumed to be part of the pharmaceutical industry, might not be knowledgeable on current regulatory processes in the government. MTaPS learned that there was an issue in the registration of USAID-donated mechanical ventilators. To resolve the issue, the team conducted a process mapping exercise to identify the main hindrance in registering these ventilators. As a result, the team learned that the issue was because of the nonpayment of the registration fee by the private company to the FDA. The team was able to focus its efforts on resolving the root cause of the problem.
- Getting health programs and relevant offices to understand and appreciate the concept of PV is challenging. Because of this, MTaPS decided to intensify its advocacy strategies by organizing an advocacy meeting with partners. MTaPS tapped its subject matter experts and presented best practices from other countries regarding PV monitoring. As a result, the FDA and DPCB agreed to do TSR as the primary PV monitoring strategy.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Developing PSCM guidelines for the implementation of ARV decentralized drug distribution and VL testing	January 2023
Consultative meeting with FDA and DPCB for the operationalization of TSR	January 2023

Table 24. Quarter 1 Y5, Activity Progress, Philippines—PEPFAR

Activity	MTaPS Objective(s)	CN220 Objective(s)	Activity Progress
Support the Department of Health and HIV Community Based Organizations in developing and implementing a procurement and supply chain management (PSCM) action plan for differentiated service delivery including community dispensing of antiretroviral (ARV) drugs to people living with HIV	1.2, 5.1	Address acute needs driven by COVID-19, mitigate household shocks, and build resilience	MTaPS, in coordination with USAID EpiC, conducted a site visit to three PEPFAR sites to understand SCM practices, system, process, and reporting forms in SHCs.
Support DOH in the drug safety monitoring of TLD and PrEP through the implementation of targeted spontaneous reporting (TSR) mechanism	2.4	Bolster economies and other critical systems under stress due to COVID-19 to prevent backsliding and enable recovery	MTaPS is supporting the finalization and operationalization of TSR for TLD and PrEP in the country. Visits were conducted in selected facilities to understand the current PV practices and update the TSR SOP based on the current practice.

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 ARVs and MNCH products, along with related pharmaceutical services. As part of its support to Rwanda's MOH and FDA, MTaPS focuses its technical assistance on both the public and private pharmaceutical sectors by continuing support for improving regulatory systems at the Rwanda FDA, improving pharmaceutical-sector oversight and management by bolstering MTCs—previously known as DTCs—and ramping up PV systems.

MTaPS' strategic approach to strengthening the Rwanda FDA is to build the Authority's institutional capacity to address key areas of weakness and gaps identified in the WHO GBT assessments conducted in November 2018 and September 2021 and by the Tanzania Medical Devices and Drugs Authority in April 2022. It also involves implementing recommendations in related institutional development plans to facilitate the Rwanda FDA to achieve WHO GBT ML3. MTaPS' support includes strengthening the 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 the Authority's regulatory information management system. MTaPS supports the MOH in strengthening MTCs at HFs to those facilities' performance in pharmaceutical management, including for MNCH medicines.

CUMULATIVE PERFORMANCE TO DATE

Over the past four years, MTaPS has continued to provide pharmaceutical systems strengthening support to the MOH and its institutions, including the Rwanda FDA, the Rwanda Biomedical Center (RBC), and the RBC's MCCH division. Through support to the Rwanda FDA, a four-year Strategic Plan (2021–2024), four regulations, and other pharmaceutical-sector regulatory documents (e.g., guidelines, manuals, and SOPs), were developed.

During Q2, an initial medicines dossier assessment workshop retreat was held, which reduced the backlog of pending medicine dossier applications at the Rwanda FDA. Of the 735 applications that were unassessed at the time, 310 were addressed in the workshop.

As part of implementation of a QMS at the Rwanda FDA in accordance with requirements of the standard ISO 9001:2015, MTaPS in May 2021 supported the development of a quality manual and corresponding SOPs, which were approved by the Authority's board. MTaPS in June 2021 supported an internal audit training of 27 Rwanda FDA staff (17 male and 10 female) and in December 2022 participated in the Authority's WHO formal benchmarking assessment, which evaluated the institution on its progress towards ML3. 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 strengthening the information management system for both active and spontaneous AE reporting, MTaPS supported the Rwanda FDA to adapt the electronic PViMS for spontaneous reporting of AEs, including AEFIs for Ebola and COVID-19 vaccines, and for active safety monitoring of DTG-based ARV therapy regimens. From June 2021 to January 2023, 1,431 AEFIs (527 of which were serious AEs) were reported to the Rwanda FDA, which subsequently 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 and use the E2B format to report to the Uppsala Monitoring Center in an interoperable format.

As far as COVID-19 vaccine AEFI monitoring is concerned, the Rwanda FDA and the National AEFI Committee, supported by WHO and MTaPS, reviewed more than 670 AEFI reports following COVID-19 vaccination. Included were reports on 79 serious cases, such as hospitalization due to anaphylaxis, respiratory distress, convulsion, skin rash, and high blood pressure. Of those 79 reports, only 52 were investigated since the rest were deemed not to be vaccine-related, and causality assessment was conducted for 46. Several cases were determined to be vaccine-related reactions, while some were coincidental, and others were caused by vaccination errors. In response to the identified AEFIs, the Rwanda FDA has taken several actions, including issuing a signal communication to health professionals on a rare adverse event (blood clotting) following the administration of the AstraZeneca COVID-19 vaccine and issuing feedback letters to health providers and vaccine manufacturers. The information also informed training and supportive supervision of health providers. The Authority has also submitted 462 reports on COVID-19 vaccine-related AEFIs to the WHO's global database (VigiBase) to support vaccine safety monitoring on a global scale.

MTaPS has been providing technical assistance for the customization and installation of a new electronic regulatory information management system, referred to as the Integrated Regulatory Information Management System (IRIMS), to increase the efficiency of the Rwanda FDA's regulatory functions. IRIMS was customized to the Authority's requirements and deployed on a temporary server at the Rwanda FDA. By Q4, 88 Rwanda FDA staff (38 male, 50 female) had been trained on the system.

In addressing the human resources capacity gap, MTaPS supported the training of health care providers in different areas of pharmaceutical management, with 695 Rwanda FDA staff and other health care providers trained in various areas, including MER, good manufacturing practices, good review practices, good reliance practices, PV, and QMS. As part of long-term sustainability capacity building, MTaPS provided technical support to develop online e-Learning courses in MER and PV, which are hosted on the Rwanda FDA servers. So far, a total of 78 trainees have enrolled, and 17 have completed the courses. In June 2021, during the annual 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 assign antibiotics as per WHO recommendations into AWaRE categories and include them in the NEML to help prescribers use antibiotics more effectively to contain AMR.

To improve quality of care for MNCH, guidelines on regulating medical gases were developed, which helped assure quality oxygen for the management of hypoxic newborns and children as well as cases of

COVID-19, 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 conducted. MTaPS supported the development of the TOR for the oxygen and respiratory-care technical working group aiming to improve access to, and appropriate use of, oxygen through improved coordination among partners and stakeholders. MTaPS also supported the MOH in a rapid assessment of the use of medicines for postpartum hemorrhage and eclampsia, and as a result supported the development of an implementation manual for cold storage of oxytocin in Rwanda to guide health care workers in health centers and hospitals on procedures for its correct storage and management.

To strengthen PV, MTaPS supported the development of a costed multi-year National PV Plan to guide the implementation of medical safety monitoring activities in PY4. Nineteen participants from the National Pharmacovigilance Advisory Committee and Rwanda FDA were trained on PV. MTaPS is working with the MOH, RBC, and Rwanda FDA to conduct active surveillance of DTG-based antiretroviral therapy regimens to determine their safety. Following approval of the study protocol, implementation plan, SOPs, and a patient consent form by the Rwanda National Ethics Committee (RNEC), enrollment of participants at 20 HFs started in December 2021 and ended in May 2022. A total of 1,437 participants enrolled, and patient follow-up is ongoing.

MTaPS supported the RBC in conducting a situational analysis of ARV MMD and pack size, which facilitated the roll-out of six multi-month dispensing (6MMD) using a recommended 90-pack size. MTaPS supported the development of a manual to improve pharmaceutical management in HFs via MTCs. The MTC manual was validated by staff from 29 district hospitals, 5 referral hospitals, and 5 university teaching hospitals out of the 47 facilities involved in an earlier MTC functionality assessment survey. Use of the MTC manual will guide the establishment of MTCs in HFs, and the document has been developed alongside tools and SOPs to guide HCWs on monitoring medicines, including the use of MNCH medicines and AE reporting.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: GOVERNMENT AND HEALTH WORKER CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS STRENGTHENED

Activity 1.1.1: Strengthen the medical products regulatory framework of the Rwanda FDA, including that for medicines used in HIV/AIDS, MNCH, and FP/RH programs

Import and export control is one of the themes of the market surveillance and control function, as specified in the GBT. Control of imports as part of market control serves as a gatekeeper to ensure that medical products placed on the market meet certain standards and specifications for quality, safety, and efficacy. During Q1, MTaPS supported a workshop for the development and review of regulatory documents used in food and drugs import and export control. Three regulations, two guidelines, and four process flows were developed, while one regulation, two guidelines and four SOPs were reviewed.

MTaPS also provided technical assistance on the development of TOR for the mid-term evaluation of the Rwanda FDA's Four-Year Strategic Plan (2021-2024), due in early 2023. The mid-term evaluation will inform the development of recommendations to address identified challenges and gaps in implementation of the strategic plan, including strategies for its improvement.

OBJECTIVE 2: AVAILABILITY AND USE OF PHARMACEUTICAL INFORMATION FOR EVIDENCE-BASED DECISION-MAKING PROMOTED

Activity 2.1.1: Build capacity on the use and management of IRIMS in automation of medical product regulation processes

During Q1, MTaPS continued to work with the Rwanda FDA and the software development consultant to support the deployment and implementation of IRIMS and train stakeholders and additional staff as users. To date, 169 staff have received in-person training conducted by the software consultant on the management and use of IRIMS. Data migration has reached 65%, and a contract between the Rwanda FDA and the Rwanda Information Society Authority (RISA) has been secured for the final hosting of IRIMS.

In advance of a WHO GBT assessment conducted at the Rwanda FDA December 12–16, 2022, MTaPS supported the Rwanda FDA IT team to prepare a detailed presentation to explain to WHO GBT assessors how IRIMS will support the automation and digitalization of the Rwanda FDA. Three servers have been procured to host IRIMS in the production environment. To allow the processing of local and international payments on IRIMS, MTaPS supported the Rwanda FDA to initiate discussions on the integration between IRIMS and the Irembo payment gateway.

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

Y4 Activity 1.2.1: Support the functionality of DTCs and enhance their capacity to manage medicines at facility level; Y3 Activity 3.1.2: Improve the quality and use of medicines for MNCH

To strengthen MTCs in hospitals and promote continuous quality improvement in the appropriate use of medicines, including those used in MNCH, MTaPS supported MTC training and orientation of 313 health care providers (200 male, 113 female) from 47 MTCs across the country on the recently updated MTC manual and on best practices for oxytocin storage and management. In addition, pharmaceutical management documents, such as the pharmaceutical services standards for accreditation and SOPs and job aids on the management of oxytocin at the health facility level, were disseminated and distributed to the health care providers. The importance of measuring results for CQI was highlighted, and examples of indicators for MTCs to use in monitoring health facility performance on MNCH conditions were provided in the Drug Use Evaluation Guide. This will improve the use of medical products, including those used in MNCH to reduce antimicrobial resistance and deaths cases resulting from post-partum hemorrhage.

Y4 Activity 3.2.1(a): Field Support (FS) work plan Activity 3.2.1(a): Support establishment of a system for active surveillance of the new DTG-based regimen (activity continuing from FY21)

In the ongoing active surveillance of DTG-based antiretroviral therapy regimens, MTaPS agreed with the RBC and the Rwanda FDA to conclude enrollment at 1,440 participants, and the protocol was revised in accordance with the new sample size to secure the RNEC's approval. Following protocol approval by RNEC, follow-up of the enrolled participants continues. Only nine AEs, e.g., mild skin rashes, have been reported.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- MOH leadership and coordination of different partners' efforts has improved efficiency in strengthening of the country's pharmacovigilance system.

(Others are included under the Objectives/ Health Areas sections of the report.)

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.1.1: Strengthen the medical products regulatory framework capacity of the Rwanda FDA in regulating pharmaceuticals, including that for medicines used in HIV/AIDS, MNCH, and FP/RH programs ▪ Strengthen the Rwanda FDA's capacity to control imports and exports via a workshop to develop and review the relevant regulatory framework, which will involve mapping regulatory documents, including undertaking a comprehensive review of existing, and developing missing, document, such as those covering special drugs and other medical commodities (e.g., medicines for personal use, orphan drugs, and compassionate-use products) Provide technical assistance to undertake the mid-term evaluation of the Rwanda FDA's Four-Year Strategic Plan (2021-2024)	January-March 2023
Activity 2.1.1: Build capacity on the use and management of IRIMS in automation of medical product regulation processes ▪ Support implementation of IRIMS application programming interfaces (APIs), documentation, and plug-ins to interface with other existing national systems [e.g., single window system and payment gateway, National Product Catalogue, e-signature via the Government Certificate Authority, and Rwanda FDA lab information management system]; conduct second training of selected Rwanda FDA staff as master trainers in IRIMS system operations and external customers ▪ Continue to build the capacity of Rwanda FDA staff and external users on effective application usage and implementation support of IRIMS, including training in maintenance with respect to architecture design and technologies Develop management and regulatory tools for processes applicable to the automated regulatory information system	January-March 2023
Activity 3.2.2: Continue to strengthen pharmacovigilance and safety monitoring for regulated medicines, including ARVs, by enhancing the existing spontaneous reporting system ▪ Support updating of PViMS tool to address emerging Rwanda FDA requirements in spontaneous reporting, including updates to the ADR reporting form and active surveillance forms ▪ Interface the PViMS and IRIMS datasets by integrating the relevant common key data elements in reports on a dashboard that reports on selected key performance indicators ▪ Support a public awareness campaign on AEFI/AE detection and prevention Review and print pharmacovigilance tools, including the patient alert card and IEC materials used in the health facilities	January-March 2023

Table 25. Quarter 1, FY23, Activity Progress, Rwanda—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
FS Activity 1.1.1: Strengthen the medical products regulatory framework capacity of Rwanda FDA in regulating pharmaceuticals, including that for medicines used in HIV/AIDS, MNCH, and FP/RH programs **Activity Description:** ▪ Review legislative framework for medical devices, including IVDs, to ensure adequate regulatory provisions; develop separate guidelines for the registration of in-vitro diagnostics ▪ Support the review/development of regulatory documents used in food and drugs import and export control ▪ Provide technical assistance to undertake the mid-term evaluation of Rwanda FDA's Four-Year Strategic Plan	1.2	The regulation governing registration of medical devices and IVDs was finalized and submitted to the Mission and the Rwanda FDA. The corresponding draft guidelines were developed and are under review by the technical team. Nine regulatory documents for import and export control were developed (three regulations, two guidelines, and four process flows) while seven documents were reviewed (one regulation, two guidelines, and four SOPs). TOR for the mid-term evaluation of the Rwanda FDA's Four-Year Strategic Plan (2021-2024) developed.
Activity 2.1.1: Build capacity on the use and management of IRIMS in automation of medical product regulation processes **Activity Description:** ▪ Work with the Rwanda FDA and the software development consultant to support the deployment and implementation of IRIMS, and train stakeholders and additional staff as users ▪ Capacity building of Rwanda FDA staff, including the Authority's information and communication technology staff, as well as external users on effective application usage and implementation support of IRIMS ▪ Support implementation of IRIMS APIs, documentation, and plug-ins to interface with other national systems; acquisition of a QMS module ▪ Develop a memorandum of understanding with RISA and the National Data Center for a reliable hosting environment for IRIMS Provision of system and operational manuals	3.1	MTaPS completed deployment of IRIMS on a temporary server at the Rwanda FDA. Preparation of the production environment to host IRIMS is on-going. Data migration has reached 65%, and a contract between the Rwanda FDA and RISA was secured for IRIMS hosting. Walk-through sessions of different departments are being conducted for Rwanda FDA staff to familiarize them with respective IRIMS modules. Draft IRIMS user and installation manuals have been developed and are under technical review.
Y4 Activity 3.2.1(a): 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 study sites; disseminate findings and recommendations from the study	5.3	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. For the 1,440 participants enrolled across the 20 study sites, only 9 AEs, e.g., mild skin rashes, have been reported.

EBOLA RESPONSE ACTIVITIES

OVERVIEW

The 2004 outbreak of 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 the 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, and they present a significant economic burden for the health system. However, a sizable percentage of these infections are preventable through effective IPC measures. By preventing the occurrence and spread of infections, IPC thereby reduces the need for antibiotics and other expensive treatment measures. Lessons learned from outbreak measures undertaken by other countries have enabled Rwanda to think ahead and develop an 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 at the ready in case of an EVD outbreak.

CUMULATIVE PERFORMANCE TO DATE

MTaPS Rwanda, in collaboration with the MOH and RBC, is working to ensure that the developed documents on EVD prevention and control undergo expert review, validation, and dissemination to HFs for EVD preparedness. In May 2021, MTaPS hired two consultants to work on the development and review of key strategic documents for EVD prevention and control so the MOH can support HFs 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.

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 was completed and approved by the MOH. 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 was completed and piloted alongside the SOPs and IPC guidelines in both Kibagabaga and Muhima district hospitals as part of validation.

MTaPS procured some equipment (50 remote temperature screening devices [ThermoFlash®], 10 tablets, and 10 modems with 3G internet connection for 6 months) to facilitate entry/exit EVD screening and reporting at the ports of entry, which also will be used during the IPC simulation exercise at the points of entry. Handover of the procured materials to the RBC was done on May 5, 2022.

In Quarter 4 of PY4, MTaPS supported the development of the IPC training materials/curriculum and the alignment of the developed documents with MOH requirements, including the EVD-hemorrhagic

fever disease national guidelines, IPC training manual, EVD handbook and job aids, and IPC compliance monitoring tool, the last of which is available for online use. The guidelines and training materials were subsequently used by both the MOH and RBC to train health care and front-line workers, starting with Musanze, as part of EVD preparedness.

QUARTER 1/ YEAR 5 ACHIEVEMENTS AND RESULTS

In September 2022, the WHO's Regional Office for Africa and the MOH for Uganda confirmed another outbreak of Ebola virus disease in that country. MTaPS rapidly refocused its assistance to support MOH- and RBC-led training at 36 hospitals in high-risk regions of Rwanda. The training was intended to improve capacity for the timely detection of EVD in health facilities, improve health care workers' capacity in IPC and multidisciplinary case management, establish a roster of rapid-response team members in all high-risk district hospitals, and strengthen operational readiness, including with respect to logistics.

EVD training session at KFH Hospital in Kigali, Rwanda. Photo credit: Zuberi Muvunyi, MTaPS consultant

Thereafter, each hospital conducted a drill/simulation for EVD case management. The drill's main objective was to strengthen capacity for screening, management of cases in isolation units, and IPC. The health care workers who had already received training in EVD case management were invited to these drills. All relevant staff were involved: directors, doctors, nurses, midwives, social workers, pharmacists, laboratory staff, drivers, social workers, data managers, psychologists, surveillance and IPC focal persons, and IPC committee members. In total, 1,150 health care workers (447 female, 703 male) were trained with direct or indirect support of MTaPS.

King Faisal Hospital health care providers performing simulation exercises to test the readiness of Rwanda's health care system to contain and manage the spread of EVD. Photo credit: Jean Mirimo, MTaPS

In November 2022, following the training and drills, MTaPS used the Ebola IPC compliance monitoring tool to assess EVD readiness of a sample of health facilities and to evaluate the results of the MTaPS Ebola IPC assistance more broadly (table 26).

Table 26. Compliance of selected health facilities with Rwanda MOH Ebola IPC requirements as of November 2022

Reporting 100%	Training of personnel 73%
IPC supplies availability 84%	IPC measures during EVD patient care 73%
Inventory management 80%	Management of personnel exposed to EVD 75%
Triage and Evaluation 57%	IPC during laboratory activities 70%
Environmental cleaning 75%	Burial of human remains 100%
Waste management 81%	Post-mortem examination 96%
Visitor management 95%	Preparing for a surge 15%
Risk communication 63%	Availability of IPC protocols 62%
Standard IPC precautions during general patient care 98%	

Whereas the development of technical documentation and training supported by MTaPS contributed to fairly high scores in most of the categories, there is still room for improvement—especially in the areas of EVD surge planning and patient triage.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Technical assistance provided by USAID/MTaPS was critical in increasing Rwanda's readiness for EVD outbreaks, the risk of which remains high.
- Training and mentorship of rapid-response teams in Ebola IPC and more broadly in EVD case management should take place regularly to maintain readiness to handle a situation in Rwanda like the recent outbreak that took place in neighboring Uganda,
- The MOH Ebola IPC compliance monitoring tool developed with MTaPS support has proven to be useful. For adequate preparedness, monitoring needs to be systematic and complemented by the development of facility-level action plans to address any remaining gaps that may be identified.
- Sustainability of activities that had been supported by MTaPS is being ensured through a variety of strategies, including strong national MOH leadership and commitment to results; demonstration of activity benefits for EVD preparedness and national security; alignment with existing IPC and EVD strategies and plans; participatory development of all technical materials; broad partner engagement; identification and support of local champions; clarity of technical standards and institutional targets; required and refresher training provisions; as well as the identification, documentation, and promotion of best practices.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

N/A—Workplan implementation completed.

P. SENEGAL

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of the USAID MTaPS Program/Senegal is to support 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 MSC, improve IPC practices and services, and strengthen governance for AMS, including capacity building. In line with the GHSA AMR action package, the expectations of the USAID Mission in Senegal, and the MOH and its partners, MTaPS continues to focus on interventions to support progress on the pathway toward higher 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 focused on solving immediate problems and demonstrating results at two additional hospitals in FY22.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' primary goal is to support the country move up to the next JEE level across the 3 result areas by supporting the completion of WHO IHR benchmark actions. As of September 2022, MTaPS has supported the completion of 24 (39%) of the 62 total WHO benchmark actions—6 contributing to MSC/AMR, 13 to IPC, and 5 to AMS—while 2 other benchmark actions are at various stages of completion (ongoing).

During previous years, MTaPS supported the revitalization of the AMR technical group in the One Health platform and its functionality under the aegis of the OH secretariat. MTaPS provided technical assistance for the development of annual and quarterly action plans and their evaluations through multisectoral workshops and meetings. MTaPS also conducted activities for WAAW and provided support for the development of the multisectoral health security action plan by following the electronic State Parties Self-Assessment Annual Reporting Tool in preparation for submission for approval by the OH High Council Steering Committee.

In addition to supporting the OH AMR technical working group, MTaPS supported the implementation of an IPC program at both national and facility levels.

In fiscal year (FY) 22, MTaPS supported the DQSHH in reviewing and updating the national IPC supervision checklist that was previously updated in 2017. The revised checklist now includes the WHO's multimodal strategy and the WASH component in health care settings. The DQSHH used the newly developed national IPC supervision checklist to measure the IPC capacity level of each health

facility visited. This supervision checklist includes the information needed to provide guidance on its use and standardize its use by supervisors in the 14 medical regions in Senegal.

In FY20, MTaPS supported the DQSHH in conducting the first assessment of the national IPC program using the WHO IPCAT2 was supported by MTaPS. Information from this assessment was used to revise the national IPC policy document, develop a national IPC strategic plan, and revitalize the ICCs at 13 hospitals by helping them implement their action plans, which were developed during a participatory initial baseline assessment conducted using the WHO IPCAF.

MTaPS also supported the DQSHH/MOH in developing the National IPC Strategic Plan based on a variety of information sources, including assessments of the national IPC program using WHO's IPCAT2 to identify remaining priority activities, experiences, and lessons learned from the 13 hospitals' ICC (3 in FY20, 5 in FY21, and 5 in FY22) revitalization process and activities (baseline assessments using WHO's IPCAF, implementation of improvement action plans, and monitoring the progress made in improving IPC practices). Furthermore, strategic plan development considered experiences from other stakeholders implementing IPC strengthening activities.

MTaPS worked in parallel with DQSHH to implement the revitalization process of ICCs in 13 hospitals using WHO's IPCAF tool. MTaPS supported DQSHH in using the lessons learned from the revitalization of ICCs during the past several years. The ICCs of 3 pilot hospitals (i.e., Hôpital Général Idrissa Pouye level 3 hospital in Dakar, private level 2 Hospital Saint Jean de Dieu in Thiès, and level 1 Hospital Abdoul Aziz Sy in Tivaouane) revitalized during FY19–20 helped to strengthen the functioning of the ICCs of 5 additional hospitals in FY21 (i.e., level 1 hospital of Mbour, level 2 of Fatick, level 2 of Kaffrine, level 3 of Aristide Le Dantec of Dakar, and level 3 of Touba [Matlaboul Fawzayni]). In FY22, MTaPS worked with DQSHH in selecting 5 additional priority hospitals (i.e., level 3 Abass Ndao Hospital of Dakar, level 2 hospital of Kedougou, level 2 hospital of Kaolack, level 3 Fann Hospital of Dakar, and level 2 hospital of Sédhiou) in which the revitalization process for ICCs is being implemented using the assessment tools (including IPCAF), the updated IPC guidelines, and the lessons learned from the revitalization process of the 8 MTaPS-supported hospitals of FY20 and FY21.

Further, by establishing a subcontract with Sunu Santé Consulting firm to develop the first draft of the National IPC Strategic Plan for Senegal, MTaPS assisted the DQSHH in finalizing the National IPC Policy document and National IPC Strategic Plan to help the MOH revitalize hospitals' ICCs nationwide.

To strengthen governance for AMS, MTaPS provided support to the NCAT to organize several technical meetings to update the antibiotic policy and STGs that were developed in 2010 but never implemented. MTaPS used the opportunity to provide a technical orientation to NCAT's four TWGs (antibiotic therapy policy, antibiotic therapy for community infections of adults and children, antibiotic therapy of health care–associated infections, and antibiotic prophylaxis) on WHO's AWaRe categorization of antibiotics, which NCAT has since adopted.

QUARTER 1/ YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Strengthen the functionality of the AMR TWG by supporting effective coordination through regular meetings

From October 4 to 7, 2022, under the aegis of the Permanent Secretariat of the National High Council of the Global Health Security Agenda (PS/HCNSSM), MTaPS worked with USAID GHSA IPs, the Fleming Fund, and other AMR stakeholders to organize a workshop for the AMR working group to assess the implementation of the AMR NAP (2017–2022) and to set up the technical committee in charge of elaborating the AMR/NAP (2023–2028). All AMR human, animal, environmental, and vegetal health sectors participated in the workshop and were represented in the technical committee. At the end of the workshop, the participants agreed to set up a small committee to define the road map for using the One Health approach to develop the AMR/NAP (2023–2028). This road map will consider the WHO's plan to conduct the IHR JEE during January–March 2023 for Senegal.

From November 18 to 24, 2022, under the aegis of the PS/HCNSSM/One Health (PS/HCNSSM/OH), MTaPS supported the observance of WAAW Africa. Senegal celebrated the fourth joint continental campaign of WAAW Africa under the auspices of the African Quadripartite Members (FAO, World Organization for Animal Health, WHO, and UN Environment Program) and the African Union (Africa Center for Disease Control and Prevention [Africa CDC] and the African Union Inter-African Bureau for Animal Resources [AU- IBAR]) with the theme of "Preventing Antimicrobial Resistance in Africa."

WAAW Africa activities were organized and implemented around the following five subject areas:
1. Adoption of a One Health approach and MSC mechanisms for AMR prevention and mitigation.
2. "Optimizing AMR Implementation: Successful AMR Initiatives"
3. Understanding the environmental dimensions of AMR
4. AMR in aquaculture: a concern for food safety, the environment, and the health of aquatic animals
5. Becoming AMR Advocates: Why African Youth Voices Are Needed

In December, MTaPS continued working with the multisectoral technical committee through ad hoc virtual meetings to develop the AMR/NAP (2023–2028) under the aegis of the One Health secretariat.

RESULT AREA 2: IPC

Activity 2.5.3: Support the revitalization of ICCs in selected district and regional hospitals

MTaPS worked with the DQSHH to support the Hann Mariste Health Center of the Center Health District of the Dakar Medical Region to conduct a baseline assessment using the WHO IPCAF tool. The Hann Mariste Health Center has "inadequate" IPC capacity, with a score of 195/800. MTaPS will provide technical support to the implementation of the Hann Mariste Health Center. The documentation of the ICC revitalization process at this health center will be made available as guidance for other health centers in Senegal's health system.

MTaPS continued working with the DQSHH to support four hospitals to implement their IPC improvement action plans. Hospital trainers trained 275 health personnel (181 women and 94 men) in IPC, including 119 in Abass Ndao hospital (95 women and 24 men), 58 in Kaolack hospital (39 women

and 19 men), 69 in Kédougou hospital (28 women and 41 men), and 29 in Sédhiou hospital (19 women and 10 men). The trained health personnel include 147 health care providers (112 women and 35 men), 57 support and administrative staff (31 women and 26 men), and 71 floor technicians (38 women and 33 men). As per the WHO IPC Guidelines, an IPC program with a dedicated and trained team in place in each acute health care facility is critical for preventing health care–associated infections and combating AMR through good IPC practices.

In December 2022, MTaPS continued working with DQSHH to support the hospitals to implement their IPC improvement action plan. As a result, the trainers of Abass Ndao level 3 hospital of Dakar trained 90 additional health care providers in IPC.

Activity 2.5.4: Support the development, dissemination, and implementation of the National IPC Strategic Plan

On November 29, 2022, MTaPS and the DQSHH worked with a small committee of IPC stakeholders from the national and subnational levels to organize a review meeting for the latest version of the national IPC strategic plan (IPC-NSP). MTaPS supported this activity through its subcontract with the Sunu Santé Consulting firm, which provided a detailed presentation on the budgeted IPC-NSP. The members of the small committee provided their final comments on the format and the content of the IPC-NSP. Sunusante Consulting will include the small committee's latest comments in the final version of the IPC-NSP.

In December 2022, MTaPS worked with DQSHH to finalize the IPC-NSP and the national IPC policy. MTaPS met with the General Directorate of Public Health and the DQSHH to develop the terms of reference of the technical validation meeting of the IPC-NSP planned in the last week of January 2023.

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

Activity 3.1.1: Support the implementation of capacity-building interventions to increase compliance with antibiotic STGs

On November 30, 2022, MTaPS supported the NCAT to organize a meeting to prepare the templates to use during the development of training modules on the approved antibiotic STGs. The antibiotic STGs include the WHO's AWaRe categorization and are critical for strengthening the rational use of antibiotics and AMS.

From December 6 to 8, 2022, MTaPS supported the NCAT to organize a workshop to develop the training modules on the approved antibiotic STGs. The training modules for antibiotic treatment for community infections of children and adults were completed during the workshop. By the end of December 2022, the small group from the workshop developed the remaining modules on health care–associated infections and antibiotic prophylaxis. The NCAT will organize a meeting by end of January to agree on the training plan to be implemented from February 2023 using the developed training modules for the approved antibiotic STGs.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- The process of improving IPC practices, with a view to partly controlling the risk of infection within health establishments, requires not only supervisors and IPC experts, but also personnel dedicated and conscientious to IPC tasks. In Quarter 1, the level 3 hospital was able to provide IPC training to 275 hospital staff including health care workers, administrators, and hygiene technicians. This is a result of the dedication of the IPC committee staffed with people who are passionate about IPC and determined to do their best to improve facility-level IPC programs.

- The NCAT has been revitalized through MTaPS support with the update of the STG and the development of training modules on antibiotic treatment in the STGs. The visit of colleagues from the home office and the regional offices triggered a meeting in October 2022 (the previous one had been conducted in May 2022). During this meeting, the committee chair requested that the MOH organize the meeting and not depend on the availability of the committee members. It was highly recommended that all members make themselves available or appoint a representative to take part, as the meetings must be held frequently. With this recommendation, the MOH was able to organize the workshop to develop training modules and finalize most of the modules even with restricted committee availability.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
In collaboration with the DQSHH, support the organization of self-assessment workshops at the level of the 13 hospitals enrolled to update their action plan for improvement.	February–March 2023
Support the development and validation of the National AMR plan for 2023–2027 under the aegis of the OH secretariat.	February–March 2023
Support the MOH to validate the IPC-NSP by the General Direction of public health to start implementation of activities.	January–February 2023
Support the training of a pool of trainers for appropriate use of antibiotics for treatment and the training of antibiotic committees in the 13 hospitals supported.	February–March 2023

Table 27. Quarter 1, FY23, Activity Progress, Senegal—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Strengthen the functionality of the AMR TWG by supporting effective coordination through regular meetings	5.4	1.1	MTaPS continued providing technical and financial support to effective coordination through regular meetings under the aegis of the OH secretariat. In collaboration with Breakthrough Action, FAO, WHO, PATH/FAO/Fleming Fund, MTaPS continue providing technical support for the review and update of the national AMR action plan.
Activity 2.5.2: Provide technical assistance for supportive supervision to increase compliance with the updated IPC guidelines and standards	5,4	2.5	MTaPS provided technical support to review and update the supervision checklist and continue to support the biannual national IPC supervision organized by the Ministry of Health and supervision of the health facilities supported by MTaPS.
Activity 2.5.3: Support the revitalization of ICCs at two selected district and regional hospitals	5.4	2.5	MTaPS continued supporting the revitalization process of the ICC of the 13 selected health facilities through self-assessment with the IPCAF tool, refresher trainings, mentoring, and formative supervisions.
Activity 2.5.4: Support the development, dissemination, and implementation of the IPC-NSP	5.4	2.5	MTaPS supported the development of the first draft of the IPC-NSP. MTaPS will support the validation of the national document by the ministry and its implementation in selected hospitals and health districts.
Activity 3.1.1: Support the implementation of capacity-building interventions to increase compliance with antibiotic STGs.	5.4	3.1	MTaPS is working with the NCAT to develop and finalize STG training modules and train the prescribers in the 13 health facilities supported by MTaPS.

EBOLA RESPONSE ACTIVITIES IN SENEGAL

OVERVIEW

MTaPS proactively supported the revitalization of the Ebola incident management structure (IMS) at the HEOC. This center had 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.

CUMULATIVE PERFORMANCE TO DATE

In the area of IPC, including WASH, MTaPS supported a workshop to finalize 32 SOPs: 6 on case management, 8 on IPC, 9 on surveillance, 4 on behavior change communication, 3 on logistics, and 2 on vaccination. In response to a request from the incident management structure for an SOP on psychosocial care, three additional SOPs were developed for psychosocial care of patients, families, and health care workers affected by Ebola.

MTaPS provided technical and financial support for a baseline assessment of the treatment and transit centers dedicated to the isolation of EVD cases in the regions of Kédougou and Tambacounda, identified in the national multisectoral plan as high-risk areas. This assessment also concerned the entry points of the Kédougou and Tambacounda regions—which are the borders with Mali and the republic of Guinea—in relation with the members of the incident management system, the local administrative authorities, the concerned medical regions, and health districts. The objective was to take stock of the available and functional equipment and staff already trained in the regions of Kédougou and Tambacounda as well as to assess, in collaboration with the administrative and health authorities, the state of preparedness of the regions of Kédougou and Tambacounda in case of a possible necessary response to EVD.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the IMS representatives to conduct a third round of assessment visits to health facilities' treatment centers, and selected treatment centers in the national EVD response multisectoral preparedness plan that took place from November 5 to 13, 2022, in the regions of Matam and Saint-Louis in Northern Senegal. This activity was carried out as part of the country's preparation and response to viral hemorrhagic fever epidemics in general, and EVD specifically.

This activity also involved all the existing border entry points in Matam and Saint-Louis, in relation with the central services members of the Ebola IMS, local administrative authorities, involved medical regions, health districts, the defense and security forces involved in securing border crossings, and technical and financial partners.

Major findings from the assessment visits include the following:

- In Matam and in Saint-Louis, there is a need to strengthen the availability of equipment at points of entry (POE) for case detection and effective care (PPE, isolation of cases of EVD, health control kits, and follow-up communication protocols and tools). There is also a need to strengthen the

skills of multisectoral actors (health care workers, defense and security forces, community health agents, veterinary agents, community actors, etc.) to prevent, detect, and respond to diseases with epidemic potential.

- Assessors noted that there is a need to set up a secure stock of PPE and WASH materials at each point of care: POE, site of transit, and Ebola treatment centers (ETC).
- In Matam, assessors recommended regional health authorities promote the construction of an emergency treatment center at the hospital of Ourossogui, which has enough space for isolation. Additionally, they recommended regional health authorities to develop and execute a training/retraining plan for involved actors and strengthen the capacities of health checkpoints at national borders. The staff tasked with supporting hygiene and WASH in communities near the border are not sufficient to manage health checkpoints at the border.
- In Saint-Louis, assessors recommended regional health authorities strengthen the capacity of Red Cross volunteers to provide technical support at health care facilities, including ETCs and transit centers. They also noted a need to facilitate cross-border coordination and communication between the defense and security forces and health professionals to monitor care within border communities.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

The EVD outbreak remains a very worrying event in the African region, in view of the previous epidemic of 2014–2016. With a resurgence of Ebola in the DRC and in Uganda, MTaPS supported the Ebola IMS to assess centers dedicated to case isolation in high-risk border regions in the north.

The region of Matam is located along the Senegal river and the border to the Republic of Mauritania. Some Mauritania residents receive medical treatment at the regional Hospital of Ourossogui and the regional Hospital of Matam. Unfortunately, there are no longer health control services at all the borders. The law enforcement and defense forces present in the borders were not trained in health control measures or on any Ebola SOPs. Additionally, the regional hygiene brigade which was visited as part of the assessment expressed its need for additional staff, which explains the lack of health officers at the border.

The general recommendation is to establish sanitary control sites that will also serve as isolations sites at the border. It is also necessary for the MOH to appoint enough health officers at each entry point.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

All the activities planned in the Ebola work plan have been completed.

Table 28. Quarter 1, FY23, Activity Progress, Senegal—EBOLA RESPONSE

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1: Support coordination mechanisms, working groups, stakeholders **Activity description**: Provide technical support to review and update the national public health emergency preparedness and response plan and to strengthen relevant coordination structures by developing terms of reference.	5.3	2.1, 2.2, 2.3, 2.5	Completed
Activity 2: Develop adopt/update guidance and SOPs **Activity description:** use the WHO's updated SOPs (on IPC, mass gatherings, etc.) and guidance on Ebola event management at points of entry to technically contribute to updating the SOPs/guidelines that Senegal has developed for preparedness and response to the EVD outbreak in 2014.	5.3	2.1, 2.2, 2.3, 2.5	Completed
Activity 3: Assess and monitor compliance with the SOPs/guidelines **Activity description**: work with implementing partners to support the dissemination of the developed/updated guidelines/SOPs/checklist/job aids to the district health management teams managing travel and ports of entry.	5.3	2.1, 2.2, 2.3, 2.5	Completed

Q. TANZANIA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA goal of MTaPS Tanzania is to support 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 MSC on AMR, IPC, and optimization of antimicrobial medicines use.

The year-5 program implementation plan for GHSA is to build on the work done in years 1, 2, 3, and 4. MTaPS continues to focus on strengthening the governance of the Ministry of Health (MoH) and selected HFs, 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 CQI of both AMS and IPC interventions and is supporting the development and implementation of surveillance methods for SSIs, whose treatment involves antibiotics and, therefore, is a key concern with respect to AMR. MTaPS is building the capacity of HCWs to implement the IPC-related reporting system (as part of DHIS-2) to provide the MoH with data for decision-making about IPC and for the implementation of CQI methodologies. MTaPS supported the assessment of AMS policies using a multisectoral approach and active implementation of AMS practices in health facilities.

CUMULATIVE PERFORMANCE TO DATE

As of September 2022, MTaPS supported 33 WHO IHR benchmark actions: 5 contributing to MSC/AMR, 20 contributing to IPC, and 8 contributing to AMS. MTaPS helped the MoH improve Tanzania's JEE score for MSC by supporting 50% (2/4) of level 3, and 75% (3/4) of capacity level 4 WHO benchmark actions, resulting in an overall achievement rate of 29% (5/17). MTaPS supported the coordination of AMR activities under the AMR MCC, working under the OH approach, such that the MCC held meetings to oversee and give guidance on implementing the NAP-AMR 2017–2022 across the human health, animal health, plant, and fishery sectors. MTaPS supported the setup and operation of IPC and AMS TWGs that helped improve the implementation of IPC and AMS activities in Tanzania. MTaPS supported the development and the operationalization of the "Multisectoral AMR Communication Strategy: Moving from Awareness to Action 2020–2025," which helped to improve OH communications, practices, and implementation among the MoH, the Ministry of Agriculture (MoA), the Ministry of Livestock and Fisheries (MLF), the President's Office Regional Administration and Local Government, and the four TWGs that feed into the MCC (AMR awareness, AMR surveillance, IPC, and AMS).

In IPC, up to September 2022, MTaPS Tanzania supported 80% (4/5) of capacity level 2, 100% (6/6) of level 3, 100% (5/5) of level 4, and 100% (5/5) of level 5 WHO benchmark actions, resulting in an overall achievement rate of 95% (20/21), 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 for a cumulative total of 519 (296 female, 223 male) HCPs. To improve IPC implementation and

sustainability, MTaPS established and strengthened IPC committees in 10 MTaPS-supported hospitals and conducted clinical mentorship and CQI, which brought about improved WASH and hand-washing practices and reduced SSIs and other nosocomial infections. An IPC e-Learning course was developed, which equipped the Center for Distance Education in Morogoro to offer online IPC training to HCPs. Furthermore, MTaPS supported the MoH to review the IPC training curriculum for HCPs and oriented 61 tutors on its use. MTaPS supported the MoH to develop a national IPC M&E system, including training RHMTs, facility IPC focal persons, and facility health management information system focal persons on IPC M&E tools and reporting IPC indicators via DHIS2. MTaPS Tanzania also supported the MoH to develop the health care-associated infection (HAI) surveillance system with reporting through DHIS2. All 10 MTaPS-supported facilities are now conducting HAI surveillance and reporting to the MoH while using the data for facility IPC improvement.

MTaPS' implementation of AMS activities up to September 2022 has contributed to improving Tanzania's baseline JEE score from level 1 to level 2 capacity by supporting 100% (4/4) of capacity level 2, 50% (3/6) of capacity level 3, and 14% (1/7) of capacity level 4 WHO benchmark actions, resulting in an overall score of 33% (8/24). MTaPS supported MoH, MoA, and MLF in developing the AMS policy guidelines as per the OH approach. MTaPS supported MoH in developing and disseminating the MTC guidelines as well as the STGs and NEML for Tanzania that included the AWaRe categorization of antibiotics. MTaPS conducted training on AMS—specifically, on the ethical prescribing and dispensing of antimicrobials— among 110 (43 female, 67 male) HCPs from 10 supported facilities. MTaPS, in collaboration with the MoH, supported HFs in implementing AMS interventions, including reviving MTCs to foster AMS implementation at hospitals. MTaPS also conducted a survey on the national consumption of antimicrobials in Tanzania for the years 2017–2019 and a PPS on antimicrobial use across six referral hospitals. In addition, a national hospital formulary template was developed and provided to 10 supported hospitals use in developing/revising their own hospital formulary.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

The new NAP-AMR 2023–2028 was finalized and launched during the quarter. An AMR symposium held during the 2022 WAAW provided an opportunity for MTaPS and its supported sites to share experiences and best practices on implementing IPC and AMS at facility level. To build the capacity of journalists in the media to advocate for good IPC practices at the HF and community levels, 108 journalists were trained on IPC.

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Review plans and progress through regular meetings of the AMR governance committee

MTaPS supported the MoH in organizing the 23rd AMR MCC meeting held on November 21, 2022, with 11 participants (4 female, 7 male). The main agenda was to finalize preparations for the launch of the new NAP-AMR 2023–2028 and prepare for an AMR symposium to be held November 22–23, 2022. Participants in the MCC meeting expressed their appreciation for support from MTaPS and other partners in the development—and promised continued support and cooperation in implementation—of the new NAP-AMR 2023–2028.

Activity 1.1.3: Support the review and revision of the multisectoral NAP-AMR

MTaPS supported the finalization and costing of the NAP-AMR 2023–2028 that was launched by the Chief Medical Officer during the AMR symposium on November 22, 2022. The AMR symposium, which was held with MTaPS' technical support, was attended by representatives from 10 MTaPS-supported facilities. Two MTaPS staff presented abstracts entitled "Increased use of system for monitoring/audit of infection, prevention, and control practices and feedback" and "MTaPS support in strengthening antimicrobial stewardship in Tanzania."

The Chief Medical Officer, Prof. Tumaini Nagu (eighth from left), with the AMR MCC secretariat and implementing partners, holds a copy of the new Tanzania NAP-AMR 2023–2028 following its launch on November 22, 2022, in the Dar es Salaam Region. Photo credit: Stephano Simba, MTaPS

RESULT AREA 2: IPC

Activity 2.2.1: Strengthen the capacity of journalists to advocate for and increase awareness of IPC for infectious diseases in the community

MTaPS provided technical support to the MoH for training journalists on key components of IPC to enable them to undertake advocacy for and sensitize them to IPC practices at the community level and in health facilities. The training was conducted December 10–12, 2022, in Dar es Salaam. A total of 108 journalists (43 female, 65 male) from various media outlets, including Channel Ten, Independent Television (ITV), Tanzania Broadcasting Cooperation (TBC), Mwananchi Communication, Star TV, and Clouds FM were trained in three groups for one day each. The training helped the journalists understand the key components of IPC and be able to accurately report on IPC in the media, which will help increase awareness of IPC among community members and health care workers. Following these trainings, the national IPC team was invited by various mass-media outlets to take part in shows aimed at educating the community on IPC and how it helps in the containment of AMR.

Dr. Joseph Hokororo, the IPC National Coordinator (right), educating the community on the prevention of infectious diseases to reduce AMR during a Channel Ten live morning show, Tanzania, December 12, 2022. Photo credit: Johannes Msigwa, MOH

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

Activity 3.5.1: Continue to improve capacity to support AMS practices in 10 supported health facilities (activity continuing from PY4)

MTaPS provided technical support to and cooperated with the MoH to integrate the "WHO health facility AMS tool" into AfyaSS, a MoH digital platform that enables HCWs to conduct supportive supervision. The tool will help improve implementation of AMS supportive supervision in health facilities, storage and analysis of the collected supervision data, and comparison among health facilities of improvement over time.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Orientation of journalists on key components of IPC and AMR containment increased their awareness and will help them share information/educate community on IPC and AMR containment.
- The costing of NAP-AMR 2023–2028 helped stakeholders understand the funding required to implement the interventions and sensitize them on the need to advocate and mobilize funding for the effective implementation and achievement of the plan.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 2.2.1: Strengthen the capacity of journalists to advocate for and increase awareness of IPC for infectious diseases in the community ▪ Working with the MOH, undertake review of the IPC Communications Strategy 2012–2017	January–March 2023
Activity 2.5.1: Continue to support active surveillance of hospital acquired infections, specifically SSIs (activity continuing from PY4) ▪ Utilize the Extension for Community Healthcare Outcomes (ECHO) platform to prepare sessions for the CQI teams to build their capacity in monitoring of IPC implementation at the hospital level, including surveillance of SSIs	January–March 2023
Activity 3.3.1: Conduct an antimicrobial utilization survey to assess compliance with AMS guidelines in the selected facilities ▪ Continue implementation of the National Antimicrobial Consumption Study	January–March 2023

Table 29. Quarter 1, FY23, Activity Progress, Tanzania—GHSA

Activity	MTaPS Objective (s)	GHSA Result (s)	Activity Progress
Activity 1.1.3: Support the review and revision of the multisectoral NAP-AMR **Activity description**: Develop NAP-AMR 2023–2028; support the NAP-AMR symposium	5.4	1.1	MTaPS supported the MCC to evaluate the performance of the NAP-AMR 2017–2022 and to develop the new NAP-AMR 2023–2028, which was subsequently launched. As part of 2022 WAAW commemoration, an AMR symposium was held in November 2022 at which MTaPS staff presented abstracts on IPC and AMS.
Activity 2.2.1: Strengthen the capacity of journalists to advocate for and increase awareness of IPC for infectious diseases in the community **Activity Description:** Train journalists on IPC/AMR to build their capacity to support advocacy of and sensitization on good IPC practices at the HF and community levels; review the IPC communication strategy	5.4	2.2	MTaPS trained 108 journalists on IPC. Following these trainings, the national IPC team was invited by various mass-media outlets to shows on IPC and how it helps in AMR containment. The trained media personnel have begun to educate the community on IPC.

FIELD SUPPORT 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 institutional capacity of the Tanzania Medicines and Medical Devices Authority (TMDA) to manage pharmaceutical systems by improving its market authorization and import processes for ARVs and enhancing its 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's Global Benchmarking Tool, and provide evidence to grow TMDA towards maturity level 4.

CUMULATIVE PERFORMANCE TO DATE

MTaPS provided technical support to the TMDA to improve efficiency in executing its regulatory functions by increasing the capacity of TMDA medicine evaluators with respect to medicine dossier evaluation in order to ensure the quality, safety, and efficacy of medicines such as ARVs. Thirty (12 female, 18 male) TMDA medicine evaluators were trained to conduct medicine dossier assessments, which will help reduce the processing time for applications for the registration of new medicines. In addition, the assessors trained with support from MTaPS will continue to train new staff and ensure sustainable knowledge transfer within the TMDA and Tanzania at large.

With respect to PV, MTaPS helped strengthen the existing passive medicine safety surveillance system for pediatric medicines used in the national HIV program by facilitating the revision of the TOR for the national PV safety advisory committee, known as the Vigilance Technical Committee (VTC), to allow for the incorporation of four pediatric experts on that committee. VTC members also were trained in PV and now have the capacity to assess pediatric ADRs and provide feedback to ADR reporters. MTaPS also supported the development of guidelines for monitoring the safety of medicines used in the pediatric population, which will help improve monitoring of medicines that include those used to manage chronic diseases such as HIV/AIDS, as well as children's susceptibility to ADRs. The TMDA, with support from MTaPS, conducted a 10-day training to build the capacity of TMDA staff to assess PSURs and risk management plans (RMPs), consequently increasing the number of competent assessors at the TMDA. Twenty-seven (10 female, 17 male) new TMDA staff, interns, and external assessors were trained on basic methods of assessing PSURs and risk management plans for ARVs and other medicinal products. This support has helped the TMDA improve its monitoring, reviewing, and reporting of safety issues arising from medicines used by the pediatric population.

MTaPS, through a consultant, carried out a process-improvement mapping for the registration and importation of ARVs for the public sector. MTaPS provided technical support on the development of process-mapping tools for the registration and importation of ARVs in Tanzania. MTaPS identified key informants and requested their participation in in-depth interviews and subsequently performed qualitative and quantitative data analyses of survey responses. MTaPS' consultant facilitated a stakeholder validation workshop that addressed the findings, challenges, and recommendations to be considered for improving the process for registration and importation of ARVs for the public sector.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS developed a work plan for FY23 (PY5) and submitted it to the Mission. MTaPS received comments from the Mission and is preparing responses. After resubmission and USAID approval of the work plan, MTaPS will begin activity implementation.

QUARTER 4 BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Note: Activity implementation will be initiated after work plan approval.

Activity and Description	Date
Activity 1.1.1: Streamline the process of import and registration of medicines, especially ARVs, according to international standards to assure quality, safety, and efficacy ■ Support a follow-on workshop to facilitate discussions among key stakeholders to review the status of implementation of recommendations developed earlier and resolve any obstacles to implementation. Develop an action plan for successful execution of any recommendations not yet implemented.	January–March 2023
Activity 1.1.2: Support the TMDA to deliver its mandate to assure safe, effective, and quality-assured medicines by creating a solid workforce for performing the required regulatory functions ■ Plan for and conduct advanced dossier assessment for 40 assessors by current medicine evaluators, covering specialized areas such as assessing bioequivalence studies and active pharmaceutical ingredients, with a focus on ARVs. The capacity building will be followed by two product dossier review retreats with the objective of evaluating 160 dossiers.	January–March 2023
Activity 2.1.1: Support capacity-building for PV PSUR and RMP implementation by domestic pharmaceutical manufacturers/marketing authorization holders and evaluation by the TMDA ■ Support the TMDA to plan for and undertake training of 20 junior assessors and 40 qualified persons responsible for PV on PV principles and the submission and evaluation of PSUR and RMP	January–March 2023
Activity 2.1.2: Support for strengthening of PV at referral (PV centers) and at TMDA zonal offices ■ Support the TMDA to plan for and conduct advanced training on PV for focal persons at the TMDA zonal offices and PV centers as well as periodic sensitization of staff of HFs served by the TMDA zonal offices and referral PV centers. ■ Organize for printing and distribution of the PV-related guidelines, safety manual, and reporting forms to HFs	January–March 2023

R. UGANDA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

In the 2017 JEE assessment, Uganda scored 3 (developed capacity) for both IPC and AMS. MTaPS' GHSA goal in Uganda is to slow the emergence and propagation of AMR. This will be accomplished by building the capacity of in-country stakeholders and HFs through a health system strengthening approach to implement Uganda's NAP on AMR and make progress toward a higher JEE score which translates to the improvement in the WHO Benchmarks for IHR capacities. MTaPS Uganda provides direct technical assistance to GOU MDAs to support three result areas in the GHSA AMR action package—optimizing the use of antimicrobials through AMS, strengthening IPC practices, and strengthening government-led MSC for the national AMR program through the NAMRSC of the OHP.

CUMULATIVE PERFORMANCE TO DATE

As of September 2022, MTaPS has supported Uganda to improve the JEE-2 score for MSC/AMR by supporting 50% (2/4) 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 OHP TWC to set up and establish the NAMRSC and its TWCs. MTaPS highlighted the work done by two women leaders and champions in AMR in Uganda to advance gender equity consideration in leadership. MTaPS has supported the ASO TWC to develop two editions of the biannual AMS newsletter.

In IPC, as of September 2022, MTaPS has helped Uganda to improve the JEE-2 score by supporting 100% (5/5) of capacity level 2, 100% (6/6) of level 3, and 40% (2/5) of level 4 WHO IHR benchmark actions. In 2019, MTaPS supported the MOH to conduct the first ever national IPC survey. MTaPS has subsequently applied best practices to implement CQI plans for IPC improvement at supported HFs. As part of capacity building at the HFs, MTaPS has cumulatively conducted 90 mentorship visits in 13 HFs, reaching 2,244 HCWs (55% female, 45% male). To foster the scale up and sustainability of IPC/WASH implementation in the country, MTaPS built the capacity of 5 USAID partners implementing the Regional Health Integration to Enhance Services programs in 5 regions to implement IPC/WASH, with 24 IPC/WASH technical officers trained, who, through district and facility-based activities, transferred the knowledge to 356 district health team members, 277 HFs, and 396 HCWs.

In the area of AMS, as of September 2022, MTaPS has helped Uganda to improve the JEE-2 score by supporting 50% (2/4) of capacity level 2, 33% (2/6) of level 3, and 29% (2/7) of level 4 WHO IHR benchmark actions, thus contributing to sustaining level 3 and progressing towards achieving levels 4 and 5. MTaPS, working with the MOH, has progressively built capacity for AMS in HFs through implementation of AMS CQI plans. MTaPS supported the NDA to develop a web-based application for routinely collecting AMC data, and subsequently developed a manual for national surveillance of AMC at NDA and conducted assessment of national AMC consumption (import data) for 2019-2022. MTaPS assessed AMS policies, regulatory framework, and supply chain as well as an assessment of existing systems for monitoring AMU in humans and animals in both public and private sectors in Uganda.

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 MAAIF to develop an EVML, guidelines on antibiotic use in various food animals, IEC materials, and AMR awareness messages for use in the animal health sector. Additionally, MTaPS supported MAAIF to develop the national IPC strategy for the agricultural sector. These activities support completion of actions under capacity level 2 on the JEE-2.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.2.1: Collaborate with Makerere University and the AMS TWC to write a biannual AMS newsletter highlighting AMS activities implemented at national and sub-national levels and share the newsletter on the documentation platform (YR4)

MTaPS worked with Makerere University to support the ASO-TWC of the NAMRSC to coordinate the collection of articles from various authors in the multisectoral AMR area for the development of the third edition of the biannual AMS newsletter. The draft newsletter is undergoing editorial review prior to publishing. The AMS newsletter is critical for the dissemination of key information on the implementation of the NAP-AMR activities. The publication links the three sectors (MSC, IPC, and AMS) and allows for information exchange between the national and sub-national levels.

Activity 1.4.1: Work with the NAMRSC to conduct a review of the NAP-AMR (both qualitative and quantitative) to identify barriers to implementing the NAP, make recommendations to overcome the barriers, and advocate for and identify potential sources of sustained funding

MTaPS identified and engaged consultants covering the human and animal health and environmental sectors to conduct a review of the soon-ending NAP-AMR 2018-2023. A plan for data collection, stakeholder engagements, documentation of the results and recommendations, and approval processes has been developed in collaboration with NAMRSC. Over a three-month period, the consultants will provide technical assistance to the NAMRSC, the OHP, MOH, MAAIF, and other partners to conduct a comprehensive review of the implementation of the NAP-AMR and the status of completion of benchmark actions in each technical area. Additionally, the exercise will identify barriers to NAP-AMR implementation, make recommendations for overcoming the barriers, and advocate for the identification of potential sources for sustained funding for the NAP.

RESULT AREA 2: IPC

Activity 2.5.1: Improve the quality of health care services through strengthening IPC at COEs

MTaPS developed a tool for qualitative assessment of the six IPC COEs' capacity to perform on their own. As COEs, the hospitals are expected to manage their own CQI programs and assist lower-level facilities in establishing CQI, develop and implement a plan to ensure COE sustainability, and list the remaining gaps in support (e.g., those related to COE staffing and finance). The data will be collected through quantitative and qualitative methods at the six MTaPS-supported HFs during quarter two. The results will be documented and shared with the HFs, MOH, Mission, and other stakeholders. They will be used to advocate for funding to sustain the COEs and the documented challenges and lessons learned will be shared through the NAMRSC and other fora with stakeholders in IPC implementation.

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

Activity 3.3.1: Work with the MOH to monitor and evaluate AMS interventions, including AMU data, and publicly report on the results

Working with MOH and ASO-TWC, MTaPS developed a qualitative checklist to assess AMS interventions and support provided by MTaPS at six supported hospitals. The MOH and ASO-TWC technical officers will apply the tool during an assessment exercise to be conducted in quarter two. The tool is aimed at evaluating AMS interventions at MTaPS-supported HFs to identify barriers to implementation and lessons learned. The results will be documented and disseminated to the HFs, ASO-TWC, NAMRSC, USAID Mission, and stakeholders as part of the efforts for transitioning support for AMS implementation in these facilities and building their capacity.

Activity 3.5.1: Designate hospitals as COEs in AMS

MTaPS developed another tool for qualitative assessment of the six supported hospitals to provide evidence for decision-making by the MOH on whether the facilities have adequate AMS capacity to be designated as AMS COEs. Together with MOH officials, a plan for the assessment of the HFs on AMS competencies has been developed; the exercise will be undertaken in quarter two. The findings of these assessments will be used to refine the criteria for designating a COE for AMS such as capacity to manage their own CQI programs, support lower-level facilities in establishing CQI to improve AMS, develop and implement a plan to ensure COE sustainability, and identify remaining gaps for advocacy to partners for support. These criteria can thereafter be applied to other HFs to support the development of AMS competencies.

In previous years, the MTaPS program supported the NDA to develop a system for collecting AMC data at the ports of entry and enable routine reporting on national level AMC and submission into WHO-GLASS. This would enable generation of a report on volumes of antibiotics imported into the country. During the quarter, the MTaPS team supported the NDA to draft a sub-grant budget and roll-out plan to implement AMC data collection and reporting at the four ports of entry in Uganda as part of a long-term sustainability plan. It is planned that following approval of the proposed sub-grant budget, MTaPS will work with NDA to ensure that the roll-out plan is implemented.

QUARTER 1/YEAR 5 BEST PRACTICES/LESSONS LEARNED

- There is a need for institutions at national and sub-national levels to go beyond dissemination of policy and guidance documents and have actionable plans to address identified gaps and challenges which can also be used for advocacy to potential partners for support. The plans also allow for accountability, follow-up, and evaluation of outcomes and impact. Without action plans, implementation of policy and guidance fails to progress beyond the dissemination phase.
- There remains a need to strengthen and widen collaboration between different sectors and government MDAs. The established collaboration mechanisms need to be supported to foster better and improved communication and coordination, clear assignment of tasks to individual sectors and MDAs, and establish evaluation mechanisms for outcomes and impact.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Activity 1.4.1: Work with the NAMRSC to conduct a review of the NAP-AMR • Conduct inception meetings with NAMRSC and stakeholders • Undertake data collection activities (desk reviews, key informant interviews, focus group discussions, etc.) to review the implementation of the NAP-AMR and the status of completion of benchmark actions in each technical area • Development of draft report on the status of completion of IHR benchmark actions and NAP implementation; undertake stakeholders' workshop for data collection, input, and feedback Development of refined draft report; stakeholder validation and final report for approval	January-March 2023
Activity 2.5.1: Improve the quality of health care services through strengthening IPC at COEs (activity continuing from FY22) • Undertake data collection to assess the implementation of IPC interventions in six supported hospitals • Data cleaning, analysis, and technical report writing Report dissemination and handover to NAMRSC and MOH	January-February 2023
Activity 3.5.1: Designate hospitals as COEs in AMS • Conduct data collection activities to evaluate AMS interventions in six hospitals and designated them as COEs for AMS • Undertake data cleaning, analysis, and technical report writing Dissemination of results at sub-national and national levels and handover	February-March 2023

Table 30. Quarter 1, FY23, Activity Progress, Uganda—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.4.1: Work with the NAMRSC to conduct a review of the NAP-AMR (both qualitative and quantitative) to identify barriers to implementing the NAP, make recommendations to overcome the barriers, and advocate for and identify potential sources of sustained funding **Activity Description**: Assessment through stakeholder engagement meetings, focus group discussions, and key informant interviews with national and sub-national stakeholders	5.4	1.4	The SOW has been developed and consultants acquired. Touch-base meetings have been organized with key stakeholders to plan for data collection activities, data management, and the development of a national report including recommendations and potential sources of sustainable funding.
Activity 2.5.1: Improve the quality of health care services by strengthening IPC at COEs **Activity Description**: Conduct a qualitative assessment (via qualitative focus group discussions) of the COEs' capacity to perform on their own; develop and implement a plan to ensure COE sustainability; and list the remaining gaps in support and hand over to the MOH (or district heath authorities)	5.4	2.5	A tool to assess the capacity of the COEs has been developed. Data collection at the six MTaPS-supported HFs is planned for quarter two with MOH.
Activity 3.3.1: Work with the MOH to monitor and evaluate AMS interventions, including AMU data, and publicly report on the results **Activity Description:** Conduct quantitative and qualitative assessments to evaluate AMS interventions and support provided by MTaPS to HFs	5.4	3.3	An assessment tool to assess AMS interventions and support provided by MTaPS at six supported hospitals has been developed with MOH and ASO-TWC. The assessment is planned with MOH.
Activity 3.2.2: Designate hospitals as COEs in AMS **Activity Description:** ▪ Assess the COEs, including the collection of qualitative data on antibiotic use and performance, to designate HFs as COEs for AMS and handover tool to MOH Roll-out of automated system for measuring volumes of antibiotics imported into the country	5.4	3.2	a) Working with MOH, use the assessment tool to assess whether six supported hospitals have adequate AMS capacity to be designated as AMS COEs. Data collection is planned for quarter two. b) MTaPS team supported NDA to draft a sub-grant budget and roll-out plan to implement AMC data collection and reporting at four selected ports of entry. Following approval of the proposed sub-grant budget, MTaPS will work with NDA to ensure that the roll-out plan is implemented.

5. PROGRESS BY REGIONAL BUREAUS

A. ASIA REGIONAL BUREAU

OVERVIEW

MTaPS set out to advance pharmaceutical management systems within the Asia region by improving ability to institutionalize transparent and evidence-based decision making, building capacity to use robust information to define and cost pharmaceutical coverage, and strengthening medicine regulatory capacity and pharmaceutical-sector governance.

CUMULATIVE PERFORMANCE TO DATE

MTaPS developed the road map for institutionalizing HTA in LMICs in consultation with global and regional HTA experts, and it held a virtual dissemination workshop with Asia region experts (e.g., HTA practitioners, policy makers, academia, WHO regional experts, etc.) in October 2020.

Based on prior work by Chootipongchaivat et al. (2015), MTaPS created a 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 progress of HTA in China, India, Indonesia, Malaysia, Philippines, South Korea, Taiwan, Thailand, and Vietnam. The BSC analysis was shared at HTAsiaLink in October 2021. A literature review of the previous systematic review conducted for the HTA road map document provided recent information for the scorecard. Key informant interviews (KII) were conducted with regional HTA experts to fill information gaps from the desk research. These insights were incorporated into a summary addendum to the HTA road map, which was reviewed by MTaPS and USAID and submitted as a journal article. The article was accepted by the International Journal of Technology Assessment in Healthcare. The BSC analysis was also shared as a poster presentation at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 2021.

Another virtual pre-workshop was organized for HTAsiaLink 2021 on October 11, 2021, which engaged over 200 participants from more than 9 Asian countries. The conference provided an important opportunity for feedback from regional HTA stakeholders to inform the design of other activities and identified RWE and MCDA as critical areas of demand in the region. In June 2022, MTaPS conducted an online workshop on RWE for Indonesia, in close collaboration with the World Bank, Center for Global Development, and International Decision Support Initiative. This workshop resulted in an action plan currently being implemented in Indonesia.

MTaPS Technical Advisor Rozar Prawiranegara presented our work improving the HTA topic selection process in Indonesia. Photo credit: Christian Suharlim, MTaPS

To explore the feasibility of an HTA hub or collaborative institution in the region, MTaPS distributed an online survey on October 2, 2022, to 125 HTA stakeholders. MTaPS also conducted 27 KIIs to learn more about stakeholders' visions and demand for an HTA hub in Asia, and to examine possible priorities and combinations of support for a regional hub. MTaPS shared preliminary findings with USAID on December 12, 2022.

MTaPS developed and delivered two trainings for countries in the Asia region (Kyrgyzstan, Bangladesh, Nepal, and the Philippines) on use of the OHT to cost pharmaceutical benefit packages. The trainings were built upon the guidance MTaPS developed in PY2, which reviewed tools to cost pharmaceutical benefit packages and explained how to use the OHT for such an exercise. Following these trainings, MTaPS confirmed Bangladesh's interest in receiving further support in applying the OHT. MTaPS then facilitated an additional in-person training on the OHT in Bangladesh for the Health Economics Unit (HEU) and other stakeholders. The outcome of this training was initial discussions with the HEU to identify interventions to be costed with the OHT, establish the costing team, and develop the implementation timeline. The HEU chose the country's Shasthyo Surokhsha Karmasuchi (SSK) Social Health Protection Scheme benefits package for the costing exercise, which will focus on costing the pharmaceutical packages of each intervention included in the SSK.

Separately, MTaPS also published a blog highlighting the two reports from the activity on building capacities related to the use of the OHT to cost pharmaceutical benefits packages. The reports provided an overview of how countries in Asia define pharmaceutical benefit packages and a guide for how to define pharmaceutical benefit packages more effectively.

MTaPS followed up with three key networks: ASEAN, SEARN, and WHO Western Pacific Regional Office, for potential collaboration to strengthen regulatory systems in Asia. Through a mapping exercise to identify existing regulatory gaps, MTaPS implemented technical capacity-building trainings on current good manufacturing practice (cGMP) for pharmaceutical manufacturers for active pharmaceutical ingredients and formulations, application of good reliance practices, evaluation of vaccine dossiers for and by NMRAs, and convergence of technical standards and guidelines for medical product registration in Bangladesh and Nepal.

MTaPS also undertook competency mapping in Nepal, Bangladesh, and the Philippines using a workshop-based approach based on the WHO global competency framework for regulators of medical products. The mapping focused on the core and functional competencies/skills required for product evaluation (reviewers), safety monitoring (PV), inspection and enforcement (inspectors), and laboratory quality control (analysts). Gaps identified will be used to develop capacity-building plans for NMRA staff to ensure adequacy in performing regulatory duties and to enhance the efficiency and effectiveness of medicine regulation with the aim of increased maturity levels for the NMRA.

MTaPS, in collaboration with WHO, conducted a comprehensive review of COI policies across several Southeast Asian countries in 2021. This review culminated in the production of a WHO- and peer-reviewed publication, documenting current experiences and best practices in COI management. MTaPS continued the collaboration to develop the COI manual, a practical guide for public pharmaceutical-sector committees in LMICs. The manual, designed to be easily adaptable to the unique circumstances of each country, outlines 10 critical steps for improving COI policy, prevention, and management in public

pharmaceutical decision-making committees. These steps include creating and implementing clear COI policies, providing training on COI management, and establishing mechanisms for monitoring and enforcing compliance. To facilitate implementation of these recommendations, MTaPS has begun engaging countries to use this guidance to address COI workplace issues. This is being done through virtual learning exchange programs and webinar sessions.

QUARTER 1/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: STRENGTHEN CAPACITY TO CONDUCT AND USE HTAS TO SUPPORT INSTITUTIONALIZATION OF TRANSPARENT AND EVIDENCE-BASED DECISION MAKING IN ASIAN COUNTRIES

Activity 1.1.1: Exploring and supporting the development of a HTA hub or collaborative institution in the Asia region

The stakeholder key informant interviews and analysis for the HTA hub in Asia have been completed. MTaPS is drafting a report summarizing the findings from both the e-survey and interviews that should be completed in Quarter 2.

MTaPS presented at the HTAsiaLink Conference in Thailand, November 27–December 3, 2022. Two presentations received a competitive award, scored by independent expert panelists. Additionally, the team explored presentations for the July 2023 International Health Economics Association (iHEA) Cape Town. A total of 11 abstracts were submitted from MTaPS HTA Asia Bureau, MTaPS HTA Indonesia, and MTaPS COVID-19 costing.

Activity 1.2.1: Cross-country learning exchange and in-person technical assistance on HTA in the Asia region

In Year 5 Quarter 1, MTaPS secured funds to leverage existing work developments in Indonesia and the Philippines. It further amplified the reach of these workstreams and explored cross-country south-south peer learning. By leveraging existing work, the modest additional incremental investments of USAID will have a large impact and reach. MTaPS has started a biweekly communication channel with the Philippines DOH to explore activities related to this workstream.

OBJECTIVE 2: STRENGTHEN CAPACITY TO DEFINE AND COST EVIDENCE-BASED PHARMACEUTICAL COVERAGE AND PROMOTE TRANSPARENCY IN PHARMACEUTICAL PRICING TO IMPROVE VALUE IN PURCHASING IN ASIAN REGIONAL COUNTRIES

Activity 2.1.1: Building capacities on the use of the OHT to cost pharmaceutical benefits packages

To support application of the OHT, MTaPS conducted two virtual trainings for participants from Kyrgyzstan, Nepal, Bangladesh, and Philippines in July and September 2021. As a result of the virtual training, Bangladesh expressed interest in applying the OHT for costing its pharmaceutical benefits coverage and requested a refresher training as part of the costing process. MTaPS continued to engage with the HEU of Bangladesh's MOH to create an implementation plan for costing the SSK package of interventions, which will include creation of a technical working group and recruitment of local consultants. MTaPS is still processing recruitment of consultants and will start the costing process in

February 2023. The HEU also requested MTaPS' technical support in tracking maternal, newborn, and child health, pharmaceutical expenditures (PE) in Bangladesh.

In a separate activity, MTaPS and the Local Health System Sustainability (LHSS) project are jointly producing a resource that helps country health accounts teams to track pharmaceutical spending more accurately through the System of Health Accounts 2011 framework and to build the capacity of pharmaceutical decision makers to use health accounts data to improve planning and policy decisions on pharmaceuticals.

MTaPS also published a blog promoting the report on pharmaceutical pricing policies in Asia from Year 2.

Activity 2.2.1: Developing materials for standardization of PE tracking in the Asia region

MTaPS began adapting the global guidelines on PE tracking to the Bangladesh context.

Activity 2.2.2: Strengthen capacity for PE tracking in Bangladesh

MTaPS established a scope of work with a technical partner, Data International, and helped finalize an inception report for the work. The consultants began collecting data from health facilities, which will inform the methodology report. MTaPS started drafting this methodology report in Quarter 1 with expected finalization in Quarter 2.

OBJECTIVE 3: BUILD HARMONIZED, SUSTAINABLE, AND RESILIENT MEDICINE REGULATORY SYSTEMS IN ASIA

Activity 3.1.1: Developing capacity-building plans and supporting implementation in countries where competency mapping was conducted, and developing a regional capacity-building strategy for SEARN

MTaPS in collaboration with USAID's Promoting the Quality of Medicines Plus (PQM+) program facilitated a regional TOT course on the Evaluation of Biological Products, including vaccines for ASEAN member states. The course was conducted from December 5 to 9, 2022, and was attended by all members states except Singapore. A total of 25 (19 female, 6 male) participants attended the course. The objectives of the course were to enhance the knowledge and understanding of NMRA staff in marketing evaluation divisions, on current global regulatory requirements during product evaluation for registration of biologics and vaccines, and to equip them with skills to further cascade the training as regional experts.

MTaPS participated in two planning meetings (October 25, 2022, and November 24, 2022) in collaboration with the WHO Southeast Asia Regulatory Office (SEARO) and SEARN to develop a regional capacity-building strategy. MTaPS is offering technical assistance as part of the drafting group for the strategy to support capacity building by using their knowledge and experiences from WHO competency framework to assist in identifying existing capacity gaps. The capacity-building strategy will enable streamlined approaches to enhancing the regulatory workforce, skills, and competencies in SEARN.

MTaPS continued to engage the NMRAs of Bangladesh and Philippines on the competency mapping dissemination findings to get feedback on the validity and uptake of the findings. The engagement also focused on supporting the development of capacity-building plans as an output of the competency mapping to support the development of requisite skills and competencies and to enhance the efficiency and effectiveness of medicine regulation with the aim of increased maturity levels for the NMRAs.

OBJECTIVE 4: PHARMACEUTICAL SECTOR GOVERNANCE IN ASIAN COUNTRIES STRENGTHENED

Activity 4.1.1: Pilot the strategic procurement initiatives for selected products in the Philippines

In December 2022, MTaPS recruited another legal consultant after the resignation of the previous one. A meeting was held between MTaPS, the consultant and the procurement team, and the DOH, where a plan for the initiative was discussed and agreed upon. An inception report and PowerPoint slides were also developed and discussed with USAID Philippines staff.

Activity 4.1.1: Conflict of interest e-Learning course

In addition to developing the practical manual for public pharmaceutical-sector committees in LMICs, MTaPS is collaborating with WHO to develop COI e-Learning modules. These modules are designed to provide practical guidance on preventing and managing COI within the public pharmaceutical system in LMICs. The e-Learning course is adapted from the manual *Managing conflicts of interest: A how-to guide for public pharmaceutical sector committees in low- and middle-income countries.* The course is designed to be accessible, interactive, and user-friendly and is targeted at decision makers and other stakeholders in the public pharmaceutical sector (PPS). The e-Learning modules are divided into several sections, covering topics such as identifying and managing COI and implementing policies to prevent and manage COI. To date, the WHO team has approved the e-Learning scaffold and storyboard, and significant progress has been made in building the alpha version of the course. Our goal is to complete the development process in the next quarter.

QUARTER 1 BEST PRACTICES/LESSONS LEARNED

- Good collaboration between implementing partners and joint activity development and implementation helps ensure sustainability while increasing efficiency. Effective ongoing communication between the MTaPS and the WHO teams has proven critical for the successful, timely development of e-Learning modules on COI management in the PPS.
- Collaborations between ASEAN member countries should be enhanced through regional networks to cross-pollinate ideas, practices, and adoption of international standards.
- Establishing efficient communication channels is key to furthering collaboration with government partners.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
PY5 Activity 1.1.1: Continue to explore and support the development of an HTA hub or collaborative institution in the Asia region	January–March 2023
PY3 Activity 1.1.2: Develop and disseminate HTA strategic briefs on lessons learned for HTA advancement in the region (from previous year's performance)	March 2023
PY5 Activity 1.2.1: Biweekly meetings with the Philippines MOH to strengthen capacity to conduct and use HTAs to support institutionalizing transparent and evidence-based decision making	Biweekly meetings on Thursdays EST, starting January 19
Activity 2.1.1: Build capacities on the use of OHT to cost pharmaceutical benefit packages: Cost the SSK interventions using the OHT with local consultants supporting	January–March 2023
Activity 2.2.1: Develop materials for standardization of PE tracking in the Asia region: Finalize the adaptation of the PE tracking guidelines to the Bangladesh context	January–March 2023
Activity 2.2.2: Strengthen capacity for PE tracking in Bangladesh: Finalize the methodology report for PE data collection	January–March 2023

Activity and Description	Date
Activity 3.1.1: Provide technical assistance to Asian countries to institutionalize regulatory processes and best practices in registration of medical products Organize a virtual workshop on application of Good Review Practices for ASEAN member states	January–June 2023
Activity 3.2.1: Apply streamlined methodology for identification of competency gaps in Vietnam Conduct a competency mapping exercise for DAV Vietnam	March 2023
Activity 3.2.2: (Year 4) Develop and continuously review regional training plans for NMRA staff to build their technical capacity on key aspects of registration and regulatory inspections: ▪ Finalize the regional guidance on regulatory competencies based on the findings in the three countries (Bangladesh, Nepal, and the Philippines) competency mapping exercises. Facilitate development of training plans for the three countries	January–March 2023
Activity 4.1.1: Conduct an assessment and analysis of the procurement policy, laws, associated rules and regulations, and other legal provisions that affect the introduction of strategic procurement interventions in one Asian country (Philippines): Facilitate inception presentation; continue the analysis, conduct result dissemination and policy option development; pilot design	January–June 2023
Activity 4.1.1. Support implementation and dissemination of the how-to manual on COI. ▪ Finalize the e-Learning course based on the how-to manual on COI Pilot the e-Learning course	January–June 2023

Table 31. Quarter 1, FY23, Activity Progress, Asia Regional Bureau

Activity	MTaPS Objective(s)	Activity Progress
PY5 Activity 1.1.1: Continue to explore and support the development of an HTA hub or collaborative institution in the Asia region	5.1	e-Survey and key informant interviews completed. Drafting report of desk review, survey, and KIIs, highlighting the demand and scope of an HTA hub in Asia, including landscape and dynamics of current actors, funders, and technical support providers.
PY5 Activity 1.1.1: Continue to explore and support the development of an HTA hub or collaborative institution in the Asia region	5.1	MTaPS presented at the HTAsiaLink Conference in Thailand November 27–December 3, 2022. Two presentations were given by MTaPS and received a competitive award scored by independent expert panelists.
PY3 Activity 1.1.2: Develop and disseminate HTA strategic briefs on lessons learned for HTA advancement in the region (from previous year's performance)	5.1	An HTA strategy brief in the format of a business canvas is currently under review and will be disseminated to the broader international audience through web-based mechanisms. Actionable strategy briefs will be developed based on country-level activities.
PY5 Activity 1.2.1: Support cross-country learning exchange and in-person technical assistance on HTA in Asia region	5.1	MTaPS secured the necessary funds to leverage existing work developments in Indonesia and the Philippines and amplified the reach of these workstreams and explore cross-country south-south peer learning.
Activity 2.1.1: Build capacities on the use of OHT to cost pharmaceutical benefit packages	1.1, 2.3, 4.1, 5.3	MTaPS created an implementation plan for costing the SSK benefits package in Bangladesh and began data collection with the support of technical partners.
Activity 2.2.1: Develop materials for standardization of PE tracking in the Asia region	1.1, 2.3, 4.1, 5.3	MTaPS began adapting the global PE tracking guidelines to the Bangladesh context.
Activity 2.2.2: Strengthen capacity for PE tracking in Bangladesh	1.1, 2.3, 4.1, 5.3	MTaPS began collecting PE data and drafting the methodology report.
Activity 3.1.1: Provide technical assistance to Asian countries to institutionalize regulatory processes and best practices in registration of medical products **Activity 3.1.2:** (Year 4) Create models for adoption of global standards to support development of regulatory IMS for electronic transmission of information in Asia **Activity 3.2.1:** (Year 4) Support ASEAN Pharmaceutical Product Working Group's (PPWG) joint assessment procedures by facilitating joint review sessions for assessment of medical products **Activity 3.2.2:** (Year 4) Develop and continuously review regional training plans for NMRA staff to build their technical capacity on key aspects of registration **Activity 3.3.1:** (Year 4) Support the development of a risk communication plan **Activity 3.1.1:** (Year 5) Develop capacity-building plans and support implementation for the countries in which competency-mapping exercise was conducted and develop a regional capacity-building strategy for SEARN	2.4, 3	PY4 Activity 3.1.1: Implementation plan approved by ASEAN PPWG; plan to hold the workshop with ASEAN member states in PY5 Q2. PY4 Activity 3.1.2: Implementation plan developed and waiting approval from ASEAN after agreeing on maintaining confidentiality of data and information from Asian members states. PY4 Activity 3.2.1: Workshop held in December 2022 and report writing ongoing. PY4 Activity 3.2.2: Draft guidance document is being developed for countries to refer while addressing the gaps identified in the competency mapping exercise. MTaPS is working with SEARN member states and SEARO in the needs assessment stream to identify capacity gaps to inform the development of a regional capacity-building strategy. PY4 Activity 3.3.1: The draft for the risk communication plan is under development. PY5 Activity 3.1.1: Ongoing review of country competency-mapping reports and validation before development of training plans and working with SEARO to develop a regional capacity-building strategy for SEARN. PY5 Activity 3.2.1: Ongoing discussions with DAV on the activity implementation. Activity planned for March 2023. PY5 Activity 3.3.1: Ongoing planning of regional conference and drafting of manuscript on lessons learned through the years.

Activity	MTaPS Objective(s)	Activity Progress
Activity 3.2.1: (Year 5) Apply streamlined methodology for identification of competency gaps in Vietnam **Activity 3.3.1:** (Year 5) Disseminate strategies and lessons learned for effective medicines registration harmonization in Asia region		
Activity 4.1.1. Support implementation and dissemination of the how-to manual on COI. **Activity description**: Develop an e-Learning course based on the how-to manual on COI with assistance from WHO and the WHO Collaborating Center	4.1.1. b	MTaPS is currently developing the COI e-Learning modules. The WHO team has approved the e-Learning scaffold and revised the storyboard. Significant progress has been made in the alpha version development of the course.
Activity 4.1.1: Conduct an assessment and analysis of the procurement policy, laws, associated rules and regulations, and other legal provisions that affect the introduction of strategic procurement interventions in one Asian country (Philippines)	5	A new legal consultant engaged, and activity has commenced. MTaPS facilitated with the Procurement services of the DOH to introduce the new consultant. In the meeting the plan for the initiative and its completion were discussed and agreed upon. Inception report and PowerPoint slides were also developed and discussed with USAID-Philippines staff.

6. PROGRESS IN ACHIEVING CONTRACT DELIVERABLES

Table 32. Quarter 1 Year 5 Progress in Achieving Contract Deliverables

Contractual Deliverable	Due Date	Submission Date	Comments
Annual Report of Government Property in Contractor's Custody	None specified	10/28/22	
Quarterly and Annual Performance Report	10/31/22	10/31/22	
Subcontracting Report (eSRS)	11/9/22	11/7/22	
Environmental Monitoring and Mitigation Plan	11/30/22	11/29/22	

7. PROGRAM SPOTLIGHT

SUCCESS STORY
Advancing Tanzania's Infection Prevention and Control Capacity through e-Learning

Mary Ranald, tutor at Kibosho School of Nursing, accessing the course online.

The COVID-19 pandemic has demonstrated the importance of countries having strong and sustainable infection prevention and control (IPC) capacity to slow down the spread of infectious diseases. An assessment using WHO's Joint External Evaluation tool (2.0) rated Tanzania's capacity to respond to an epidemic as "developed but not sustainable." The results indicated gaps in human resource skills in IPC at the national and sub-national levels, with weak monitoring, follow-up, feedback, and support systems for compliance with WHO's IPC guidelines and standards.

Educators like Mary Ranald, a tutor at Kibosho School of Nursing, were using the old national IPC curriculum to teach pre-service health workers for five years. Crucial IPC topics, such as hand hygiene, health care waste management, personal protective equipment donning, and disinfection/sterilization of medical and surgical instruments, were missing from the curriculum.

But in 2018, the Tanzania Ministry of Health (MOH) partnered with the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program to improve the country's IPC capacity and advance it to the next level, developing a new curriculum incorporating the missing topics and aligned with WHO-recommended IPC guidelines.

Informed by the new, more comprehensive curriculum, MTaPS collaborated with the Center for Distance Education (CDE) to develop an eight-module e-Learning course for IPC. MTaPS worked with the CDE to build its capacity to develop and manage the e-Learning course, training its lecturers in course development, facilitation, and administration. The course, hosted on an MOH-run platform, has become part of the national curriculum. The MOH's promotion of it to health care workers reflects the government's ownership and institutionalization of the course for sustainability.

Converting the material into an e-Learning format overcomes the cost and time constraints associated with in-person training, making the course more accessible for most pre-service and in-service health workers—even those in remote areas.

Upon course completion, health care workers earn continuing professional development points that they can use when applying for re-licensure with professional bodies. Mary is one of more than 100 health workers who completed the course.

> *"I was happy to study the IPC course in e-Learning [format] as I had never taken an online course before and it was not my intention to study it [IPC] anytime soon due to time and work priority constraints that would prevent me from physically traveling to take in-person training. It helped that this course is self-directed. It is fantastic! Because of the revised IPC guideline updates incorporated into the course, I will now be able to teach my students current IPC practices."*
>
> *—Mary Ranald, a tutor at Kibosho School of Nursing*

WHO lists suboptimal IPC practices as a significant contributor to widespread disease transmission in health facilities, particularly during health emergencies. With a health workforce shortage in Tanzania, the free online course provides health workers like Mary an easily accessible and convenient mode of building IPC skills without having to take leave from their duty stations.

Improved IPC practices at health facilities also improve the quality of routine health care, reducing the risk of hospital-acquired infections that can jeopardize successful treatment. Fewer infections also mean less use of antibiotics, thereby helping improve antimicrobial stewardship—a key objective and goal of the Global Health Security Agenda, under which MTaPS provided support to the Tanzanian MOH.

SUCCESS STORY

Infection Prevention and Control in Tanzania

MTaPS Key in Developing Successful Monitoring and Evaluation System

Onsite mentoring session. Photo credit: Doris Lutkam/MTaPS Tanzania

In Tanzania, the absence of a reliable monitoring and evaluation (M&E) system threatened efforts by health facilities to implement guidelines for preventing and stopping the spread of infection.

USAID's Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program supported the Tanzania Ministry of Health (MOH) in developing a system to gather the data needed to make informed decisions with respect to Infection Prevention and Control (IPC) continuous quality improvement. IPC data is now available from the national to the subnational levels following the integration of the M&E system with Tanzania's required national health-related reporting system, District Health Information Software 2 (DHIS2), thereby ensuring sustainability and opportunities for scale-up.

A Strategic Move for Tanzania

IPC reporting is crucial for the MOH to plan supervision and mentorship activities and to promote ongoing improvements in IPC nationally. The COVID-19 pandemic had slowed implementation of IPC activities, and, from a strategic perspective, the lack of an integrated M&E system prevented health facilities in Tanzania from meeting reporting mandates, sharing best practices, and scaling up IPC efforts.

A Plan for Success

MTaPS coordinated with various Government of Tanzania ministries; local government bodies; the President's Office, Regional Administration and Local Government Tanzania; the World Health Organization; Medipeace; and the University of Dar es Salaam to ensure success, developing an M&E system and supporting the dissemination of information and the promotion of data use.

Key contributions include:

- Coordinating and participating in stakeholder meetings to develop the national IPC M&E framework

- Supporting the national IPC technical working group to develop tools for reporting IPC data from the health facility level to the national level
- Developing an IPC dashboard within the DHIS2
- Coordinating a stakeholder meeting to analyze datasets and indicators in the DHIS2 to inform progress and identify gaps in implementation
- Developing IPC M&E training materials and training 75 health care workers on the collection, reporting, and use of data in the IPC M&E system
- Offering continuous mentorship with respect to compiling and reporting IPC data into the DHIS2

Promising Results

The success of this initiative led to notable achievements, including the establishment of the first national IPC M&E framework in Tanzania and the ability to leverage DHIS2 for integrating the IPC reporting system into the national system. As a result, 31 facilities now report monthly and quarterly on IPC.

Reporting rate of IPC monthly report (n=31)
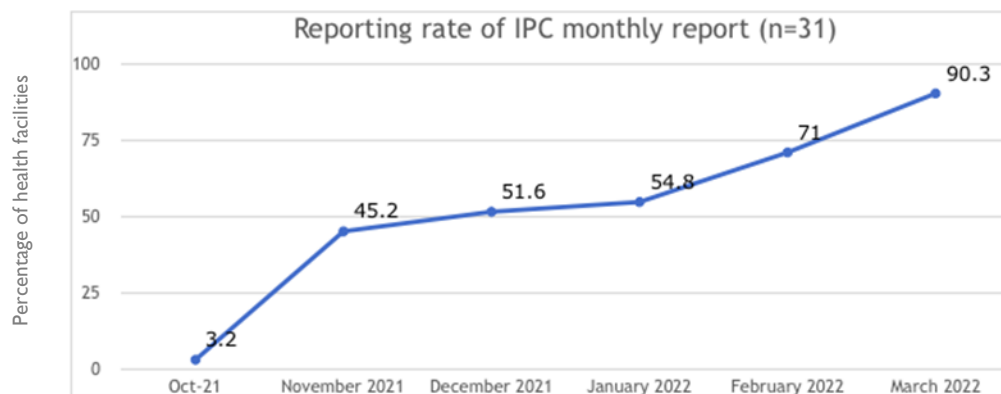
As the country scales up the effort, the M&E system will equip the MOH with necessary data, allowing for timely feedback. Training prepares health care workers for improved and consistent reporting, and new capacities for peer learning allow for the exchange of information and best practices—which is crucial for sustaining improvements in IPC and staying updated with global practices.

An Eye to the Future

To ensure sustainability, health facilities in Tanzania will need to take actions such as including IPC-related M&E activities into budgets and comprehensive health plans. Other sustainability measures should involve scaling to include additional health facilities and planning targeted mentorship to support continuous improvement efforts.

"The IPC M&E system has great benefits. It helps to push the health facilities to continue implementing IPC even without the MOH going to the health facilities physically. Efforts are being made to scale up the system to all health facilities."

—Dr. Joseph Hokororo, National IPC Coordinator

8. MONITORING, EVALUATION, RESEARCH, & LEARNING

A. MONITORING & EVALUATION

QUARTER 1 PROGRESS

The MTaPS home office (HO) MERL team started developing the monitoring, evaluation, and learning (MEL) plans and finalizing them through ongoing communication with all country M&E points of contact (POCs). These MEL plans are reflective of the activities that have been finalized in the country and portfolio workplans. The DevResults data management system was updated to ensure that it reflects Year 5 indicators and targets. A Performance Indicator Reference Sheet (PIRS) for all new country-specific indicators was developed and/or included in the MEL plans and DevResults. The MERL HO team received recommendations from an external data quality audit, integrated them in DevResults refresher trainings, and presented them at an expanded MERL team meeting attended by MTaPS country POCs.

DevResults Data Dashboards

DevResults and Power BI dashboards continue to be used for performance monitoring data entry, validation. storage and visualization. In all country specific meetings with the country M&E staff and technical staff, the HO MERL team emphasized the use of Power BI dashboards for understanding the progress of a country/portfolio toward its targets and eventually toward project objectives and sub-objectives. Use of Power BI dashboards has been recognized as a valuable tool for decision making as well. MTaPS teams have been asked to actively use these dashboards to make inferences about the progress of the program and pause and reflect when needed. The sample size associated with each indicator was recorded and has been made available for all countries to review on the Power BI landing page, connected to the DevResults landing page. Based on the sampling methodology, the national representativeness of data collected on each indicator was also assessed and added to the Power BI dashboards landing page.

COVID-19 In-Country Activity Reports

MTaPS has continued to engage with local stakeholders to respond to the COVID-19 pandemic. MTaPS country teams continued to collect data to track the implementation and progress of MTaPS' COVID-19 activities. In PY5, MTaPS is implementing COVID-19-related activities in 11 countries. At the beginning of PY5, MTaPS completed its COVID-related activities in Burkina Faso and Mali. MTaPS Madagascar began COVID activities in PY5 Q1. MTaPS has generated over 100 country reports since PY3 as part of monitoring and evaluating COVID-19 activity progress, including the number of health care workers who received COVID-19 training and facilities in compliance with COVID-19 IPC guidelines.

DQA Audit

Based on data quality audit conducted by an external firm Dev Analytics, recommendations were made for the six sampled MTaPS countries where the data quality audit was conducted. Presentations were made on the key findings and recommendations to the country technical and M&E teams as well as the USAID Missions in specific countries. Based on these recommendations, a data quality global action plan was developed by HO MERL team which included a detailed plan on how these recommendations would be integrated in the MTaPS performance monitoring data management system. To reinforce these recommendations, these were included in the Year 5 MEL plans for all countries and key recommendations were also highlighted in the Data Collection and Management SOP and DQA SOP. Some of the recommendations, such as updating PIRS for specific indicators, were immediately implemented by HO MERL team. To help countries understand and use these recommendations to improve data quality, each country has been provided with a DQA country-specific action plan, which includes the recommendations made. In monthly coordination meetings with each country, the country-specific plan is introduced and feedback from countries is requested in adapting the plan to the context.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
DevResults refresher training (with focus on data quality)	January 9, 2023
Power BI dashboard trainings (tailored for countries)	February 7–8, 2023
Data quality and management training (with DQA findings incorporated)	February 14, 2023
DevResults refresher training (with focus on data quality)	February 1, 2023
Knowledge Exchange on Data Use for Decision Making (Experiences from Uganda and Mali)	February 21, 2023
DQA country action plans continue to be launched for each country and are being finalized with inputs on recommendations and prioritization in each country	January 5, 2023, onward

B. KNOWLEDGE MANAGEMENT

QUARTER 1 PROGRESS

MTaPS PSS in Practice Knowledge Exchange

Continuous Quality Improvement of Infection Prevention and Control Practices in Cameroon: Processes and Results. On October 4, 2022, Alphonse Acho, Senior Technical Advisor for MTaPS Cameroon, presented on several approaches, including the WHO 5-step approach on quality improvement, the WHO multimodal strategy, the fishbone method, and the plan-do-study-act cycle. These techniques led to improvements in IPC practices in Cameroon, including an increased IPCAT2 IPC guidelines score from 6 in 2019 to 44 in 2022.

Continuous Quality Improvement in AMS through Drug and Therapeutics Committees in DRC. On November 1, 2022, Robert Tuala Tuala, MTaPS DRC Country Project Director, presented on the interventions of drug and therapeutics committees in DRC and resulting improvements, including a reduction in irrational use of antibiotics and the development of a formulary list.

Auditable Pharmaceutical Transactions and Services (APTS): Systems Approach for Improving Pharmaceutical Management in Ethiopia. On November 22, 2022, Hailu Tadeg, MTaPS Ethiopia Country Project Director, presented on APTS—a systems tool that introduces transparent and accountable pharmaceutical transactions and services that result in a continuous supply of essential medicines, optimal budget utilization, and improved pharmacy services at hospitals in Ethiopia.

How to Engage Civil Society in Social Accountability for Improving Access to and Appropriate Use of Medical Products. On December 6, 2022, Andrew Brown, Senior Principal Technical Advisor and Lead on Governance and Capacity Development; Jane Briggs, Senior Principal Technical Advisor and Lead on MNCH; Dr. Walter Flores, MTaPS Consultant; and Cesar Kasongo, MTaPS DRC Technical Advisor; presented country experience from the DRC and lessons learned from social accountability research and interventions to engage civil society in improving access to and appropriate use of quality MNCH medical products.

Stakeholder Engagement to Improve Indonesia's HTA Topic Selection Process. On December 13, 2022, Arry Putra, Country Project Director, MTaPS Indonesia, and Rozar Prawiranegara, Technical Advisor, MTaPS Indonesia, presented on MTaPS' stakeholder engagement approach to improving the country's HTA topic selection process and the lessons learned in the process.

Electronic TB Recording and Reporting System in Bangladesh: e-TB Manager. On December 20, 2022, Md. Abu Taleb, Senior Technical Advisor for TB, presented on MTaPS' approaches to and lessons learned from implementing a comprehensive web-based tool for programmatic TB management in Bangladesh: e-TB Manager. The approaches included advocacy, a phased rollout, development of training materials, and more.

Advancing Regulatory Systems for Improved Access to Safe, Effective, Affordable, and Quality-Assured Medical Products. MTaPS completed a technical brief highlighting MTaPS' RSS approach, which centers on strengthening governance, building institutional and individual capacity, advocating for adequate staffing and financing, promoting regulatory reliance, and increasing the availability and use of information for regulatory decision making in LMICs.

One Health Tool. MTaPS finalized a technical approach brief on use of the One Health tool, applications of the software, capacity building to use the software, and recommendations for future use.

Building Capacity to Implement e-TB Manager Across Bangladesh. MTaPS drafted a technical highlight on e-TB Manager, a web-based system which functions as a national electronic TB recording and reporting system. The e-TB Manager improves the process of preparing and disseminating reports, improving the ability to adjust patients' treatment regimens in a timely manner.

Strengthening Drug and Therapeutics Committee Utilization in Health Facilities in Burkina Faso. MTaPS finalized a technical highlight on its role supporting DTC establishment and member installation in regional hospitals, teaching hospitals, and district centers; training on AMS; and establishing priority-setting mechanisms in Burkina Faso.

Effects of IPC Interventions in MTaPS-supported Health Facilities in Cameroon. MTaPS finalized a technical brief on IPC activities in Cameroon, including baseline assessment of health facilities in four regions, training of trainers, establishment of IPC committees, support to national counterparts, collaboration with stakeholders, development of national guidelines, and quality improvement activities.

Advancing Global Health Security through Multisectoral Coordination in Cote d'Ivoire. MTaPS drafted a technical brief on activities in Côte d'Ivoire, targeted toward strengthening governance, contributing to national policy, validating training modules on IPC and AMS, supporting activity packages, facilitating e-Learning, building capacities of health care professionals, and increasing awareness through social and behavioral change programs.

Capacity Building of Community Representatives on the Early Detection of Tuberculosis in the DRC. MTaPS drafted a technical brief on involvement of community stakeholders in implementing community-based directly observed treatment short (DOTS) course and organizing mini-campaigns for active screening of suspected TB cases in communities.

Strengthening Infection Prevention and Control at the National and Health Care Facility Levels in Ethiopia. MTaPS completed a technical brief summarizing the program's technical assistance to strengthen IPC governance and lay the groundwork for institutionalizing and sustaining IPC improvements at national and subnational levels in Ethiopia.

Combating AMR by Strengthening Human Resource Capacity through Pre-Service Training in Mali. MTaPS addressed USAID feedback on a lessons learned report on establishment of DTCs, implementing training and monitoring activities, implementing action plans, and conducting supervisory visits to health facilities to strengthen DTC capacity.

Building Capacity to Assess Bioequivalence Studies for MNCH Medicines in Mozambique. MTaPS completed a technical brief on MTaPS' efforts to build the capacity of personnel working at the country's national medicines regulatory agency for evaluating the quality and efficacy of medicines for MNCH to determine if the products warrant marketing authorization for import, distribution, or sale.

Strengthening Antimicrobial Stewardship in Nigeria. MTaPS finalized a technical brief that summarizes the program's efforts to improve Nigeria's JEE score for AMS by supporting WHO IHR benchmark actions and strengthening the implementation of AMS programs in select health facilities.

Strengthening Antimicrobial Stewardship in Tanzania. MTaPS completed a technical brief that summarizes the program's efforts to implement evidence-based AMS practices for strengthening governance, capacity, and services at health facilities to contain AMR.

Ebola Virus Disease Preparedness and Response in Southwestern Uganda. MTaPS completed a technical brief that summarizes the program's efforts to strengthen capacity for EVD preparedness and response at the local level, provide guidance and support at regional and district levels, and conduct a review of the national EVD preparedness plan.

Facilitating Peer-to-Peer learning: Practical Exchange of Knowledge, Skills, and Best Practices toward Antimicrobial Resistance Containment in Uganda. MTaPS drafted a technical highlight on addressing gaps and building capacity for AMR containment, through technical and logistical support for a peer-to-peer learning activity.

Implementation of Centers of Excellence for AMS in Uganda: Progress to Date and Measurement of the Impact of CQI Interventions. MTaPS drafted a technical brief on the role of MTaPS-supported AMS implementation to establish AMS COEs.

Progressing toward a Higher Joint External Evaluation Capacity Level for Uganda. MTaPS completed a technical brief summarizing its efforts to improve Uganda's capacity for AMR containment by supporting WHO IHR benchmark actions for MSC, IPC, and AMS, thus enabling Uganda's progress toward a higher JEE score.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
MTaPS PSS in Practice Knowledge Exchanges	January–March 2023
Technical Documentation	January–March 2023

C. LEARNING

QUARTER 1 PROGRESS

During Quarter 1, the home office Knowledge Management and Learning (KM&L) team coordinated with country teams and technical leads to prioritize which learning questions would be answered this project year before the end of the MTaPS program. The home office KM&L team worked closely with country teams and technical leads to answer the following learning questions in Quarter 1:

- **Burkina Faso:** What are the key enablers for the effective functioning of DTC committees?
- **Côte d'Ivoire:** How have the AMR governance bodies been strengthened? What evidence exists of their increased functionality?
- **Ethiopia:** What is the level of adherence to IPC standards in MTaPS-supported facilities?
- **Nigeria:** What are the primary barriers to building institutional capacity in AMS? How can these barriers be overcome in the Nigerian context?
- **Tanzania:** What are the lessons learned from implementing an AMS program at both the national and health facility levels?

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Develop products to answer global and country-specific learning questions	January–March 2023

D. RESEARCH

QUARTER 1 PROGRESS

This quarter, MTaPS continued advancing the global PSS learning agenda through engagement with audiences at global meetings. The program presented two abstracts at the 10th HTAsiaLink Conference held in Thailand November 30–December 2, 2022:

- Application of MCDA using analytical hierarchy process (AHP) approach in weighting the HTA topic selection criteria in Indonesia
- Eliciting value for HTA topic selection criteria in Indonesia using Delphi method and deliberative processes

The two presentations highlighted MTaPS' success in improving transparency in HTA decision making in Indonesia. Through MTaPS' work, Indonesia institutionalized a systematic process of assessing new drugs and procedures for inclusion in the national health benefits package. HTAsiaLink awarded MTaPS for its presentation on the AHP application, and the program has since been invited to contribute a paper to a special issue in the International Journal of Environmental Research and Public Health on health systems economics research. The team is developing the manuscript for submission in Quarter 2.

MTaPS also submitted a poster entitled Auditable Pharmaceutical Transactions and Services (APTS)—Systems Approach for Sustainably Improving Pharmaceutical Management in Ethiopia, to the 2022 USAID Health Systems Strengthening Case Competition. The program was chosen as one of three winners and presented at the Winners Showcase on October 25, 2022. The competition was an opportunity for to showcase MTaPS' work and its effect on health systems and outcomes.

MTaPS also presented a mix of workshops, oral presentations, and posters at four other global conferences, as follows:

American Public Health Association, November 6–9, 2022:

- Uptake and integration of the WHO AWaRe categorization of antibiotics in national antimicrobial stewardship documents in LMICs: experiences from five countries
- Strengthening IPC to enhance preparedness and response for COVID-19 emergencies in Ethiopia
- Strengthening IPC to reduce vulnerabilities to emerging and re-emerging infectious diseases—the case of Ethiopia
- CQI of IPC practices in health facilities in Cameroon: lessons learned
- USAID MTaPS support to the Government of Bangladesh to strengthen the health care system to combat COVID-19
- PSS Insight v2.0—a framework and indicators for measuring PSS
- Strengthening health care workers' capacity in the use of an electronic reporting system to improve tuberculosis management in Bangladesh

People that Deliver Global Indaba, October 12–13, 2022:

- Outcome of competency mapping in national regulatory authorities in selected Asian countries
- Implementation of good storage and distribution practices (GSDP) among wholesalers in Nepal
- Implementation of good pharmacy practice (GPP) in private and public sector pharmacies in Nepal
- No passport required: reimagining technical assistance in a changing world

- PSS: how to strengthen this key subsystem of the health system
- Procurement and supply chain management (PSCM) local technical assistance providers scheme (LTAPS) for local government units in the Philippines

Health Systems Research, October 31–November 4, 2022:

- Streamlining political economy analysis (PEA) approaches in health systems research

15th Annual Global Health Supply Chain Summit, November 30–December 2, 2023:

- PSS: how to strengthen this key subsystem of the health system

MTaPS also submitted four abstracts to the International Maternal Newborn Health Conference 2023, scheduled for May 8–11, 2023.

- Improving access to maternal, newborn, and child health (MNCH) medical products in low- and middle-income countries: a mapping of registration of MNCH medical products in 9 countries
- Leveraging civil society to improve access to and appropriate use of quality maternal, newborn, and child health medicines
- Forecasting of select reproductive, maternal, newborn, and child health medical products
- Improving subnational procurement practices of MNCH products in Nepal

The first abstract was accepted and the second and third have been waitlisted.

In addition to conferences, MTaPS also drafted and submitted the following two manuscripts for peer review.

- Identifying and addressing challenges to antimicrobial use surveillance in the human health sector in low- and middle-income countries: experiences and lessons learned from Tanzania and Uganda
- Moving from assessments to implementation: promising practices for strengthening antimicrobial resistance containment capacity

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and Description	Date
Prepare for participation in the International Maternal Newborn Health Conference 2023 (May 2023)	January–March 2023
Respond to editor's comments on the submitted manuscripts	February 2023
Develop HTA manuscript for special issue in International Journal of Environmental Research and Public Health	February 2023

9. ANNEXES

ANNEX 1: MTaPS INDICATORS

Annex Table 1: MTaPS Performance Indicator Tracking Table

N/A is placed when activities are out of scope for the portfolio in the reporting year.

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
GH-IO 1	Has the country developed policies for prescription of access, watch, or reserve class of antibiotics according to AWaRe categorization? (yes/no)	Annually	0/12	4/12	5/12	5/12					
	Bangladesh		No	Yes	Yes	Yes					
	Burkina Faso		No	No	Yes	No					
	Cameroon		No	No	No	No					
	Côte d'Ivoire		No	No	No	No					
	DRC		No	Yes	Yes	Yes					
	Ethiopia		No	No	No	Yes					
	Kenya		No	No	No	No					
	Mali		No	No	No	No					
	Mozambique		No	No	No	No					
	Nigeria		No	No	No	No					
	Senegal		No	Yes	Yes	Yes					
	Tanzania		No	Yes	Yes	Yes					
GH-IO 2	Has the country implemented WHO AWaRe categories? (yes/no)	Annually	1/12	3/12	8/12	7/12					
	Bangladesh		Yes	Yes	Yes	Yes					
	Burkina Faso		No	No	Yes	Yes					
	Cameroon		No	No	No	No					
	Côte d'Ivoire		No	No	No	No					
	DRC		No	Yes	Yes	Yes					
	Ethiopia		No	No	Yes	Yes					
	Kenya		No	No	Yes	Yes					
	Mali		No	No	Yes	No					
	Mozambique		No	No	No	No					
	Nigeria		No	No	No	No					
	Senegal		No	No	Yes	Yes					
	Tanzania		No	Yes	Yes	Yes					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
IO.1	% of median international price paid for a set of tracer medicines that was part of the last regular MOH procurement	Baseline/ Endline	179%	N/A	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)	Annually	0	N/A	N/A	N/A					
	Nepal			Yes	Yes	Yes	N/A				
MNCH 1	# of countries participating in the dissemination of the regulation guidelines for medical devices	Annually	0	0	0	N/A					
MNCH 2	# of MNCH medical devices included in the guidelines	Annually	0	0	0	N/A					
MNCH 3	# of stakeholders from regulatory authorities and manufacturers of oxygen participating in the dissemination and adoption of the oxygen regulatory framework	Annually	0	0	0	N/A					
MNCH 4	# of oxygen manufacturers committed to addressing weaknesses identified	Annually	0	0	0	N/A					
MNCH 6	# of countries using the RMNCH forecasting supplement	Annually	0	N/A	5	8					
MNCH 9	# of best practices identified and documented on elements of pharmaceutical management in social accountability MNCH interventions from the literature	Annually	0	3	N/A	N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MNCH 10	# of MTaPS-supported NMRAs implementing improved registration practices relevant for MNCH medical products	Annually	0	I	N/A	I					
MNCH 12	# of quality-assured MNCH products registered in selected country	Semiannually	0	N/A	N/A	123					
MNCH 13	# of countries supported to implement decentralized procurement systems	Semiannually	0	I	N/A	I					
MNCH 21	# of quantification guidance documents developed	Annually	0	0	0	5					
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	6					
	Bangladesh		0	2	I	2					
	DRC		N/A	N/A	N/A	N/A					
	Indonesia		0	N/A	2	N/A					
	Jordan		0	0	0	3					
	Nepal		0	0	0	N/A					
	Rwanda		0	I	4	I					
	IGAD		0	0	4	N/A					
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	17					
	DRC MNCH		0	0	29	17					
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)	0%					
	IGAD		0	N/A	100% (2/2)	N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Mali		0	N/A	N/A	0% (0/1)					
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	20					
	Asia Bureau		0	0	1	4					
	Bangladesh		0	2	2	5					
	Burkina Faso PV		0	1	0	N/A					
	Cross Bureau		0	N/A	N/A	1					
	Global MNCH		0	1	0	N/A					
	Indonesia		0	N/A	0	N/A					
	Jordan		0	0	0	0					
	Mali MNCH		0	N/A	N/A	1					
	Mozambique		0	1	2	N/A					
	Nepal		0	N/A	3	6					
	Philippines		0	0	3	1					
	Rwanda		0	26	17	0					
	Tanzania PEPFAR		0	N/A	2	2					
PP 1.1.1	# of policies and plans developed, enhanced, or implemented to improve service delivery governance and regulation due to MTaPS support	Annually	0	2	3	1					
PP 1.2.1	# of health workers who received in-service training using non-traditional platforms on PSS, PSCM, or PV with MTaPS support	Quarterly	0	0	N/A	1,872	1,048				
MT 1.2.2	# of pharmaceutical regulatory enforcement mechanisms established or strengthened with MTaPS support	Semiannually	0	0	5	8					
	Global MNCH		0	N/A	0	N/A					
	Mozambique		0	0	2	N/A					
	Rwanda		0	0	2	8					
	Tanzania PEPFAR		0	N/A	1	N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MT 1.2.3	% of established pharmaceutical regulatory enforcement mechanisms that are functional	Semiannually	50%	42% (11/26)	88% (15/17)	75% (3/4)					
	Bangladesh		50%	100% (2/2)	100% (8/8)	100% (2/2)					
	Mozambique		0%	22% (2/9)	67% (2/3)	N/A					
	Rwanda		0%	83% (5/6)	83% (5/6)	75% (6/8)					
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	1					
	Jordan		0	0	0	0					
	DRC MNCH		0	0	1	1					
PP 1.3.1	% of USG-supported facilities using MTaPS supported eLMIS	Quarterly	0	N/A	N/A	Data not reported	37% (12/32)				
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	0					
	Jordan		0	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	7					
	Asia Bureau		0	N/A	1	2					
	Bangladesh		0	4	0	1					
	IGAD		0	1	1	N/A					
	Jordan		0	N/A	N/A	4					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MT 2.2.2	# of persons trained in pharmaceutical management with MTaPS support	Quarterly	0	1,116	11,782	24,169	2,180					
	Asia Bureau		0	0	99	413	Female	19	Female	Female	Female	
							Male	6	Male	Male	Male	
							Unknown	80	Unknown	Unknown	Unknown	
							Total	105	Total	Total	Total	
	Bangladesh		0	961	2856	3,013	Female	256	Female	Female	Female	
							Male	67	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	323	Total	Total	Total	
	Cross Bureau		0	N/A	N/A	124	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	Total	Total	
	DRC MNCH		0	0	373	192	Female	3	Female	Female	Female	
							Male	8	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	11	Total	Total	Total	
	DRC Supply Chain		N/A	N/A	N/A	0	Female		Female	Female	Female	
							Male	N/A	Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	IGAD		0	0	843	23	Female		Female	Female	Female	
							Male	N/A	Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Indonesia		0	0	0	251	Female	14	Female	Female	Female	
							Male	3	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	17	Total	Total	Total	
	Jordan		0	N/A	N/A	50	Female	213	Female	Female	Female	
							Male	160	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	373	Total	Total	Total	
	Mali MNCH		0	0	0	8	Female		Female	Female	Female	
							Male	N/A	Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Mozambique		0	40	21	125	Female	N/A	Female	Female	Female	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		**Total**	**Total**	**Total**	
	Nepal		0	N/A	38	121	Female	N/A				
							Male					
							Unknown					
							Total					
	Philippines		0	0	6926	5,191	Female	748	Female	Female	Female	
							Male	300	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	1,048	**Total**	**Total**	**Total**	
	Rwanda		0	0	603	236	Female	113	Female	Female	Female	
							Male	190	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	303	**Total**	**Total**	**Total**	
	Rwanda PEPFAR		0	N/A	N/A	88	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		**Total**	**Total**	**Total**	
	Tanzania PEPFAR		N/A	N/A	30	N/A	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		**Total**	**Total**	**Total**	
MT 2.2.3	# of in-person or e-Learning courses developed with MTaPS assistance	Annually	0	1	11	11						
	Asia Bureau		0	N/A	3	2						
	Bangladesh		0	0	0	N/A						
	Cross Bureau		0	1	1	2						
	IGAD		N/A	N/A	0	N/A						
	Mozambique		0	0	1	1						
	Philippines		0	0	4	6						
	Rwanda		0	0	2	N/A						
MT 2.2.4	# of people successfully completing MTaPS-developed e-Learning courses	Quarterly	0	65	6,917	4,227	1,180					
	Asia Bureau		0	0	52	0	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		**Total**	**Total**	**Total**	
	Bangladesh		0	0	0	0	Female	0	Female	Female	Female	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	Total	Total	
	Côte d'Ivoire		0	N/A	N/A	N/A	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	Total	Total	
	Cross Bureau		0	6	8	208	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	418	Unknown	Unknown	Unknown	
							Total	418	Total	Total	Total	
	Mozambique		0	65	0	0	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Philippines		0	0	6857	3,892	Female	547	Female	Female	Female	
							Male	215	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	762	Total	Total	Total	
	Rwanda		0	0	0	127	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
MT 2.4.1	# of days reduced for product registration in countries with MTaPS-supported national medicines registration authority	Annually	0	0	180	0						
	Mali MNCH		0	N/A	N/A	0						
MT 2.4.2	# of premises inspected by MTaPS-supported NMRA	Annually	0	N/A	N/A	3,751						
	Nepal		0	N/A	N/A	3,751						
MT 2.4.3	# of regional harmonization initiatives with participation by MTaPS-supported NMRAs	Annually	0	0	3	10						
	Asia Bureau		0	N/A	1	10						
	IGAD		0	N/A	2	N/A						
	Mozambique		0	0	0	N/A						

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MT 2.4.4	# of countries that have conducted an assessment at any level of the regulatory system	Annually	Yes	Yes	Yes	Yes					
	Nepal		Yes	Yes	Yes	Yes					
MT 2.4.5	# of medicines with current valid registration	Annually	0	N/A	N/A	60					
	Mali MNCH		0	N/A	N/A	60					
NP 1	% of USG-assisted organizations with improved performance	Annually	0	0%	0%	0% (0/1)					
NP 2	# of wholesalers inspected according to the new good distribution practices inspection guidelines	Annually	0	0	0	22					
NP 3	# of public- and private-sector pharmacies inspected according to the new good pharmacy practices inspection guidelines	Annually	0	0	12	N/A					
NP 4	# of innovations supported through USG assistance	Annually	0	0	2	4					
NP 5	% of surveyed medicines labeled in compliance with labeling requirements	Annually	8.7%	N/A	8.7%	0%					
NP 6	% of private-sector pharmacies surveyed dispensing prescription medicines without prescription	Annually	25%	N/A	25%	N/A					
NP 8	# of monitoring visits in which GON participates	Annually	0	N/A	2	6					
PP 1.5.1	# of TB and FP commodities for which a quantification process is completed with MTaPS support	Annually	0	0	0	6					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
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	0					
PP 2.2.1	# of TB and FP products registered in the Philippines with MTaPS support	Annually	0	0	0	9					
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	2	5	1					
PP 3.3	% of MTaPS-supported entities carrying out supply chain management functions without external technical assistance	Annually	0	0	33% (4/12)	25% (2/8)					
DRC 3	# of health facilities that are implementing the post-training action plan	Annually	0	0	0	50					
DRC 4	% of facilities implementing appropriate storage of oxytocin	Quarterly	0	0	0	75% (54/72)	76% (55/72)				
DRC 5	# of DPS and/or IPS using the updated directory of registered medicines	Semiannually	0	0	0	8					
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	Semiannually	90%	92% (4,303/4,690)	99% (2,006/2,016)	100% (20/20)					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Bangladesh		90%	92% (4,293/4,680)	100% (2,006/2,006)	N/A						
	Rwanda Field Support		0%	100% (10/10)	0% (0/10)	N/A						
	Rwanda PEPFAR		0%	N/A	N/A	100% (20/20)						
MT 3.1.2	# and % of MTaPS-supported health facilities using interoperable PMIS tools	Semiannually	61% (61/100)	88% (3,884/4,410)	85% (6434/ 7565)	72% (8,957/12,367)						
	Bangladesh		61% (61/100)	88% (3,875/4,396)	77% (4734/ 6173)	72% (4,418/6,106)						
	Mozambique		0%	64% (9/14)	85% (1412/ 1652)	64% (9/14)						
	Rwanda PEPFAR		0%	N/A	N/A	100% (20/20)						
MT 3.1.3	# of countries that have a functional early warning system linking clinical and stock data	Annually	0	0	2	1						
	Bangladesh		0	Yes	Yes	Yes						
	Mozambique		0	No	No	No						
MT 3.2.1	# and % of MTaPS-supported health facilities that complete and submit an LMIS report on time for the most recent reporting period	Quarterly	54.11% (158/292)	92% (4293/4680)	76% (4588/6003)	72% (18,362 /25,490)	77% (5,114/6,678)					
	Bangladesh		74.3% (84/115)	92% (4293/4680)	77% (4488/5826)	74% (4830/6500)	*Hospitals* — 65% (211/325); *Other* — 77% (4,791/6,176); *Total* — 77% (5,002/6,501)		*Hospitals* / *Other* / *Total*	*Hospitals* / *Other* / *Total*	*Hospitals* / *Other* / *Total*	
	DRC MNCH		42% (74/177)	Data not reported	56% (100/177)	74% (132/177)	*Hospitals* 100% (10/10); *Health centers* 79% (122/155); *Other* 83% (10/12); *Total* 80% (142/177)		*Hospitals* / *Health centers* / *Other* / *Total*	*Hospitals* / *Health centers* / *Other* / *Total*	*Hospitals* / *Health centers* / *Other* / *Total*	
MT 3.3.2	# of PSS technical documents authored by MTaPS	Semiannually	0	14	39	56						
	Asia Bureau		0	N/A	N/A	0						
	CSL		0	N/A	1	10						
	Cross Bureau		10	13	10	11						

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Indonesia		0	N/A	0	7					
	Jordan		0	N/A	N/A	2					
	Global MNCH		0	1	1	9					
	Rwanda		0	N/A	27	17					
MT 3.3.3	# of activities to engage with stakeholders to advance the PSS global learning agenda	Quarterly	0	4	12	64	28				
	Asia Bureau		0	N/A	N/A	1	1				
	CSL*		0	N/A	0	16	N/A				
	Cross Bureau		0	11	12	31	19				
	Indonesia		0	N/A	0	16	8				
PP 3.1	# of joint success stories produced	Annually	0	2	3	2					
PP 3.4	# of gender assessments, analyses, studies, or research conducted by MTaPS on PSCM and PV	Annually	0	0	1	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	Semiannually	0	N/A	100%	100% (50/50)					
MNCH 18	# of countries supported to implement decentralized procurement systems	Semiannually	0	N/A	N/A	N/A					
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	N/A					
MNCH 20	# of countries where bottlenecks in access to pediatric amoxicillin are identified and presented to MOH	Annually	0	0	N/A	N/A					
MT 4.1.2	# of new or revised medicine pricing policies developed with MTaPS assistance	Annually	0	N/A	N/A	N/A					
	Indonesia		0	N/A	N/A	N/A					
	DRC Supply Chain		0	N/A	N/A	N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MT 4.2.1	# of pharmacy benefits programs introduced or improved in health sector with MTaPS support	Annually	0	1	N/A	N/A					
	Bangladesh		0	1	N/A	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	N/A					
	Indonesia		0	N/A	0	N/A					
MT 4.2.3	# of strategic plans developed or updated to address pharmaceutical costs and financing with MTaPS support	Semiannually	0	2	0	2					
	Bangladesh		0	2	0	0					
	Indonesia		N/A	N/A	N/A	2					
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	Data not reported					
	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	Yes					
	Indonesia		N/A	N/A	Yes	Yes					
MT 4.3.3	Does the country have system(s) to track pharmaceutical expenditures? (yes/no)	Annually	N/A	N/A	N/A	No					
	Indonesia		N/A	N/A	N/A	No					
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	N/A					
	Indonesia		N/A	N/A	0						

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
PP 1.4.1	# of private-sector outlets providing FP or TB commodities through a referral and reimbursement scheme	Annually	N/A	N/A	5	0					
MT 5.1.1	% of service delivery points with stock out of FP, TB, and HIV-AIDS tracer commodities	Quarterly	40.5%	45% (5,896/13,114)	31% (5,661 /18,258)	37% (15,398 /40,738)	33% (4,517/13,682)				
	Philippines		40.5%	45% (5,896/13,114)	31% 5,661/18,258)	37% (15,398 /40,738)	33% (4,517/13,682)				
	First-line TB meds (4 FDC)		40.5%	52% (929/1,784)	21% (358/1,705)	23% (1,085/4,703)	19% (291/1,541)				
	TB pediatric med (4FDC)		90.6%	97% (506/519)	49% (694/1,418)	53% (1,966/3,706)	44% (522/1,189)				
	TB preventive treatment (for children)		63.8%	77% (582/753)	81% (967/1,189)	86% (1,663/1,940)	N/A				
	TB second-line drug (Levofloxacin 500mg)		N/A	64% (127/199)	10% (18/186)	3.5% (7/198)	3% (6/182)				
	TB second-line drug (Moxifloxacin 400mg)		N/A	50% (100/199)	7% (12/168)	N/A	N/A				
	TB second-line drug (Linezolid 600mg)		N/A	47% (95/199)	5% (9/184)	9% (17/198)	4% (7/182)				
	TB second-line drug (Bedaquiline)		N/A	47% (95/199)	8% (14/183)	4.5% (9/198)	7% (13/182)				
	GeneXpert cartridges		N/A	3% (13/395)	14% (46/338)	30% (367/1,207)	95% (694/728)				
	FP injectable		30.2%	27% (466/1703)	22% (500/2,237)	28% (1,420/5,017)	29% (495/1,714)				
	FP implant		52.7%	69% (796/1150)	42% (784/1,879)	50% (2,022/4,208)	44% (572/1,292)				
	FP oral COC		25.6%	24% (418/1716)	14% (318/2,273)	34% (1,734/5,062)	35% (602/1,734)				
	FP oral POP		69.3%	52% (715/1374)	24% (540/2,229)	22% (1,101/5,053)	20% (350/1,738)				
	IUD		36.7%	37% (466/1264)	41% (836/2,022)	43% (1,892/4,369)	39% (567/1,458)				
	Male condom		38.9%	36% (592/1661)	25% (568/2,249)	20% (1,036/5,059)	23% (398/1,742)				
MT 5.1.1 (FP)	Stockout rates of tracer medicines in MTaPS-supported health facilities (FP)	Semiannually	0%	N/A	N/A	.00116 (70/60,363)					
	Bangladesh										
MT 5.1.2	% of tracer products stocked according to plan	Semiannually	0%	N/A	28% (52/186)	28% (25/88)					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Bangladesh		0%	N/A	0% (0/7)	50% (3/6)					
					92% (12/13)	50% (3/6)					
					14% (1/7)	0					
					0% (0/7)	0					
	DRC MNCH		0%	N/A	37% (14/38)	56% (11/19)					
					42% (16/38)	26% (5/19)					
					18% (7/38)	16% (3/19)					
					53% (2/38)	0% (0/19)					
MT 5.1.2 (FP)	% of tracer products stocked according to plan (FP)	Semiannually	0%	N/A	N/A	50% (12/14)					
	Bangladesh		0%	N/A	N/A	33%					
						67%					
						0					
						0					
MT 5.1.2 (TB)	% of tracer products stocked according to plan (TB)	Semiannually	0%	N/A	N/A	N/A					
	Bangladesh		0%	N/A	N/A	N/A					
						N/A					
						N/A					
						N/A					
MT 5.1.3	% of initially MTaPS-supported supply chain functions carried out by national entities that are done without external technical assistance	Semiannually	0%	Data not reported	100% (3/3)	100% (3/3)					
	Bangladesh		0%	Data not reported	100% (3/3)						
MT 5.2.1	% of MTaPS-supported health facilities which have developed, adopted, or implemented pharmaceutical services standards	Semiannually	0%	0%	0% (0/100)	0%					
	Rwanda		0%	0%	0% (0/100)	0%					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MT 5.2.2	% of MTaPS-supported health facilities promoting patient-centered pharmaceutical services	Semiannually	0%	N/A	N/A	100% (20/20)						
	Rwanda		0%	N/A	N/A	100% (20/20)						
MT 5.2.3	% of MTaPS-supported health facilities implementing CQI approaches to improve medicine use	Semiannually	0%	N/A	N/A	100% (20/20)						
	Rwanda		0%	N/A	N/A	100% (20/20)						
MT 5.3.1	% of MTaPS-supported health facilities that have implemented medicines safety activities	Quarterly	31% (31/100)	3% (3/110)	44% (46/105)	67% (414/615)	83% (75/90)					
	Bangladesh		31% (31/100)	3% (3/100)	56% (28/50)	58% (38/65)	Pharmacies	77% (50/65)	Pharmacies	Pharmacies	Pharmacies	
							Total	77% (50/65)	Total	Total	Total	
	IGAD		0%	Data not reported	24% (10/41)	6.5% (8/123)	Hospitals	N/A	Hospitals	Hospitals	Hospitals	
							Health centers		Health centers	Health centers	Health centers	
							Pharmacies		Pharmacies	Pharmacies	Pharmacies	
							Total		Total	Total	Total	
	Rwanda		0% (0/10)	0% (0/10)	50% (5/10)	N/A	Hospitals	100% (10/10)	Hospitals	Hospitals	Hospitals	
							Health centers	100% (10/10)	Health centers	Health centers	Health centers	
							Total	100% (20/20)	Total	Total	Total	
	Rwanda PEPFAR		0%	N/A	N/A	100% (20/20)	Hospitals	N/A	Hospitals	Hospitals	Hospitals	
							Health centers		Health centers	Health centers	Health centers	
							Total		Total	Total	Total	
	Mozambique		0%	N/A	100%	100% (14/14)	Hospitals	100% (1/1)	Hospitals	Hospitals	Hospitals	
							Health centers	100% (4/4)	Health centers	Health centers	Health centers	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Total	100% (5/5)	*Total*	*Total*	*Total*	
MT 5.3.2	% of ADEs reported to the NMRA and reviewed by the NMRA	Semiannually		22% (95/440)	53% (7,419 /13,881)	16% (3,801/22,758)						
	IGAD		0% (0/0)	N/A	100% (1104/1104)	N/A						
	Bangladesh		68% (68/100)	22%	77% (449/586)	90% (852/945)						
	Mozambique		60%	N/A	56% (1237/2213)	12.19% (1,223/10,035)						
	Mozambique PEPFAR		0	0	23% (1,563/6,635)	12.19% (1,223/10,035)						
	Rwanda		N/A	73% (274/374)	55% (102/186)	29% (503/1,746)						
	Tanzania PEPFAR		N/A	N/A	2,641/	N/A						
NP-MT 5.3.2	# of ADEs reported in Nepal	Annually	194	29	43	6						
MT 5.3.4	# of medical product regulatory actions carried out by the NMRA for reasons of drug safety during the reporting period	Annually	0	N/A	N/A	15						
	Nepal		0	N/A	N/A	15						
MT 5.4.1	% of MTaPS-supported health facilities that have documented evidence of improvement in antimicrobial medicines prescription and/or use	Annually	0	N/A	N/A	0% (0/3)						
	Jordan		0	N/A	N/A							
MT 5.4.2	% of MTaPS-supported health facilities implementing locally identified and prioritized core elements of IPC activities	Semiannually	0%	100%	100% (7/7)	100% (7/7)						
	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	4	N/A					
	Jordan		0	N/A	N/A	4	N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
ML 1	# of marketing authorization commission meetings supported by MTaPS	Quarterly	0	0	0	1	N/A				
	Mali MNCH		0	0	0	1	N/A				
ML 2	# of quarterly meetings to orient key stakeholders on using directory of registered medical products	Quarterly	0	0	0	1	N/A				
	Mali MNCH		0	0	0	1	N/A				
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	N/A				
	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	N/A				
	Côte d'Ivoire		0	0	0	N/A	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / Total	ETU / Non-ETU / POE / Total	
	Mali		0	0	0	7	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
	Rwanda		0	0	0	0	N/A — ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
	Senegal		0	0	0	0	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
	Uganda		0	0	0	59	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
EVD 3	# of persons who received EVD training with MTaPS support	Quarterly	0	0	0	924	N/A				
	Côte d'Ivoire		0	0	0	N/A	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	
	Mali		0	0	0	0	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	
	Rwanda		0	0	0	32	Female / Male / Unknown / **Total** — N/A	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	
	Senegal		0	0	0	0	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	
	Uganda		0	0	0	892	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	Female / Male / Unknown / **Total**	
EVD 4	# of MTaPS-supported entities in compliance with EVD IPC guidelines	Quarterly	0	0	0	7	N/A				
	Côte d'Ivoire		0	0	0	N/A	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
	Mali	Quarterly	0	0	0	7	ETU / Non-ETU / POE / **Total** — N/A	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
	Rwanda		0	0	0	0	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
	Senegal		0	0	0	0	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	ETU / Non-ETU / POE / **Total**	
PP 2.3.1	% of sentinel facilities using PViMS	Quarterly	0	0	20%	70% (564/801)	99% (197/199)				
	Philippines	Quarterly	0	0	20%	70% (564/801)	99% (197/199)				

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
PH-P 1	# of products completed HTA process with MTaPS support *Philippines*	Annually	0	N/A	N/A	1						
PH- P 2	# of HIV/AIDS commodities that complete the quantification process with MTaPS support *Philippines*	Annually	0	N/A	N/A	9						
JO 1	[# of National Vaccine Procurement Modernization Committee (NVPMC) meetings with MTaPS support.](#) *Jordan*	Quarterly	0	N/A	N/A	3	1 1					
JO 4	[Number of awareness-raising activities on AMR and rational use of antibiotics conducted](#) *Jordan*	Quarterly	0 0	N/A N/A	N/A N/A	4 4	8 8					
JO 5	[Number of youth reached through AMR activities covering health education messages related to AMR with MTaPS support](#)	Quarterly	0	N/A	N/A	0	1,125					
	Jordan		0	N/A	N/A	0	*Female* *Male* *Unknown* ***Total***	568 557 0 1,125	*Female* *Male* *Unknown* ***Total***	*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 *Jordan*	Quarterly	0 0	N/A N/A	N/A N/A	0 0	N/A N/A					
JO 7	# of COVID-19 vaccines safety surveillance reports produced with MTaPS support *Jordan*	Quarterly	0 0	N/A N/A	N/A N/A	3 3	N/A N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
MSC 1	# of AMR-related in-country meetings or activities conducted with multisectoral participation	Quarterly	0	122	170	188	45				
	Bangladesh		0	3	2	9	3				
	Burkina Faso		0	2	2	4	1				
	Senegal		0	2	5	8	2				
	Cameroon		0	5	7	4	0				
	Côte d'Ivoire		0	35	67	76	11				
	DRC		0	6	20	8	2				
	Ethiopia		0	1	N/A	5	3				
	Jordan		0	0	2	N/A	N/A				
	Kenya		0	38	26	24	8				
	Mali		0	16	6	13	3				
	Mozambique		0	0	13	12	3				
	Nigeria		0	N/A	6	10	4				
	Tanzania		0	4	2	8	1				
	Uganda		0	9	7	7	4				
MSC 2	# and % of female participants in meetings or other events organized by the multisectoral body on AMR	Semiannually		39% (842/2,135)	42% (346/825)	32% (779/2,458)					
	Bangladesh		29% (24/84)	29% (24/84)	29% (12/41)	20% (60/300)					
	Burkina Faso		18% (3/17)	22% (6/27)	33% (10/10)	29% (5/17)					
	Cameroon		50% (2/4)	39% (39/101)	52% (32/62)	27% (38/138)					
	Côte d'Ivoire		38% (21/55)	38% (42/110)	43% (70/163)	39% (151/382)					
	DRC		34%	36% (76/212)	32% (30/93)	35% (54/154)					
	Ethiopia		22%	17% (16/93)	N/A	22% (71/321)					
	Jordan		45% (5/11)	Data not reported	45% (5/11)	N/A					
	Kenya		66%	44% (562/1270)	51% (105/207)	45% (101/226)					
	Mali		15%	16% (20/124)	20% (22/109)	21% (82/394)					
	Mozambique		48% (11/23)	N/A	40% (4/10)	40% (36/92)					
	Nigeria		Data not reported	N/A	41% (17/41)	46% (44/95)					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Senegal		58% (54/93)	58% (54/93)	34% (11/32)	39% (70/181)					
	Tanzania		14% (3/21)	14% (3/21)	0% (0/0)	22% (14/63)					
	Uganda		Data not reported	N/A	61% (28/46)	43% (44/102)					
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	12					
	Bangladesh		0	0	2	1					
	Burkina Faso		0	0	1	1					
	Cameroon		0	1	1	0					
	Côte d'Ivoire		0	0	0	1					
	DRC		0	3	0	0					
	Kenya		0	3	3	1					
	Mali		0	8	N/A	1					
	Mozambique		0	N/A	2	N/A					
	Nigeria		0	N/A	0	1					
	Senegal		0	1	2	3					
	Tanzania		0	1	2	1					
	Uganda		0	0	0	2					
MSC 4	# of multisectoral bodies that have developed a national monitoring framework with MTaPS support	Annually	0	1	1	8					
	Bangladesh		0	0	0	N/A					
	Burkina Faso		0	0	0	0					
	Cameroon		0	0	0	1					
	Côte d'Ivoire		0	0	0	1					
	DRC		0	0	0	1					
	Kenya		0	1	1	1					
	Mali		0	0	N/A	N/A					
	Mozambique		0	0	0	0					
	Nigeria		0	N/A	0	1					
	Senegal		0	0	1	2					
	Tanzania		0	0	0	1					
	Uganda		0	0	0	0					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
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	237	40					
	Bangladesh		0	0	0	N/A	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Burkina Faso		0	0	80	0	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	Total	Total	
	Cameroon		0	0	20	N/A	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Côte d'Ivoire		0	134	0	N/A	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	DRC		0	0	463	0	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Ethiopia		0	150	N/A	22	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	Total	Total	
	Kenya		0	N/A	N/A	22	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	Total	Total	
	Mali		0	30	2	0	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Mozambique		0	0	45	67	Female	6	Female	Female	Female	
							Male	5	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	11	Total	Total	Total	
	Nigeria		0	N/A	0	25	Female	3	Female	Female	Female	
							Male	26	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Total	29	*Total*	*Total*	*Total*	
	Senegal		0	0	0	0	*Female*	0	*Female*	*Female*	*Female*	
							Male	0	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	0	*Total*	*Total*	*Total*	
	Tanzania		0	0	0	N/A	*Female*	N/A	*Female*	*Female*	*Female*	
							Male		*Male*	*Male*	*Male*	
							Unknown		*Unknown*	*Unknown*	*Unknown*	
							Total		*Total*	*Total*	*Total*	
	Uganda		0	0	45	101	*Female*	0	*Female*	*Female*	*Female*	
							Male	0	*Male*	*Male*	*Male*	
							Unknown	0	**Unknown**	*Unknown*	*Unknown*	
							Total	0	*Total*	*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	26						
	Bangladesh		0	0	0	0						
	Burkina Faso		0	0	1	0						
	Cameroon		0	0	20	20						
	Côte d'Ivoire		0	1	2	6						
	DRC		0	0	0	N/A						
	Kenya		0	0	0	0						
	Mali		0	1	2	N/A						
	Mozambique		0	N/A	0	N/A						
	Nigeria		0	N/A	0	N/A						
	Senegal		0	0	0	0						
	Tanzania		0	0	0	N/A						
	Uganda		0	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	5						
	Bangladesh		0	0	0	N/A						
	Burkina Faso		0	0	0	0						
	Cameroon		0	0	0	1						
	Côte d'Ivoire		0	0	0	0						
	DRC		0	0	1	0						
	Kenya		0	0	0	1						
	Mozambique		0	N/A	1	2						
	Nigeria		0	N/A	0	0						
	Senegal		0	0	0	0						

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Tanzania		0	0	0	I						
	Uganda		0	0	0	0						
IP I	# of updated policies, legislation, regulations, or operational documents for improving IPC	Annually	0	9	3	7						
	Bangladesh		0	0	0	N/A						
	Burkina Faso		0	0	0	N/A						
	Cameroon		0	0	I	I						
	Côte d'Ivoire		0	7	0	0						
	DRC		0	0	0	N/A						
	Kenya		0	0	3	2						
	Mali		0	I	N/A	I						
	Mozambique		0	N/A	I	N/A						
	Nigeria		0	N/A	I	I						
	Senegal		0	0	0	I						
	Tanzania		0	I	0	I						
	Uganda		0	0	0	I						
IP 2	# of persons trained in IPC with MTaPS support	Quarterly	0	1,199	7,477	3,886	577					
	Bangladesh		0	0	95	264	*Female* / *Male* / *Unknown* / **Total**	N/A	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	
	Cameroon		0	86	88	N/A	*Female* / *Male* / *Unknown* / **Total**	N/A	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	
	Côte d'Ivoire		0	0	I3I	158	*Female* / *Male* / *Unknown* / **Total**	N/A	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	
	DRC		0	0	94	N/A	*Female* / *Male* / *Unknown* / **Total**	N/A	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	
	Ethiopia		0	0	N/A	28	*Female* / *Male* / *Unknown* / **Total**	33 / 39 / 0 / 72	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	
	Kenya		0	642	5,230	742	*Female* / *Male* / *Unknown* / **Total**	52 / 33 / 0 / 85	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	*Female* / *Male* / *Unknown* / **Total**	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Mali		0	N/A	21	29	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	
							Total		Total	Total	Total	
	Mozambique		0	0	0	57	Female	8	Female	Female	Female	
							Male	6	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	14	Total	Total	Total	
	Nigeria		0	N/A	15	51	Female	11	Female	Female	Female	
							Male	12	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	23	Total	Total	Total	
	Senegal		0	0	22	717	Female	181	Female	Female	Female	
							Male	94	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	275	Total	Total	Total	
	Tanzania		0	471	17	117	Female	43	Female	Female	Female	
							Male	65	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	108	Total	Total	Total	
	Uganda		0	0	1,247	1,770	Female	0	Female	Female	Female	
							Male	0	Male	Male	Male	
							Unknown	0	Unknown	Unknown	Unknown	
							Total	0	Total	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)	100% (141/141)	95% (131/138)					
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	100% (4/4)	Hospitals	55% (5/9)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	55% (5/9)	Total	Total	Total	
	Cameroon		0% (0/0)	0% (0/0)	100% (12/12)	100% (12/12)	Hospitals	100% (12/12)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health Centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (12/12)	Total	Total	Total	
	Côte d'Ivoire		0% (0/0)	0% (0/0)	100% (12/12)	100% (22/22)	Hospital	100% (20/20)	Hospital	Hospital	Hospital	
							Animal health centers	0% (0/0)	Animal health centers	Animal health centers	Animal health centers	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (20/20)	Total	Total	Total	
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	Hospitals	100% (12/12)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (12/12)	Total	Total	Total	
	Ethiopia		0% (0/0)	50% (15/30)	N/A	100% (5/5)	Hospitals	100% (5/5)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (5/5)	Total	Total	Total	
	Kenya		0% (0/0)	0% (0/0)	100% (20/20)	100% (20/20)	Hospitals	100% (19/19)	Health centers	Hospitals	Hospitals	
							Health centers	100% (1/1)	Others	Health centers	Health centers	
							Others	0% (0/0)	Total	Others	Others	
							Total	100% (20/20)	Hospital	Total	Total	
	Mali		0% (0/0)	0% (0/0)	100% (16/16)	100% (16/16)	Hospital	100% 9/9	Health centers	Hospital	Hospital	
							Health centers	100% (7/7)	Others	Health centers	Health centers	
							Others	0% (0/0)	Total	Others	Others	
							Total	100% (16/16)	Hospital	Total	Total	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	100% (7/7)	Hospital	100% (7/7)	Hospital	Hospital	Hospital	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (7/7)	Total	Total	Total	
	Nigeria		0% (0/0)	N/A	0% (0/0)	100% (7/7)	Hospitals	100% (7/7)	Health centers	Hospitals	Hospitals	
							Health centers	0% (0/0)	Others	Health centers	Health centers	
							Others	0% (0/0)	Total	Others	Others	
							Total	100% (7/7)	Hospitals	Total	Total	
	Senegal		100% (3/3)	100% (3/3)	100% (8/8)	100% (13/13)	Hospitals	83% (10/12)	Health centers	Hospitals	Hospitals	
							Health centers	0% (0/1)	Others	Health centers	Health centers	
							Others	0% (0/0)	Total	Others	Others	
							Total	77% (10/13)	Hospitals	Total	Total	
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	100% (10/10)	Hospitals	100% (10/10)	Health centers	Hospitals	Hospitals	
							Health centers	0% (0/0)	Others	Health centers	Health centers	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Others	0% (0/0)	*Total*	*Others*	*Others*	
							Total	100% (10/10)	*Hospitals*	*Total*	*Total*	
	Uganda		0% (0/0)	0% (0/0)	100% (13/13)	100% (13/13)	*Hospitals*	100% (7/7)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (7/7)	*Total*	*Total*	*Total*	
IP 4	# of countries with improved performance in core IPC components at the national level from baseline to follow-up	Annually	0% (0/12)	25% (3/12)	75% (8/12)	3/4						
	Bangladesh		No	No	No	No						
	Kenya		No	Yes	Yes	Yes						
	Mali		No	No	Yes	Yes						
	Nigeria		No	N/A	Yes	Yes						
IP 5	# and % of MTaPS-supported facilities implementing CQI to improve IPC	Quarterly	40% (23/57)	83% (39/47)	99% (106/107)	88% (125/141)	93% (128/138)					
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	50% (2/4)	*Hospitals*	44% (4/9)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	44% (4/9)	*Total*	*Total*	*Total*	
	Cameroon		0% (0/6)	100% (6/6)	100% (12/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (12/12)	*Total*	*Total*	*Total*	
	Côte d'Ivoire		50% (2/4)	100% (4/4)	100% (12/12)	92% (20/22)	*Hospitals*	100% (20/20)	*Hospitals*	*Hospitals*	*Hospitals*	
							Animal health centers	0% (0/0)	*Animal health centers*	*Animal health centers*	*Animal health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (20/20)	*Total*	*Total*	*Total*	
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (12/12)	*Total*	*Total*	*Total*	
	Ethiopia		0% (0/0)	70%	N/A	0% (0/5)	*Hospitals*	100% (5/5)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Total 100% (5/5)	Total	Total	Total	
	Kenya		100% (16/16)	100% (16/16)	100% (20/20)	100% (20/20)	Hospitals 100% (19/19)	Hospitals	Hospitals	Hospitals	
							Health centers 100% (1/1)	Health centers	Health centers	Health centers	
							Others 0% (0/0)	Others	Others	Others	
							Total 100% (20/20)	Total	Total	Total	
	Mali		0% (0/5)	0% (0/5)	94% (15/16)	100% (16/16)	Hospital 89% (8/9)	Hospital	Hospital	Hospital	
							Health centers 100% (7/7)	Health centers	Health centers	Health centers	
							Others 0% (0/0)	Others	Others	Others	
							Total 94% (15/16)	Total	Total	Total	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	100% (7/7)	Hospital 100% (7/7)	Hospital	Hospital	Hospital	
							Health centers 0% (0/0)	Health centers	Health centers	Health centers	
							Others 0% (0/0)	Others	Others	Others	
							Total 100% (7/7)	Total	Total	Total	
	Nigeria		0% (0/3)	N/A	0% (0/0)	14% (1/7)	Hospitals 100% (7/7)	Hospitals	Hospitals	Hospitals	
							Health centers 0% (0/0)	Health centers	Health centers	Health centers	
							Others 0% (0/0)	Others	Others	Others	
							Total 100% (7/7)	Total	Total	Total	
	Senegal		0% (0/3)	0% (0/3)	100% (8/8)	92% (12/13)	Hospitals 75% (9/12)	Health centers	Hospitals	Hospitals	
							Health centers 0% (0/1)	Others	Health centers	Health centers	
							Others 0% (0/0)	Total	Others	Others	
							Total 69% (9/13)	Hospitals	Total	Total	
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	100% (10/10)	Hospitals 100% (10/10)	Health centers	Hospitals	Hospitals	
							Health centers 0% (0/0)	Others	Health centers	Health centers	
							Others 0% (0/0)	Total	Others	Others	
							Total 100% (10/10)	Hospitals	Total	Total	
	Uganda		0% (0/7)	100% (7/7)	100% (13/13)	100% (13/13)	Hospitals 100% (7/7)	Hospitals	Hospitals	Hospitals	
							Health centers 0% (0/0)	Health centers	Health centers	Health centers	
							Others 0% (0/0)	Others	Others	Others	
							Total 100% (7/7)	Total	Total	Total	
IP 6	# and % of MTaPS-supported facilities with functional IPC committees	Quarterly	35% (18/51)	87% (41/47)	94% (104/110)	98% (139/141)	98% (135/138)				
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	100% (6/6)	Hospitals 100% (9/9)	Hospitals	Hospitals	Hospitals	
							Health centers 0% (0/0)	Health centers	Health centers	Health centers	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (9/9)	***Total***	***Total***	***Total***	
	Cameroon		0% (0/0)	83% (5/6)	100% (12/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (12/12)	***Total***	***Total***	***Total***	
	Côte d'Ivoire		100% (4/4)	100% (4/4)	100% (12/12)	100% (22/22)	*Hospitals*	100% (20/20)	*Hospitals*	*Hospitals*	*Hospitals*	
							Animal health centers	0% (0/0)	*Animal health centers*	*Animal health centers*	*Animal health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (20/20)	***Total***	***Total***	***Total***	
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (12/12)	***Total***	***Total***	***Total***	
	Ethiopia		0% (0/0)	100%	N/A	100% (5/5)	*Hospitals*	100% (5/5)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (5/5)	***Total***	***Total***	***Total***	
	Kenya		0% (0/16)	100% (16/16)	92% (18/20)	100% (20/20)	*Hospitals*	100% (19/19)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	100% (1/1)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (20/20)	***Total***	***Total***	***Total***	
	Mali		0% (0/5)	0% (0/5)	75% (12/16)	100% (16/16)	*Hospital*	100% (9/9)	*Hospital*	*Hospital*	*Hospital*	
							Health centers	100% (7/7)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (16/16)	***Total***	***Total***	***Total***	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospital*	*Hospital*	*Hospital*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (7/7)	***Total***	***Total***	***Total***	
	Nigeria		0% (0/3)	N/A	0% (0/3)	86% (6/7)	*Hospitals*	100% (7/7)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (7/7)	***Total***	***Total***	***Total***	
	Senegal		100% (3/3)	100%	100%	92%	*Hospitals*	83% (10/12)	*Hospitals*	*Hospitals*	*Hospitals*	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
				(3/3)	(8/8)	(12/13)	*Health centers*	0% (0/1)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	77% (10/13)	*Total*	*Total*	*Total*	
	Tanzania		17% (1/6)	100% (6/6)	100% (10/10)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (10/10)	*Total*	*Total*	*Total*	
	Uganda		100% (7/7)	100% (7/7)	100% (13/13)	100% (13/13)	*Hospitals*	100% (7/7)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (7/7)	*Total*	*Total*	*Total*	
IP 7	# and % of MTaPS-supported facilities with improved hand hygiene compliance	Annually	0	100% (36/36)	85% (88/104)	73% (103/141)						
	Bangladesh		0	N/A	100% (2/2)	100% (4/4)	*Hospitals*					
							Total					
	Cameroon		0	N/A	100% (12/12)	92% (11/12)	*Hospitals*					
							Total					
	Côte d'Ivoire		0	100% (4/4)	90% (9/12)	45% (10/22)	*Hospitals*					
							Health centers					
							Total					
	DRC		0	N/A	57% (4/7)	100% (12/12)	*Hospitals*					
							Total					
	Ethiopia		0	N/A	N/A	0% (0/5)	*Hospitals*					
							Total					
	Kenya		0	100% (16/16)	100% (20/20)	100% (20/20)	*Hospitals*					
							Health centers					
							Total					
	Mali		0	N/A	94% (15/16)	75% (12/16)	*Hospital*					
							Health centers					
							Total					
	Mozambique		0	N/A	0% (0/7)	43% (3/7)	*Hospitals*					
							Total					
	Nigeria		0	N/A	0% (1/3)	14% (1/7)	*Hospitals*					
							Total					
	Senegal		0	100% (3/3)	100% (8/8)	54% (7/13)	*Hospitals*					
							Health Centers					
							Total					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Tanzania		0	100% (6/6)	100% (10/10)	100% (10/10)	*Hospitals*					
							Total					
	Uganda		0	100% (7/7)	100% (7/7)	100% (13/13)	*Hospitals*					
							Total					
IP 8	# and % of MTaPS-supported facilities with improved performance in core IPC components	Annually	0	35% (26/73)	75% (78/104)	80% (113/141)						
	Bangladesh		0	50% (1/2)	100% (2/2)	100% (4/4)	*Hospitals*					
							Total					
	Cameroon		0	N/A	100% (12/12)	92% (11/12)	*Hospitals*					
							Total					
	Côte d'Ivoire		0	N/A	80% (8/12)	41% (9/22)	*Hospitals*					
							Heath center					
							Total					
	DRC		0	N/A	0% (0/7)	100% (12/12)	*Hospitals*					
							Total					
	Kenya		0	100% (16/16)	100% (20/20)	100% (20/20)	*Hospitals*					
							Health centers					
							Total					
	Mali		0	N/A	94% (15/16)	81% (13/16)	*Hospital*					
							Health centers					
							Total					
	Mozambique		0	N/A	100% (7/7)	100% (7/7)	*Hospitals*					
							Total					
	Nigeria		0	N/A	0% (0/3)	14% (1/7)	*Hospitals*					
							Total					
	Senegal		0	100% (3/3)	100% (8/8)	100% (13/13)	*Hospitals*					
							Health Centers					
							Total					
	Tanzania		0	100% (6/6)	60% (6/10)	100% (10/10)	*Hospitals*					
							Total					
	Uganda		0	N/A	0% (0/7)	100% (13/13)	*Hospitals*					
							Total					
AS 1	# of policies, legislation, regulations, or operational documents related to AMS developed or updated with MTaPS support	Annually	0	5	12	14						
	Bangladesh		0	0	0	1						
	Burkina Faso		0	0	2	N/A						
	Cameroon		0	0	0	0						

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Côte d'Ivoire		0	1	0	0						
	DRC		0	1	3	1						
	Kenya		0	1	3	3						
	Mali		0	1	N/A	1						
	Mozambique		0	N/A	1	3						
	Nigeria		0	N/A	0	1						
	Senegal		0	0	1	1						
	Tanzania		0	1	2	1						
	Uganda		0	0	0	2						
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% (112/155)	80% (122/152)					
	Bangladesh		0% (0/0)	0% (0/0)	0% (0/2)	50% (2/4)	Hospitals	44% (4/9)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health Centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	44% (4/9)	Total	Total	Total	
	Burkina Faso		0% (0/0)	0% (0/0)	25% (3/12)	0% (0/10)	Hospitals	100% (10/10)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health Centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (10/10)	Total	Total	Total	
	Cameroon		0% (0/0)	0% (0/0)	92% (11/12)	100% (12/12)	Hospitals	100% (12/12)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (12/12)	Total	Total	Total	
	Côte d'Ivoire		0% (0/0)	0% (0/0)	75% (9/12)	91% (20/22)	Hospitals	70% (14/20)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	70% (14/20)[7]	Total	Total	Total	
	Ethiopia		0% (0/0)	N/A	N/A	0% (0/5)	Hospitals	100% (5/5)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (5/5)	Total	Total	Total	
	DRC		0% (0/0)	0%	100%	100%	Hospitals	100% (12/12)	Hospitals	Hospitals	Hospitals	

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[7] Data was not collected from 6 facilities in PY5Q1

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
				(0/0)	(7/7)	(12/12)	Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (12/12)	Total	Total	Total	
	Kenya		6% (1/16)	100% (18/18)	83% (20/24)	100% (21/21)	Hospitals	95% (20/21)	Hospitals	Hospitals	Hospitals	
							Health centers	100% (1/1)	Health centers	Health centers	Health centers	
							Pharmacy	0% (0/2)	Others	Pharmacy	Pharmacy	
							Total	87% (21/24)	Total	Total	Total	
	Mali		0% (0/0)	0% (0/0)	56% (9/16)	75% (12/16)	Hospital	78% (7/9)	Hospitals	Hospital	Hospital	
							Health centers	86% (6/7)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	81% (13/16)	Total	Total	Total	
	Mozambique		0% (0/7)	Data not reported	0% (0/7)	43% (3/7)	Hospitals	100% (7/7)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (7/7)	Total	Total	Total	
	Nigeria		0% (0/3)	N/A	0% (0/0)	100% (7/7)	Hospitals	100% (7/7)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (7/7)	Total	Total	Total	
	Senegal		0% (0/0)	0% (0/0)	0% (0/8)	0% (0/14)	Hospitals	0% (0/12)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/1)	Health Centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	0% (0/13)	Total	Total	Total	
	Tanzania		0% (0/6)	0% (0/6)	20% (2/10)	100% (10/10)	Hospitals	100% (10/10)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health Centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (10/10)	Total	Total	Total	
	Uganda		43% (3/7)	100% (7/7)	100% (13/13)	100% (13/13)	Hospitals	100% (7/7)	Hospitals	Hospitals	Hospitals	
							Health centers	0% (0/0)	Health centers	Health centers	Health centers	
							Others	0% (0/0)	Others	Others	Others	
							Total	100% (7/7)	Total	Total	Total	
AS 3	# of persons trained in AMS topics with MTaPS support	Quarterly	0	436	4721	4,051	1,080			2,042		
	Bangladesh		0	0	0	420	Female	N/A	Female	Female	Female	
							Male		Male	Male	Male	
							Unknown		Unknown	Unknown	Unknown	

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
							Total		*Total*	*Total*	*Total*	
	Burkina Faso[8]		0	0	97	86	*Female*	158	*Female*	*Female*	*Female*	
							Male	192	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	350	*Total*	*Total*	*Total*	
	Cameroon		0	0	222	17	*Female*		*Female*	*Female*	*Female*	
							Male	N/A	*Male*	*Male*	*Male*	
							Unknown		*Unknown*	*Unknown*	*Unknown*	
							Total		*Total*	*Total*	*Total*	
	Côte d'Ivoire		0	0	237	104	*Female*	6	*Female*	*Female*	*Female*	
							Male	30	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	36	*Total*	*Total*	*Total*	
	DRC		0	0	274	91	*Female*		*Female*	*Female*	*Female*	
							Male	N/A	*Male*	*Male*	*Male*	
							Unknown		*Unknown*	*Unknown*	*Unknown*	
							Total		*Total*	*Total*	*Total*	
	Ethiopia		0	0	N/A	180	*Female*	36	*Female*	*Female*	*Female*	
							Male	93	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	129	*Total*	*Total*	*Total*	
	Kenya		0	165	1,333	869	*Female*	271	*Female*	*Female*	*Female*	
							Male	237	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	508	*Total*	*Total*	*Total*	
	Mali		0	0	136	49	*Female*		*Female*	*Female*	*Female*	
							Male	N/A	*Male*	*Male*	*Male*	
							Unknown		*Unknown*	*Unknown*	*Unknown*	
							Total		*Total*	*Total*	*Total*	
	Mozambique		0	0	0	34	*Female*	7	*Female*	*Female*	*Female*	
							Male	8	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	15	*Total*	*Total*	*Total*	
	Nigeria		0	N/A	18	108	*Female*	0	*Female*	*Female*	*Female*	
							Male	0	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	0	*Total*	*Total*	*Total*	
	Senegal		0	0	0	0	*Female*	0	*Female*	*Female*	*Female*	
							Male	0	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	

[8] Continuing activity from PY4. Activity not planned for the rest of the PY5.

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Tanzania		0	201	0	N/A	*Total*	0	*Total*	*Total*	*Total*	
							Female	0	*Female*	*Female*	*Female*	
							Male	0	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
	Uganda		0	70	2,513	1,776	*Total*	0	*Total*	*Total*	*Total*	
							Female	17	*Female*	*Female*	*Female*	
							Male	25	*Male*	*Male*	*Male*	
							Unknown	0	*Unknown*	*Unknown*	*Unknown*	
							Total	42	*Total*	*Total*	*Total*	
AS 4	# and % of MTaPS-supported facilities implementing CQI to improve AMS	Quarterly	49% (24/49)	75% (41/55)	57% (71/124)	68% (106/155)	73% (111/152)					
	Bangladesh		0% (0/0)	0% (0/0)	0% (0/2)	50% (2/4)	*Hospitals*	44% (4/9)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	44% (4/9)	*Total*	*Total*	*Total*	
	Burkina Faso9		0% (0/0)	100% (5/5)	25% (3/12)	0% (0/10)	*Hospitals*	100% (10/10)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health Centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (10/10)	*Total*	*Total*	*Total*	
	Cameroon		0% (0/0)	0% (0/6)	92% (11/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	100% (12/12)	*Total*	*Total*	*Total*	
	Côte d'Ivoire10		0% (0/0)	100% (2/2)	90% (9/10)	91% (20/22)	*Hospitals*	70% (14/20)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
							Total	70% (14/20)	*Total*	*Total*	*Total*	
	DRC		0% (0/0)	100% (3/3)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% 0/0)	*Others*	*Others*	*Others*	
							Total	100% (12/12)	*Total*	*Total*	*Total*	
	Ethiopia		3% (1/30)	13% (4/30)	N/A	0% (0/5)	*Hospitals*	100% (5/5)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	

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9 Continuing activity from PY4. Activity not planned for the rest of the project year.
10 Data was not collected from 6 facilities in PY5Q1.

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Kenya		100% (18/18)	100% (18/18)	92% (22/24)	91% (21/23)	*Total*	100% (5/5)	*Total*	*Total*	*Total*	
							Hospitals	95% (20/21)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	100% (1/1)	*Health centers*	*Health centers*	*Health centers*	
							Pharmacy	0% (0/2)	*Pharmacy*	*Pharmacy*	*Pharmacy*	
	Mali		0% (0/5)	0% (0/5)	13% (2/16)	75% (12/16)	*Total*	87% (21/24)	*Total*	*Total*	*Total*	
							Hospital	78% (7/9)	*Hospitals*	*Hospital*	*Hospital*	
							Health centers	86% (6/7)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
	Mozambique		0% (0/7)	Data not reported	57% (4/7)	100% (7/7)	*Total*	81% (13/16)	*Total*	*Total*	*Total*	
							Hospital	0% (0/7)	*Hospital*	*Hospital*	*Hospital*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
	Nigeria		0% (0/3)	N/A	0% (0/3)	14% (1/7)	*Total*	0% (0/7)	*Total*	*Total*	*Total*	
							Hospitals	100% (7/7)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
	Senegal		0% (0/3)	0% (0/3)	0% (0/8)	0% (0/14)	*Total*	100% (7/7)	*Total*	*Total*	*Total*	
							Hospitals	0% (0/12)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/1)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
	Tanzania		0% (0/6)	100% (6/6)	20% (2/10)	60% (6/10)	*Total*	0% (0/13)	*Total*	*Total*	*Total*	
							Hospitals	60% (6/10)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% (0/0)	*Others*	*Others*	*Others*	
	Uganda		86% (6/7)	100% (7/7)	100% (13/13)	100% (13/13)	*Total*	60% (6/10)	*Total*	*Total*	*Total*	
							Hospitals	100% (7/7)	*Hospitals*	*Hospitals*	*Hospitals*	
							Health centers	0% (0/0)	*Health centers*	*Health centers*	*Health centers*	
							Others	0% d(0/0)	*Others*	*Others*	*Others*	
							Total	100% (7/7)	*Total*	*Total*	*Total*	
AS 5	#/% of MTaPS-supported facilities that have documented evidence of improvement in antimicrobial medicines prescribing or use	Annually		49% (27/55)	29% (35/120)	36% (57/155)						
	Bangladesh		0%	N/A	0% (0/2)	50% (2/4)	*Hospitals*					
							Total					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result		PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
	Burkina Faso		0%	0% (0/5)	0% (0/12)	0% (0/10)	*Hospitals*					
							Total					
	Cameroon		0%	N/A	0% (0/12)	92% (11/12)	*Hospitals*					
							Total					
	Côte d'Ivoire		0%	0% (0/2)	0% (0/12)	14% (3/22)	*Hospitals*					
							Health centers					
							Total					
	DRC		0%	100% (3/3)	0% (0/7)	58% (7/12)	*Hospitals*					
							Total					
	Kenya		0%	100% (18/18)	92% (22/24)	91% (21/23)	*Hospitals*					
							Health centers					
							Pharmacies					
							Total					
	Mali		0%	N/A	13% (2/16)	0% (0/16)	*Hospital*					
							Health centers					
							Total					
	Mozambique		0%	N/A	71% (5/7)	28% (2/7)	*Hospitals*					
							Total					
	Nigeria		0%	N/A	0% (0/3)	0% (0/7)	*Hospitals*					
							Total					
	Senegal		0%	N/A	0% (0/8)	0% (14/14)	*Hospitals*					
							Total					
	Tanzania		0%	100% (6/6)	60% (6/10)	70% (7/10)	*Hospitals*					
							Total					
	Uganda		0%	0% (0/7)	0% (0/7)	31% (4/13)	*Hospitals*					
							Total					
DRC 1	# of quality assured MNCH, RH/FP, and TB medicines products registered with MTaPS support	Semiannually	0	0	29	26						
DRC 4	% of facilities implementing appropriate storage of oxytocin	Quarterly	0	N/A	64% (46/72)	75% (54/72)	76% (55/72)					
DRC 5	# of DPS and/or IPS using the updated directory of registered medicines	Semiannually	0	0	7	4						
DRC 8	# of health zones involved in provincial quantification exercises with MTaPS support	Semiannually	0	0	19	10						
DRC 9	# of MNCH treatment protocols or job aids disseminated to HFs with MTaPS support	Semiannually	0	0	0	0						

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
DRC 10	# of contraceptive kits (reduced FP package) distributed to community care sites (CSS) in MTaPS-supported HZs	Semiannually	0	0	0	0					
DRC 11	% of CSS reporting contraceptive data to health facilities in MTaPS-supported HZs	Semiannually	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	Semiannually	0	0	0	2					
DRC 13	# of sensitization meetings to explain he role and scope of the National Supply Chain Management Professionals Association (AGCAL)	Annually	0	N/A	N/A	N/A					
BG 1	% of procurement packages of DGFP and DGHS that are on schedule	Annually	0	0	82%	50%					
BG 4	% of target health facilities that keep complete TB patient information (as per national standards)	Annually	0	N/A	44%	71% (64/90)					
BG 8	Number of laws, policies, regulations, action plans or standards formally proposed, adopted, or implemented as supported by US Government assistance	Annually	N/A	N/A	N/A	N/A					
BG 9	Number of program approaches/initiative adopted/changed due to evidence-based recommendations and/or advocacy by USAID-supported activities	Annually	N/A	N/A	N/A	N/A					

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
BG 10	# and % of district hospitals using e-asset Management System	Annually	N/A	N/A	N/A	N/A					
BG 12	# of health commodities tracked through USAID-supported eLMIS	Annually	N/A	N/A	N/A	N/A					
BG 13	# of organizations whose members/staff were trained and/or mentored through USAID support	Semiannually	N/A	N/A	N/A	N/A					
BG 14	Number of TB patients registered in e-TB manager	Quarterly	0	N/A	N/A	N/A	70,495				
DRC 2	# of CBO members that have been capacitated to participate in oversight of pharmaceutical management for MNCH commodities with MTaPS support	Annually	0	0	350	344					
IN 4.3.1a	Number of analytical products developed and used to inform policies or guidance based on evidence	Annually	0	N/A	N/A	1					
IN 4.3.3b	Number of health personnel receiving capacity development support to optimize the management of health services	Annually	0	N/A	N/A	242					
IP.MP.1**	Number of facilities receiving MTaPS support to strengthen IPC and/or WASH practices for Monkey pox	Quarterly	0	N/A	N/A	N/A	30				
	DRC		0	N/A	N/A	N/A	30				
IP.MP.2**	Number of people trained to prevent, detect, and/or respond to Monkey pox outbreak with MTaPS support	Quarterly	0	N/A	N/A	N/A	30				
	DRC		0	N/A	N/A	N/A	30				

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4 Result	PY5Q1 Result	PY5Q2 Result	PY5Q3 Result	PY5Q4 Result	PY5 Cumulative Result
IP.MP.3**	Number of post-training supervision visits conducted	Quarterly	0	N/A	N/A	N/A	N/A				
	DRC		0	N/A	N/A	N/A	N/A				
IP.MP.4**	Number of field supervision visits conducted	Quarterly	0	N/A	N/A	N/A	N/A				
	DRC		0	N/A	N/A	N/A	N/A				
IP.MP.5**	Were the findings from supervision visits sent to health zones and/or health facilities?	Quarterly	0	N/A	N/A	N/A	N/A				
	DRC		0	N/A	N/A	N/A	N/A				
IP.MP.6**	Are the recommendations made after supervision visits, implemented by health zones and/or health facilities?	Quarterly	0	N/A	N/A	N/A	N/A				
	DRC		0	N/A	N/A	N/A	N/A				
IP.3.MP.7	# and % of MTaPS-supported health facilities that are using standardized tool(s) for monitoring IPC and informing programmatic improvement for Monkey pox	Semiannually	N/A	N/A	N/A	N/A					
	DRC		N/A	N/A	N/A	N/A					

* CSL portfolio is currently implementing remaining Year 4 activities. Activity corresponding to indicator MT 3.3.1 has been completed before this reporting period.

** Indicators IP.MP.1,2,3,4,5 and 6 track progress on Monkey pox activities in DRC.

ANNEX 2: GLOBAL HEALTH SECURITY AGENDA – QUARTER PROGRESS FOR FY23Q1

SUMMARY OF ACTIVITIES FOR THIS QUARTER (FY23Q1)

SELECTED MTaPS GHSA INDICATOR PROGRESS
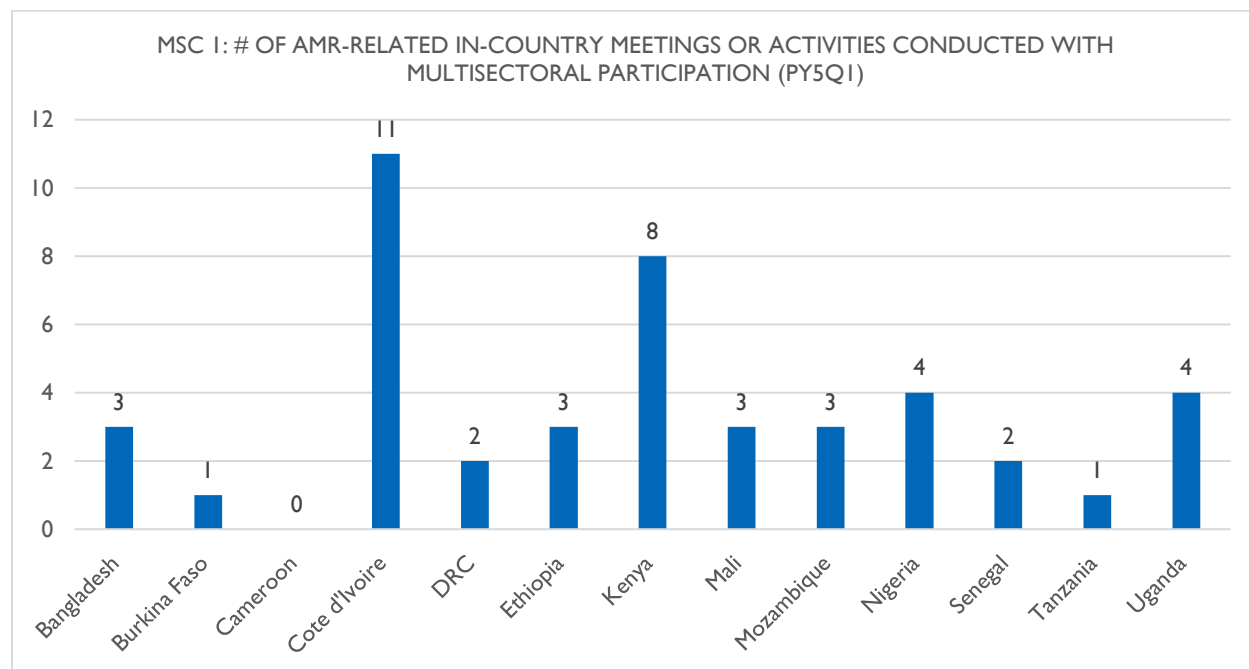
Annex Figure 1. MSC1. # of AMR-related in-country meetings or activities conducted with multisectoral participation in PY5Q1

Annex Table 2.1 IP3: % of MTaPS-supported facilities that are using standardized tools for monitoring IPC and informing programmatic improvement

	Country											
Quarter	Bangladesh[1]	Cameroon	Côte d'Ivoire	DRC[2]	Ethiopia[3]	Kenya	Mali	Mozambique[4]	Nigeria[5]	Senegal[6]	Tanzania	Uganda[7]
PY4Q1	50% (2/4)	100% (12/12)	80% (16/20)	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% (22/20)	100% (7/7)	-	100% (20/20)	100% (16/16)	100% (7/7)	0% (0/7)	57% (8/14)	100% (10/10)	100% (13/13)
PY4Q3	50% (2/4)	100% (12/12)	100% (22/20)	100% (12/12)	100% (5/5)	100% (20/20)	100% (16/16)	100% (3/3)	28% (2/7)	61% (8/13)	100% (10/10)	100% (13/13)
PY4Q4	100% (4/4)	100% (12/12)	100% (22/20)	100% (12/12)	100% (5/5)	100% (20/20)	100% (16/16)	100% (7/7)	100% (7/7)	100% (13/13)	100% (10/10)	100% (13/13)
PY5Q1	55% (5/9)	100% (12/12)	100% (20/20)	100% (12/12)	100% (5/5)	100% (20/20)	100% (16/16)	100% (7/7)	100% (7/7)	77% (10/13)	100% (10/10)	100% (7/7)

[1] Additional five facilities were added at the beginning of PY5. Four facilities have not received supportive supervision or training; this is planned for PY5Q2.
[2] Five facilities were added in PY4Q3.

Annex Table 2.2. IP5. % of MTaPS-supported facilities implementing continuous quality improvement (CQI) to improve IPC

	Country											
Quarter	Bangladesh[1]	Cameroon	Côte d'Ivoire	DRC[2]	Ethiopia[3]	Kenya	Mali[4]	Mozambique[5]	Nigeria[6]	Senegal[7]	Tanzania	Uganda[8]
PY4Q1	50% (2/4)	100% (12/12)	60% (12/20)	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% (20/20)	100% (7/7)	-	100% (20/20)	100% (16/16)	100% (7/7)	14% (1/7)	57% (8/14)	100% (10/10)	100% (13/13)
PY4Q3	50% (2/4)	100% (12/12)	100% (20/20)	100% (12/12)	0% (0/5)	100% (20/20)	100% (16/16)	100% (3/3)	14% (1/7)	61% (8/13)	100% (10/10)	100% (13/13)
PY4Q4	50% (2/4)	100% (12/12)	92% (20/20)	100% (12/12)	0% (0/5)	100% (20/20)	100% (16/16)	100% (7/7)	14% (1/7)	92% (12/13)	100% (10/10)	100% (13/13)
PY5Q1	44% (4/9)	100% (12/12)	100% (20/20)	100% (12/12)	100% (5/5)	100% (20/20)	94% (15/16)	100% (7/7)	100% (7/7)	69% (9/13)	100% (10/10)	100% (7/7)

Annex Table 2.3. IP6. % of MTaPS-supported facilities with functional IPC committees

	Country											
Quarter	Bangladesh[1]	Cameroon	Côte d'Ivoire	DRC[2]	Ethiopia[3]	Kenya	Mali	Mozambique[4]	Nigeria[5]	Senegal[6]	Tanzania	Uganda[7]
PY4Q1	50% (2/4)	100% (12/12)	80% (16/20)	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% (20/20)	100% (7/7)	-	100% (20/20)	100% (16/16)	100% (7/7)	14% (1/7)	57% (8/14)	100% (10/10)	100% (13/13)
PY4Q3	100% (4/4)	92% (11/12)	100% (20/20)	100% (12/12)	100% (5/5)	100% (20/20)	100% (16/16)	100% (3/3)	28% (2/7)	61% (8/13)	100% (10/10)	100% (13/13)
PY4Q4	100% (4/4)	100% (12/12)	100% (20/20)	100% (12/12)	100% (5/5)	100% (20/20)	100% (16/16)	100% (7/7)	86% (6/7)	92% (12/13)	100% (10/10)	100% (13/13)
PY5Q1	100% (9/9)	100% (12/12)	100% (20/20)	100% (12/12)	100% (5/5)	100% (20/20)	100% (16/16)	100% (7/7)	100% (7/7)	77% (10/13)	100% (10/10)	100% (7/7)

[1] Additional five facilities were added at the beginning of PY5. Four facilities have not received supportive supervision or training. This is planned for PY5Q2.
[2] Five facilities added in PY4 Q3.
[3] In PY4Q1–Q2 work resumed after a pause in PY3; facilities were selected but work had not started as the work plan had not been approved.
[4] In PY4Q3, a new IPC coordinator was hired and could only support three health facilities in IPC; the other four facilities were added back in Q4.
[5] In PY4Q2, two of the initial three facilities were dropped due to lack of support from the MOH, and six facilities were identified to replace them. IPC committees at supported facilities held a meeting in PY4Q1 to inaugurate the committee and a second meeting in PY4Q2 to review the facility IPC work plan developed by the IPC team.
[6] In PY4Q3, one facility was removed as the hospital has temporarily closed. In PY5, an assessment found that Hann Mariste Health Center had inadequate IPC capacity. MTaPS will provide technical support to revitalize IPC activities. Further information for the two underperforming facilities was not provided.
[7] In PY5 the number of facilities was reduced to seven due to funding constraints and a need to scale down activities.

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[1]	Burkina Faso[2]	Cameroon	Côte d'Ivoire[3]	DRC[4]	Ethiopia[5]	Kenya[6]	Mali[7]	Mozambique	Nigeria[8]	Senegal[9]	Tanzania	Uganda[10]
PY4Q1	25% (1/4)	0% (0/10)	100% (12/12)	45% (9/20)	100% (7/7)	-	91% (21/23)	6% (3/16)	71% (5/7)	100% (3/3)	0% (0/14)	100% (10/10)	100% (13/13)
PY4Q2	50% (2/4)	0% (0/10)	92% (11/12)	50% (10/20)	100% (7/7)	-	91% (21/23)	88% (14/16)	71% (5/7)	14% (1/7)	0% (0/14)	100% (10/10)	100% (13/13)
PY4Q3	50% (2/4)	0% (0/10)	100% (12/12)	100% (20/20)	100% (12/12)	0% (0/5)	91% (21/23)	100% (16/16)	14% (2/7)	43% (3/7)	0% (0/13)	100% (10/10)	100% (13/13)
PY4Q4	50% (2/4)	0% (0/10)	100% (12/12)	100% (20/20)	100% (12/12)	0% (0/5)	91% (21/23)	75% (12/16)	43% (3/7)	100% (7/7)	0% (0/13)	100% (10/10)	100% (13/13)
PY5Q1	44% (4/9)	100% (10/10)	100% (12/12)	70% (14/20)	100% (12/12)	100% (5/5)	87% (21/24)	81% (13/16)	100% (7/7)	100% (7/7)	0% (0/13)	100% (10/10)	100% (7/7)

[1] Additional five facilities were added at the beginning of PY5. Four facilities have not received supportive supervision or training. This is planned for PY5Q2.
[2] In PY4 MTaPS Burkina Faso harmonized action plans for all hospitals. Indicator related activities began in PY4Q3; however, DTCs did not function as planned and improvement plans and monitoring frameworks were not implemented.
[3] In PY5Q1, six sites did not receive supportive supervision from the AMS team, thus information for this indicator was not collected for the facilities.

[4] Five facilities were added in PY4Q3.

[5] In PY3, activities were suspended. In PY4Q3 facilities were selected, but work had not started as the work plan had not been approved. In PY4Q4, MTaPS identified gaps in AMS, including a lack of AMS committees. Four out of five hospitals had established or reinstated their committees; however, improvement plans or frameworks had yet to be developed.

[6] In PY5Q1, two community pharmacies were not implementing AMS activities for various underlying issues. One hospital has been added to MTaPS and is undergoing preparatory work before activity implementation begins.

[7] In PY4Q4, MTaPS Mali implemented virtual supportive supervision visits; however, four facilities did not attend; therefore, no progress/data was obtained for these facilities. In PY5, three facilities were unable to implement AMS activities due to time constraints.

[8] In PY4Q2, two of the initial three facilities were dropped due to lack of support from the MOH, and six facilities were identified to replace them.

[9] In PY4Q3, one facility was removed as the hospital has temporarily closed. In PY4, Senegal prioritized IPC activities. AMS activities have experienced delays due to MOH endorsement of trainings. Trainings are set to begin in Q2 along with other AMS activities.

[10] In PY5 the number of facilities was reduced to seven due to funding constraints and a need to scale down activities.

Annex Table 2.5. AS4. % of MTaPS-supported facilities implementing CQI to improve AMS

Country													
Quarter	Bangladesh[1]	Burkina Faso[2]	Cameroon	Côte d'Ivoire[3]	DRC[4]	Ethiopia[5]	Kenya[6]	Mali[7]	Mozambique[8]	Nigeria[9]	Senegal[10]	Tanzania[11]	Uganda[12]
PY4Q1	0% (0/4)	0% (0/10)	100% (12/12)	45% (9/20)	100% (7/7)	-	91% (21/23)	6% (3/16)	0% (5/7)	0% (0/3)	0% (0/14)	60% (10/10)	100% (13/13)
PY4Q2	25% (1/4)	0% (0/10)	92% (11/12)	50% (10/20)	100% (7/7)	-	91% (21/23)	88% (14/16)	0% (5/7)	14% (1/7)	0% (0/14)	60% (10/10)	100% (13/13)
PY4Q3	25% (1/4)	0% (0/10)	100% (12/12)	100% (20/20)	100% (12/12)	0% (0/5)	91% (21/23)	100% (16/16)	14% (1/7)	14% (1/7)	0% (0/14)	60% (10/10)	100% (13/13)
PY4Q4	50% (2/4)	0% (0/10)	100% (12/12)	100% (20/20)	100% (12/12)	0% (0/5)	91% (21/23)	75% (12/16)	100% (7/7)	14% (1/7)	0% (0/14)	60% (6/10)	100% (13/13)
PY5Q1	44% (4/9)	100% (10/10)	100% (12/12)	70% (14/20)	100% (12/12)	100% (5/5)	87% (21/24)	81% (13/16)	0% (0/7)	100% (7/7)	0% (0/13)	60% (6/10)	100% (7/7)

[1] Additional five facilities were added at the beginning of PY5. Four facilities have not received supportive supervision or training. This is planned for PY5Q2.

[2] Burkina Faso harmonized action plans for all hospitals. Indicator-related activities began in Q3; however, DTCs did not function as planned and CQI to improve AMS did not begin.

[3] In PY5Q1, six sites did not receive supportive supervision from the AMS team; therefore, information for this indicator was not collected for the facilities.

[4] Five facilities were added in PY4 Q3.

[5] In PY3, activities were suspended. In PY4Q3, facilities were selected but work had not started as the work plan had not been approved. In Q4, MTaPS identified gaps in AMS, including a lack of AMS committees. Four out of five hospitals have established or reinstated their committees; however, CQI to improve AMS did not begin.

[6] In PY5Q1, two community pharmacies were not implementing AMS activities for various underlying issues. One hospital has been added to MTaPS and is undergoing preparatory work before activity implementation begins.

[7] The Dermatology Hospital of Bamako, the Mali Gavardo Hospital, and Kayes Hospital have not implemented CQI activities due to limited time to complete activities.

[8] CQI for AMS activities will begin in PY5Q2.

[9] In Q2, two of the initial three facilities were dropped due to lack of support from the MOH, and six facilities were identified to replace them. Only one facility has begun AMS interventions; other facilities are delayed due to trainings and reprioritization.

[10] In PY4 Senegal prioritized IPC activities. AMS activities have experienced delays due to MOH endorsement of trainings. Trainings are set to begin in Q2 along with other AMS activities.

[11] In PY5Q1, four facilities have slow uptake of MTCs for AMS CQI implementation. The Tanzania team is conducting supportive supervision for MTCs and AMS CQI activities.

[12] In PY5, the number of facilities was reduced to seven due to funding constraints and a need to scale down activities

PROGRESS ON WHO BENCHMARK ACTIONS (JEE SCORES)

Annex Table 2.6. Progress on multisectoral coordination (MSC) (P.3.1): achieved cumulatively with MTaPS' support (as of September 2022)

Benchmarks actions completed/supported	Country												
	BD	BF	CM	CI	CD	ET	KE	ML	MZ	NG	SN	TZ	UG
Achieved cumulatively from the beginning of MTaPS to September 2022***													
Limited Capacity–02 (4 actions)	0%	50%	50%	100%	50%	100%	50%	0%	50%	0%	50%	0%	50%
Developed Capacity–03 (4 actions)	25%	50%	50%	75%	50%	100%	50%	75%	50%	50%	50%	50%	50%
Demonstrated Capacity–04 (4 actions)	75%	50%	25%	75%	75%	100%	100%	100%	25%	75%	50%	75%	50%
Sustainable Capacity–05 (5 actions)	20%	0%	0%	0%	20%	0%	40%	20%	0%	20%	20%	0%	0%

Bangladesh (BD), Burkina Faso (BF), Cameroon (CM), Côte d'Ivoire (CI), DRC (CD), Ethiopia (ET), Kenya (KE), Mali (ML), Mozambique (MZ), Nigeria (NG), Senegal (SN), Tanzania (TZ), Uganda (UG)
** Some benchmark actions were partially achieved as they are a compound of two or more separate components.
*** Some actions are ongoing.

Annex Table 2.7. Progress on IPC (P.3.3): achieved cumulatively with MTaPS' support (as of September 2022)

Benchmarks actions completed/supported	Country												
	BD	BF*	CM	CI	CD	ET	KE	ML	MZ	NG	SN	TZ	UG
Achieved cumulatively from the beginning of MTaPS to September 2022***													
Limited Capacity–02 (4 actions)	80%	--	80%	100%	80%	80%	80%	100%	80%	60%	60%	80%	100%
Developed Capacity–03 (4 actions)	83%	--	83%	100%	67%	100%	67%	83%	67%	67%	100%	100%	100%
Demonstrated Capacity–04 (4 actions)	20%	--	60%	80%	0%	80%	60%	40%	0%	0%	60%	100%	40%
Sustainable Capacity–05 (5 actions)	0%	--	0%	0%	0%	0%	0%	0%	0%	0%	40%	100%	0%

Bangladesh (BD), Burkina Faso (BF), Cameroon (CM), Côte d'Ivoire (CI), DRC (CD), Ethiopia (ET), Kenya (KE), Mali (ML), Mozambique (MZ), Nigeria (NG), Senegal (SN), Tanzania (TZ), Uganda (UG)
*Burkina Faso does not implement IPC activities.

Annex Table 2.8. Progress on AMS (P.3.4): achieved cumulatively with MTaPS' support (as of September 2022)

Benchmarks actions completed/supported	Country												
	BD	BF	CM	CI	CD	ET	KE	ML	MZ	NG	SN	TZ	UG
Achieved** cumulatively from the beginning of MTaPS to September 2022***													
Limited Capacity–02 (4 actions)	50%	50%	50%	75%	75%	75%	75%	75%	50%	100%	75%	100%	50%
Developed Capacity–03 (4 actions)	33%	17%	33%	83%	33%	67%	83%	50%	50%	50%	33%	50%	33%
Demonstrated Capacity–04 (4 actions)	0%	0%	29%	29%	0%	14%	14%	14%	14%	0%	0%	14%	29%
Sustainable Capacity–05 (5 actions)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Bangladesh (BD), Burkina Faso (BF), Cameroon (CM), Côte d'Ivoire (CI), DRC (CD), Ethiopia (ET), Kenya (KE), Mali (ML), Mozambique (MZ), Nigeria (NG), Senegal (SN), Tanzania (TZ), Uganda (UG)
* Some of the benchmark actions were partially achieved as they are a compound of two or more separate components.
** Some actions are ongoing.

ANNEX 3: MONTHLY COVID-19 INDICATORS, QUARTER 1, YEAR 5

Annex Table 3.1. Number of staff and volunteers trained on COVID-19 vaccine-related topics with MTaPS' support (COV 2. [CV1.3-3.])

Portfolio/ Disaggregation	Country	October – December 2022
	Bangladesh	0
	Cameroon	0
	Côte d'Ivoire	1687
	Kenya	502
	Mali*	N/A
	Mozambique**	N/A
	Nigeria	127
	Philippines	0
	Rwanda	103
	Senegal	1023
	Tanzania	394
	Total	**3836**
Sex	Male	2242
	Female	1594
	Unknown sex	0
Technical area***	Storage, handling, delivery, and waste management of COVID-19 vaccines	2428
	Planning and organizing COVID-19 vaccination sessions	529
	AEFI monitoring for COVID-19 vaccination	1129
	Recording and monitoring COVID-19 vaccination	524
	Communication with the community about COVID-19 vaccination	522

* COVID-19 activities have been completed in Mali in September 2022; no more data to report starting PY5 Q1.
** COVID-19 activities were not conducted in Mozambique in PY5 Q1 as the workplan was approved in January2023.
*** Disaggregation by technical area for training staff and volunteers is not exclusive of each other.

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	October - December 2022
	Bangladesh	0
	Côte d'Ivoire	3
	Kenya	0
	Mali*	N/A
	Mozambique**	N/A
	Philippines	0
	Rwanda	0
	Senegal	0
Total		**3**

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. [(CV.2.4-17])

Portfolio/ Disaggregation	Country	October- December 2022
	Bangladesh	1
	Cameroon	0
	Côte d'Ivoire	80
	Kenya	20
	Mali*	N/A
	Senegal	328
	Tanzania	0
Total		**429**

Annex Table 3.4. Number of workers who received COVID-19-related training in IPC and/or WASH with MTaPS' support (COV 6. [CV.2.4-18])

Portfolio/ Disaggregation	Country	October- December 2022
	Bangladesh	15
	Cameroon	0
	Côte d'Ivoire	1681
	Kenya	826
	Mali*	N/A
	Senegal	640
	Tanzania	0
Total		**3162**
Sex	Male	2014
	Female	1130
	Unknown sex	18
Trainee Category	HCW	337
	Non-HCW	2825

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. [CV.2.6-22])

Portfolio/ Disaggregation	Country	October – December 2022
	Bangladesh	0
	Cameroon	0
	Côte d'Ivoire	0
	Kenya	8
	Mali*	N/A
	Mozambique**	N/A
	Philippines	0
	Rwanda	0
	Senegal	7
	Tanzania	3
	Madagascar	2
	Total	**20**
Technical area	Risk communication and community engagement	0
	Surveillance, rapid response teams, case investigation	0
	Points of entry	0
	Laboratory systems	2
	Case management	4
	Infection prevention and control	5
	Coordination and operations	6
	Vaccine introduction (incl., PV)	3

Annex Table 3.6. Number of AEFI reports reviewed by the appropriate responsible bodies with USG support among those submitted to country monitoring systems (COV1 [CV.1.5-9])

Portfolio/ Disaggregation	Country	October-December 2022
	Bangladesh	77
	Côte d'Ivoire	91
	Nigeria	0
	Kenya***	7
	Mali*	N/A
	Mozambique**	N/A
	Rwanda	0
	Tanzania	310
	Senegal	1
	Total	**486**
USG Support*	Direct support	78
	Indirect support	408
Severity of event**	Minor	473
	Moderate	4
	Serious/severe**	3

*** In Kenya, data on severity of events not available from government although 6 reports were reviewed with USG support. In Rwanda, MTaPS was not invited to review AEFI reports.

Annex Table 3.7. Number of tools (ex. 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	October – December 2022
	Bangladesh	0
	Côte d'Ivoire	0
	Kenya	0
	Mali	0
	Mozambique	0
	Rwanda	0
	Senegal	1
	Total	**1**
Technical area	Establishing surveillance systems	0
	Monitoring and responding to AEFIs	1
	Monitoring and responding to adverse events of special interest	0
	Safety data management systems	0
	COVID-19 vaccine safety communication	0

Annex Table 3.8. Country has developed or adapted COVID-19 vaccine microplans with MTaPS' support (COV 8. [C.1])

Country	October – December 2022
Bangladesh	No
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	October – December 2022
Bangladesh	Yes
Côte d'Ivoire	No
Kenya	Yes
Mali	N/A
Mozambique	Yes
Rwanda	Yes
Senegal	Yes

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	October – December 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	October - December 2022
Côte d'Ivoire	No
Kenya	N/A
Philippines	Yes
Senegal	No

Annex Table 3.12. Percent of MTaPS-supported health facilities in compliance with IPC COVID-19 guidelines/standard operating procedures (COV 12)

Country	October – December 2022
Cameroon	0%
Côte d'Ivoire	16%
Kenya	83%
Senegal	92%

Annex Table 3.13. Number of health workers trained in COVID-19 testing or specimen transport with USG support (CV.2.4-15)

Country		October – December 2022
Madagascar		63
Sex	Male	33
	Female	30
	Unknown sex	0

Annex Table 3.14. Number of health workers who are remunerated by MTaPS to support workload required for COVID-19 vaccine delivery in the reporting period (COV 14 [CV.1.3-4])

Portfolio/ Disaggregation	Country	October- December 2022
	Cameroon	134
	Côte d'Ivoire	1130
	Nigeria	84
	Total	**1348**
Cadre	Clinical	581
	Community/Law	0
	Data Management	171
	Supervision and Logistics	596

Annex Table 3.15. Number of vaccination sites supported by MTaPS during the reporting period (COV 15 (CV.1.4-5))

Portfolio/ Disaggregation	Country	October- December 2022
	Cameroon	0
	Côte d'Ivoire	5378
	Nigeria	215
	Senegal	0
	Total	**5593**
Type	Fixed site	4042
	Community-based outreach vaccination sites	127
	Mobile team (or clinic) or transit team strategy	0
	Mass vaccination sites/campaigns	1424

Annex Table 3.16. Number of people who have received a first dose of an approved COVID-19 vaccine (COV-1) with MTaPS' direct support (COV 16 (CV.1.4-6)

Portfolio/ Disaggregation	Country	October- December 2022
	Nigeria	3364
	Senegal	0
	Cameroon	466,827
	Total	**470,191**
Vaccine Brand	Moderna	0
	Pfizer	11,883
	Astra Zeneca	0
	Janssen	373,367
	Other	84,941
Sex	Male	1520
	Female	1844
	Unknown sex	466,827

Annex Table 3.17. Number of people who received a last recommended dose of primary series of an approved COVI-19 vaccine (COV – 17 (CV. 1.4.7) with MTAPS direct support

Portfolio/ Disaggregation	Country	October -December 2022
	Nigeria	6477
	Senegal	0
	Cameroon	13204
	Total	**19681**
Vaccine Brand	Moderna	0
	Pfizer	1747
	Astra Zeneca	0
	Janssen	6285
Sex	Male	2989
	Female	3488
	Unknown sex	13204

Annex Table 3.18. Number of people who received a booster dose of primary series of an approved COVID-19 vaccine (COV -2,3,4) with MTaPS' support (COV – 17 [CV. 1.4.8])

Portfolio/ Disaggregation	Country	October- December 2022
	Nigeria	3541
	Senegal	0
	Cameroon	96819
	Total	**100360**
Vaccine Brand	Moderna	0
	Pfizer	1767
	Astra Zeneca	0
	Janssen	84727
	Other	13866
Sex	Male	1384
	Female	2157
	Unknown sex	96819

ANNEX 4: MTAPS RESULTS FRAMEWORK

MTaPS Goal: To enable low- and middle-income countries to strengthen their pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medical products and pharmaceutical services

Objective 1:
Pharmaceutical-sector governance strengthened

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

Objective 3:
Availability and use of pharmaceutical information for decision making increased, and global learning agenda advanced

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

Objective 5:
Pharmaceutical services, including product availability and patient-centered care to achieve desired health outcomes, improved

Sub-objective 1.1:
Transparency and accountability of country pharmaceutical systems improved

Sub-objective 2.1:
Innovative and proven approaches for human resource capacity building institutionalized

Sub-objective 3.1:
Pharmaceutical management information systems that are interoperable and link patients and products effectively implemented

Sub-objective 4.1:
Financial barriers to access to medicines reduced

Sub-objective 5.1:
Availability of essential medicines and other health technologies improved

Sub-objective 1.2:
Evidence-based medicines policies, laws, regulations, guidelines, norms, and standards improved and enforced

Sub-objective 2.2:
Capacity of government to manage pharmaceutical systems strengthened

Sub-objective 3.2:
Information on pharmaceutical systems available and used

Sub-objective 4.2:
Evidence-based medicines strategies and pharmacy benefits programs developed and implemented

Sub-objective 5.2:
Patient-centered pharmaceutical care improved

Sub-objective 1.3:
Stakeholder engagement and empowerment, including civil society and consumers, increased

Sub-objective 2.3:
Capacity of private sector organizations to support pharmaceutical operations improved

Sub-objective 3.3:
Pharmaceutical systems strengthening research and global learning agenda advanced

Sub-objective 4.3:
Efficiency of pharmaceutical resource allocation and use increased

Sub-objective 5.3:
Patient safety and therapeutic effectiveness ensured

Sub-objective 2.4:
Medicines regulatory capacity strengthened, including through regional regulatory harmonization

Sub-objective 4.4:
Mobilization of additional and sustainable resources increased

Sub-objective 5.4:
Antimicrobial resistance containment supported

ANNEX 5: GHSA RESULTS FRAMEWORK

MTaPS GHSA Goal: Support antimicrobial resistance containment:
Slow the emergence of resistant bacteria and prevent the spread of resistant infections

Result Area 1: Effective multisectoral coordination on AMR	**Result Area 2:** Infection prevention and control	**Result Area 3:** Use of antimicrobial medicines optimized
Result 1.1: Governance for multisectoral coordination strengthened	**Result 2.1:** Governance for IPC strengthened	**Result 3.1:** Governance for AMS strengthened
Result 1.2: Capacity for multisectoral coordination on AMR increased	**Result 2.2:** Institutional and HR capacity to manage IPC strengthened	**Result 3.2:** Institutional and HR capacity to manage AMS strengthened
Result 1.3: AMR-related information and global learning agenda advanced through multisectoral coordination body	**Result 2.3:** IPC-related information available and used for decision making, and global learning agenda advanced	**Result 3.3:** AMS-related information available and used for decision making, and global learning agenda advanced
Result 1.4: AMR-related financing optimized by multisectoral coordination body	**Result 2.4:** IPC financing optimized	**Result 3.4:** AMS financing optimized
Result 1.5: AMR containment-related pharmaceutical services improved through multisectoral efforts	**Result 2.5:** IPC practices and services improved	**Result 3.5:** AMS practices and services improved

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

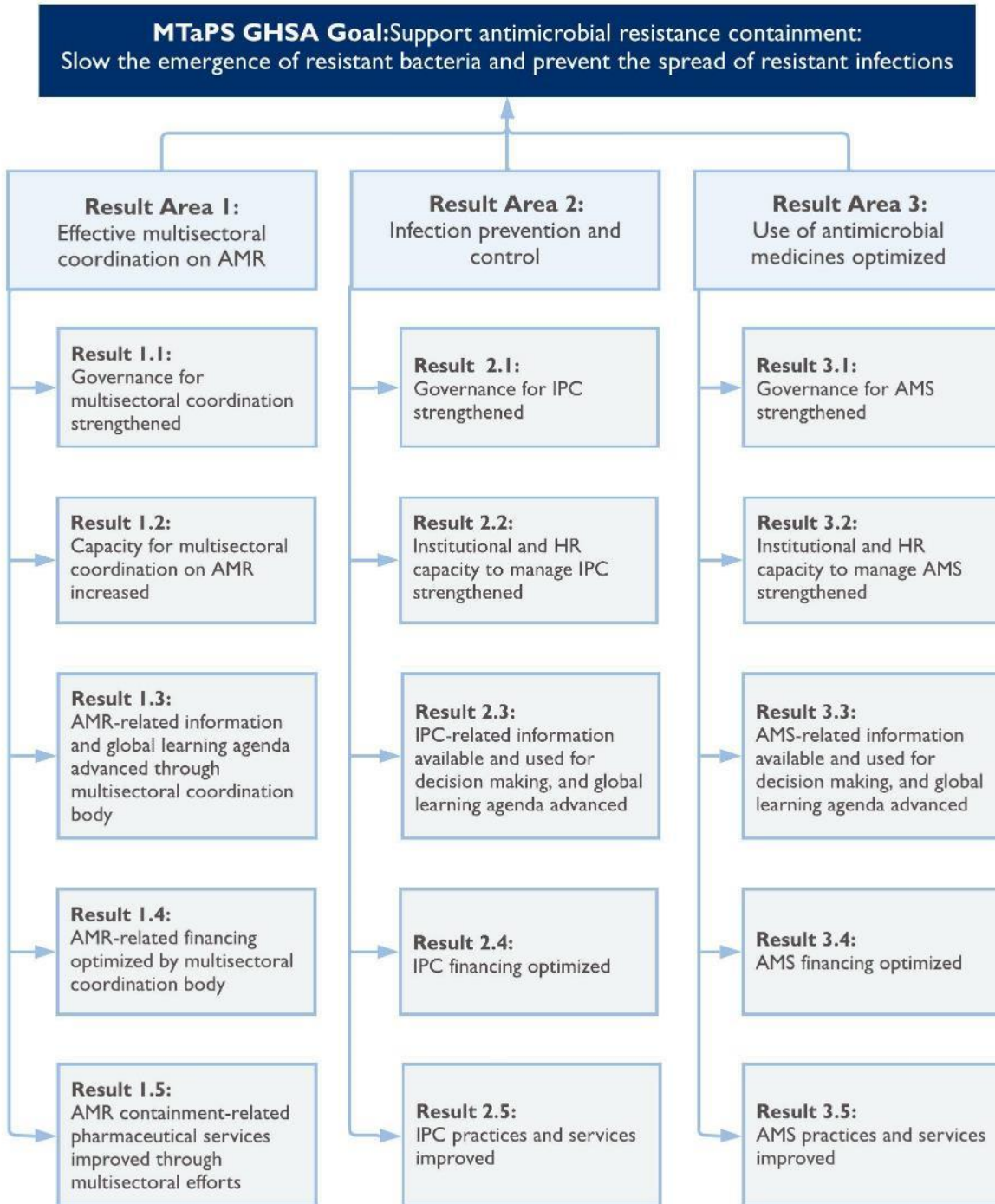**Result Area 6:** Coordination and Operations

ANNEX 7: MNCH RESULTS FRAMEWORK

MTaPS Goal: To enable low- and middle-income countries to strengthen their pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medical products and pharmaceutical services

MNCH Goal: Ensure the availability and appropriate use of safe, effective, affordable, and quality-assured medicines, technologies, and supplies and effective pharmaceutical services to reduce maternal, newborn, and child mortality

Objective 1: Pharmaceutical-sector governance increased

Objective 2: Institutional and human resource capacity for pharmaceutical management and services, including regulation of MNCH products, strengthened

Objective 3: Availability and use of pharmaceutical information on MNCH medicines for decision making increased and global learning agenda advanced

Objective 4: Financing of medicines for women's and children's health optimized

Objective 5: Pharmaceutical services for women, newborns, and children—including product availability and patient-centered care—improved

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

2.1: Regulatory system for MNCH medical products improved

3.1: Pharmaceutical systems strengthening (PSS) global learning agenda advanced for women's, newborns', and children's health

5.1: Availability of essential medicines, technologies, and supplies for women's, newborns', and children's health improved

3.3: PSS research and global learning agenda advanced for women's and children's health

5.2: Pharmaceutical services for women and children improved