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

Improved Access. Improved Services. Better Health Outcomes.

Photo credit: Francois Ebah Bela

FISCAL YEAR 2023
ANNUAL AND QUARTER 4 (JULY–SEPTEMBER 2023) REPORT

USAID
FROM THE AMERICAN PEOPLE

FISCAL YEAR 2023
ANNUAL AND QUARTER 4 (JULY–SEPTEMBER 2023) REPORT

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

TABLE OF CONTENTS

Project Overview iii

Acronyms and Abbreviations iv

1. Introduction 1
   - A. Purpose 1
   - B. MTaPS' Goal and Objectives 1
   - C. MTaPS' Approach to Strengthening Pharmaceutical Systems 1
   - D. About the Report 2

2. Progress by Objectives 3
   - A. Objective 1: Pharmaceutical-Sector Governance Strengthened 3
   - B. Objective 2: Institutional and Human Resource Capacity for Pharmaceutical Management and Services Increased, Including Regulation of Medical Products 1
   - C. Objective 3: Availability and Use of Pharmaceutical Information for Decision Making Increased and Global Learning Agenda Advanced 6
   - D. Objective 4: Pharmaceutical-Sector Financing, Including Resource Allocation and Use, Optimized 12
   - E. Objective 5: Pharmaceutical Services, Including Product Availability and Patient-Centered Care to Achieve Desired Health Outcomes, Improved 18

3. Progress by Health Area/Funding Stream 25
   - A. Global Health Security Agenda/Antimicrobial Resistance (GHSA/AMR) 25
   - B. COVID-19 30
   - C. Maternal, Neonatal, and Child Health (MNCH) 39
   - D. Office of Population and Reproductive Health (PRH), Commodity Security and Logistics (CSL) 45
   - E. Office of Health Systems, Cross Bureau 50
   - F. Gender 57

4. Progress by Country 62
   - A. Bangladesh 62
   - B. Burkina Faso 78
   - C. Cameroon 83
   - D. Côte d'Ivoire 91
   - E. DRC 96
   - F. Ethiopia 113
   - G. Indonesia 121
   - H. Jordan 128
   - I. Kenya 136
   - J. Mali 143
   - K. Mozambique 151
   - L. Nepal 162
   - M. Nigeria 170

N. Philippines 177
O. Rwanda 194
P. Senegal 201
Q. Tanzania 207
R. Uganda 218

5. Progress by Regional Bureaus 223
A. Asia Regional Bureau 223

6. Progress in Achieving Contract Deliverables 230

7. Program Spotlight 231

8. Monitoring, Evaluation, Research, & Learning 247
A. Monitoring & Evaluation 247
B. Knowledge Management and Learning 250
C. Research 255

9. Annexes 259
Annex 1. MTaPS Indicators 259
Annex 2. Global Health Security Agenda—Quarter Progress for FY23Q4 308
Annex 3. Monthly COVID-19 Indicators, FY23Q4 314
Annex 4. MTaPS Results Framework 322
Annex 5. GHSA Results Framework 323
Annex 6. COVID-19 Results Framework 324
Annex 7. MNCH Results Framework 325

PROJECT OVERVIEW

Program Name:		USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Reporting Period:		Fiscal Year 2023 Annual and Quarter 4 (July-September 2023)
Activity Start Date and End Date:		September 20, 2018–September 19, 2024
Name of Prime Implementing Partner:		Management Sciences for Health
Contract Number:		7200AA18C00074
MTaPS Partners:	***Core Partners:***	Boston University, FHI 360, 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

This document may be reproduced if credit is given to MTaPS. Please use the following citation.

2023. *USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program: Fiscal Year 2023 Annual and Quarter 4 (July–September 2023) Report.* Submitted to the U.S. Agency for International Development by the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program. Arlington, VA: Management Sciences for Health, Inc.

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

ACRONYMS AND ABBREVIATIONS

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 advisory 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
CSL	Commodity Security and Logistics
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 economics 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

PRH	population and reproductive health
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
SIAPS	Systems for Improved Access to Pharmaceuticals and Services Program
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 six-year MTaPS program (2018–2024) 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 pharmaceutical systems-strengthening approach 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.

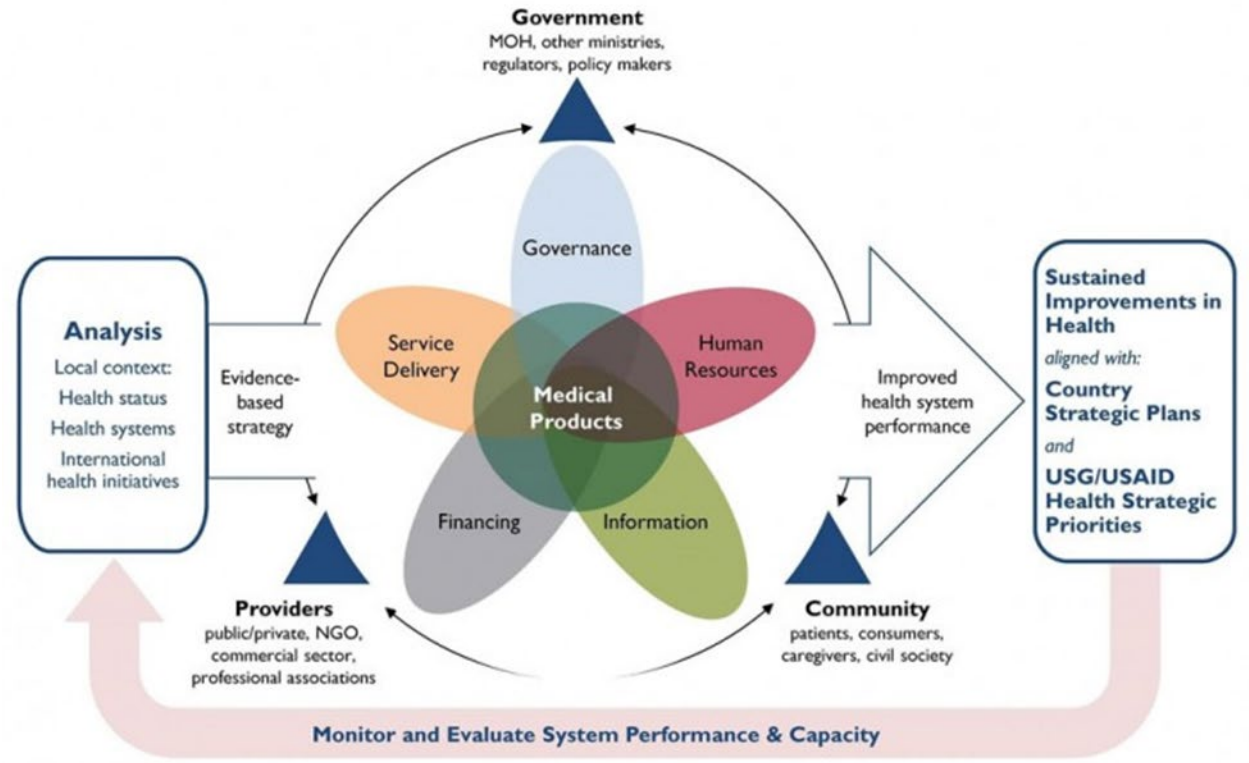


Figure 1. USAID pharmaceutical systems–strengthening approach

D. ABOUT THE REPORT

This report presents activity progress and achievements by portfolio for fiscal year 2023, both annual (October 2022–September 2023) and quarter 4 (July–September 2023). 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 medical technologies, which is required 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 mature and respond to challenges.

CUMULATIVE PERFORMANCE TO DATE

Improvements to areas of governance in pharmaceutical systems take time. Since the beginning of MTaPS, the need for effective governance has been a priority across MTaPS countries and particularly in Bangladesh, Nepal, Jordan, the Philippines, Tanzania, and Rwanda. With the conclusion of PY5, improvements in pharmaceutical governance systems have become more visible. The journeys of Bangladesh, Jordan, and Tanzania are presented here as examples of how MTaPS has engaged in improving pharmaceutical governance and how multiple cross-cutting interventions in this area have yielded results.

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

Jordan: To increase transparency and accountability of procurement systems, MTaPS supported the drafting of the medicines procurement FA SOPs, which will be submitted to the National Committee for Procurement Policies for review and approval. and engaged private-sector pharmaceutical suppliers in the FA planning process. MTaPS also completed the final draft of the Procurement Negotiation SOPs with an annex specifically focused on negotiations within the FA setting, laying the foundations for improved medicines procurement.

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

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

Bangladesh: MTaPS assisted the DGDA to develop an inspection strategy to ensure good pharmacy practices in PY1 and PY2 and an electronic inspection and licensing system for pharmacies in PY3. In PY4, MTaPS supported the CAPA plan development to address WHO GBT assessment gaps; establish an effective QMS; and employ the convergence of regional technical standards for medicines registration and application of good review practices. In PY5, MTaPS assisted with training and dissemination of the DGDA's five-year strategic plan (2022–2026).

Tanzania: MTaPS facilitated a comprehensive process improvement mapping for the registration and importation of ARVs in the public sector. This initiative aimed to identify and address barriers and bottlenecks in the ARV supply chain by involving the Tanzania Medicines and Medical Devices Authority and medicines importers. The intervention registering and importing improved regulatory guidelines for ARVs, streamlined import clearance procedures for the Tanzania Medicines and Medical Devices Authority, and minimized wastage of essential HIV/AIDS and other disease management products. These improvements increased public access to and availability of high-quality medicines for better treatment outcomes.

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

Tanzania: MSC across ministries is vital for an effective approach to AMR. MTaPS supported the coordination of AMR activities under the AMR MCC, working under the OH approach, to implement the NAP-AMR 2017–2022 and the current NAP-AMR 2023–2028 across the human health, animal health, plant, livestock, and fisheries sectors. MTaPS supported the setup and operation of TWGs to help improve the implementation of IPC, AMS, and M&E in Tanzania. This support has helped improve OH communications, practices, and implementation among the MOH, Ministry of Agriculture, Ministry of Livestock and Fisheries, and President's Office Regional Administration and Local Government.

YEAR 5 ACHIEVEMENTS AND RESULTS

The following examples highlight the development of good governance practices during PY5 in selected areas of the pharmaceutical system for the countries mentioned.

PSS Insight: PSS Insight v2.0 is a tool for countries to measure progress in strengthening pharmaceutical systems. In PY5, MTaPS supported piloting the tool fourcountries: Bangladesh, Nepal, Tanzania, and Uganda. Country stakeholders provided valuable feedback on the relevance and feasibility of collecting the indicators, and their contributions were critical to finalizing the tool. PSS Insight v2.0 is poised to be released as a global good in PY6 to help pharmaceutical system actors make informed decisions to strengthen their systems and increase transparency in pharmaceutical systems.

Bangladesh: MTaPS assisted the DGDA in drafting an action plan based on the DGDA's five-year strategic plan and provided technical review and feedback to the finalization of DGDA's regulatory framework and five-year strategic plan for the national control laboratory (2023–2028), supported by

the PQM+ program. MTaPS advocated for the MOHFW's endorsement for the national guideline on the PV system in Bangladesh and the good PV practices guideline, endorsed in August 2023.

Burkina Faso: MTaPS, in collaboration with the OH TS, organized the fourth quarterly meeting of the Rational Use of Antimicrobials sub-committee. The meeting presented the results of national AMR surveillance in the laboratory from 2018 to 2022. Lessons learned from the five years of AMR surveillance highlighted strategies to best implement the OH approach to combat AMR.

Tanzania: MTaPS provided technical support in the development of the next edition of the NAP-AMR for 2023–2028. MTaPS supported the MOH in developing the draft National Communication Strategy for IPC (2023–2028), which will help the MOH disseminate harmonized IPC information to implement socially efficient and effective behavior change communication related to IPC in Tanzania.

Senegal: In collaboration with the World Animal Health Organization and FAO USAID Emergency Centre for Transboundary Animal Diseases, MTaPS provided technical and financial support for a workshop to develop the National AMR Action Plan for 2023–2027. Senegal's National AMS Plan, which was previously developed with MTaPS support, is now integrated into the new NAP-AMR. During the workshop, MTaPS provided orientation on resources, including the GBT, the newly updated JEE 3.0 tool, and the IPC-NSP. MTaPS also provided technical assistance to update Senegal's National IPC Guidelines.

Nepal: During PY5, MTaPS provided technical assistance in the development of the Codes on Sales and Distribution of Drugs, including the good practices guidelines endorsed by the Government of Nepal. In addition, MTaPS supported the drafting of six regulations and three codes to help implement the new Drug Bill, strengthen regulation, and register medicines and health technology products. MTaPS supported the implementation of GPP and GSDP through multipronged strategies, including the training of tutors and the development of e-Learning materials and IEC for public awareness.

Kenya: On MSC, MTaPS supported the commemoration of WAAW 2022 at the national level and in the MTaPS focus counties of Kisumu, Nyeri, Kilifi, and Murang'a. MTaPS also provided technical assistance to the NASIC to review and develop the next iteration of the NAP-AMR and NAP M&E framework 2023–2027, which will be launched during WAAW 2023.

On IPC, MTaPS supported the MOH in the development and review of the national IPC guideline, HCWM guideline, and HAI surveillance protocol.

On AMS, MTaPS provided technical assistance to the MOH Directorate of Health Products and Technologies (DHPT) with the finalization of both the Kenya essential medicines list (KEML) 2023 (including the AWaRe categorization) and alignment of the KNMF to the reviewed KEML. MTaPS also participated in regional AMS workshops to review key regional AMS guidelines.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

The following country examples are illustrative of Q4/Y5 achievements associated with improving pharmaceutical governance.

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

Bangladesh: After incorporating feedback from the DGHS, MTaPS submitted the final draft of the Procurement Handbook based on the GOB Procurement Act 2006 and the Procurement Rules 2008. This tool will be a guiding reference for DGHS and MOHFW officials and key entities to complete procurement processes using good governance and fairness within a reasonable timeline.

Jordan: MTaPS submitted the FA SOPs and the procurement negotiation SOPs to the GPD for approval by the National Procurement Policies Committee. MTaPS and the GPD conducted a training session on implementing FA using the FA SOPs for the GPD information technology team and members of the Automation Consulting Committee at the GPD. In collaboration with the Public Financial Management Activity Project, MTaPS delivered training on GPB. These activities are collectively contributing to a more transparent and efficient medicines procurement system in Jordan.

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

Tanzania: MTaPS supported the MOH in conducting the final review of the draft IPC communication strategy (2023–2028) through a workshop attended by IPC stakeholders, including Tanzania Health Promotion Support and Afya Bora. The strategy will help the MOH ensure that everyone has adequate information to communicate on IPC and create awareness on the status of IPC in the country, promote adherence to IPC standards at all levels, and maintain consistency in practicing IPC countrywide.

Kenya: MTaPS, in collaboration with the MOH, finalized the national HAI surveillance guidelines. In collaboration with the MOH DHPT, MTaPS provided technical assistance to finalize the KEML 2023, including the AWaRe categorization, and align the KNMF to the reviewed KEML. Additionally, MTaPS participated in the regional AMS workshop supported by the East, Central, and Southern Africa Health Community and Africa CDC to review key regional AMS priority and guideline documents.

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

Burkina Faso: MTaPS, the AMR-TTC, and its sub-commissions supported the TS in organizing the celebration of WAAW. MTaPS also collaborated with the FAO, the Country Health Information Systems and Data Use Program, Jhpiego, and WHO to facilitate the organization of regular OHP meetings to review plans and progress in implementing the NAP-AMR and to strengthen coordination between the OHP and the TTCs, including the AMR-TTC. MTaPS supported the TS and related partners in organizing a two-day meeting to assess the country's progress toward WHO benchmark actions for IHR capacities related to MSC, AMS, and IPC.

Senegal: With technical and financial support from MTaPS, the multisectoral AMR TWG organized a workshop in July 2023 to complete the development of Senegal's national AMR action plan. MTaPS then collaborated with other GHSA partners, including the FAO and IDDS, to support multiple follow-on meetings of the select committee in charge of finalizing the plan. Senegal's National AMR Action Plan

was developed based on the recommendations of WHO JEE experts and informed by the provisional results of the JEE related to the indicator for MSC on AMR.

BEST PRACTICES/LESSONS LEARNED

- Improving transparency and accountability within pharmaceutical systems, and medicines procurement systems specifically, requires local stakeholder leadership and medium-term commitments for changes to be notable. MTaPS' experience in Jordan and Bangladesh is a testament to this.
- Engaging with government, the private sector, civil society, and IPs is critical for the development and acceptance of pharmaceutical legislation and related guidelines and policies. An excellent example of this is MTaPS' support for MSC, which seeks to enable an OH approach to GHSA issues such as AMR; this is working well in Burkina Faso, Kenya, and Tanzania to improve coordinated approaches to AMR.

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 the MTaPS program. 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 but not limited to the following: e-Learning materials are integrated into the learning system of ministries for ongoing use, and digital solutions are seamlessly embedded into the workflows of pharmaceutical systems. MTaPS aims to enable mature pharmaceutical systems—including regulatory systems—in countries, leaving the responsibility for these systems in the hands of local counterparts.

CUMULATIVE PERFORMANCE TO DATE

Strengthening pharmaceutical systems requires incremental improvements over time. For example, to strengthen pharmaceutical regulatory systems, MTaPS performed assessments and reviewed previous assessments to determine the level of maturity of the regulatory system in countries, co-creating and implementing 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 streamlined registration systems through applying GRP and electronic IMSs.

MTaPS worked with several regional organizations (e.g., ASEAN, EAC, ECOWAS IGAD, SADC and SEARN) to support convergence and harmonization of medical product regulation in PV, regulatory inspections, and regulatory IMSs. MTaPS offered technical assistance to validate a monitoring and evaluation tool to measure the performance of 11 designated regional centers of regulatory excellence in Africa and provide baseline information on the status of the institutions and organizations. In addition, MTaPS provided capacity development and supported convergence of medicines and vaccines registration in Asia.

These incremental and targeted approaches have demonstrated progress towards MTaPS' goal for supported countries to achieve stable and effective regulatory systems to assure the safety and quality of medical products on the market.

This next section presents further select country examples of how systematic application of capacity strengthening approaches have been used since the beginning of the program to improve the pharmaceutical system components concerned.

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

Tanzania: To improve IPC implementation and sustainability, MTaPS Tanzania established and strengthened IPC committees in 10 MTaPS Tanzania-supported hospitals and conducted clinical mentorship and CQI, which brought about improved WASH and handwashing practices and reduced SSIs and other nosocomial infections. MTaPS Tanzania developed an IPC e-Learning course that equipped the Center for Distance Education in Morogoro to offer online IPC training to HCPs, orienting 61 (including 41 female) tutors on its use. MTaPS further supported the MOH to develop a national IPC M&E system. This included training RHMTs, facility IPC focal persons, and facility health management information system focal persons on the use of IPC M&E tools and reporting IPC indicators via DHIS2.

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

Rwanda: To address the human resources capacity gap, MTaPS supported training of HCPs in different areas of pharmaceutical management, including 815 Rwanda FDA regulatory personnel trained in medicines evaluation and registration, good manufacturing practices, good review practices, good reliance practices, PV, and QMS. To ensure long-term sustainability, MTaPS provided technical support to develop online e-Learning courses in MER and PV, which are hosted on the Rwanda FDA servers. MTaPS supported the MOH and Rwanda FDA in disseminating information on the pharmaceutical service accreditation standards and medicines safety to health workers. To improve pharmaceutical management in HFs via MTCs, MTaPS supported the development of an MTC operational manual, tools and SOPs, and orientation of 313 HCPs (113 female).

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

DRC: Despite the large percentage of medicines under the management of private organizations, there is a lack of well-established local and professional supply chain organizations to support the public supply chain system for health commodities in DRC. MTaPS has been systematically supporting L'Association des Gestionnaires de la chaine d'Approvisionnement et logistique en sigle (AGCAL) to strengthen its capacities and increase its engagement and role in the management of the national pharmaceutical supply chain system. MTaPS has facilitated the establishment of AGCAL at the national and provincial (Nord-Kivu and Ituri) levels and supported the appointment of key AGCAL officials and assisted in the development of leadership competencies for these officials.

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

Nepal: MTaPS made considerable progress towards improving DDA's regulatory capability (i.e., assisting in organizational restructuring, implementation of OpenRIMS for medicine registration and

pharmacovigilance [PViMS], capacity strengthening and competence development of personnel, established QMS standards and practices). MTaPS provided technical assistance in the implementation of the MALAP that has enabled the authority to adequately address WHO GBT indicators linked to ML, with all ML1 and ML2 indicators addressed and 64% of ML3 indicators either implemented or awaiting approval. MTaPS is supporting the development of a new MIS known as Drug Administration Management System 2.

YEAR 5 ACHIEVEMENTS AND RESULTS

In year five, MTaPS conducted systematic capacity strengthening activities across a wide range of pharmaceutical systems areas with the following examples demonstrating an emphasis on supporting local stakeholders to undertake activities themselves.

Rwanda: MTaPS supported medicines dossier assessment retreats to reduce the backlog of pending medicine dossier applications at the Rwanda FDA. This enabled the Authority's assessors to utilize the reliance approach to expedite processing, as some applications were for products already registered by the Tanzania Medicines and Medical Devices Authority and Ghana FDA.

Nigeria: 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. Through an in-person, competency-based training approach, the capacity of 59 members (21 male, 38 female) of the 7 facility teams was built on key technical, managerial, and leadership components relating to IPC. As a result, the facility teams conducted step-down trainings for 1,218 staff (427 male, 791 female). MTaPS provides ongoing monitoring of these programs remotely and through mentoring visits to the facilities.

Nepal: Implementation of the SPARS pilot study was completed in 284 government health facilities documenting significant, 111% (8.5 to 17.9), improvement in medicines management following three supervisory site visits. Implementing SPARS helps to promote best practices in stock and storage management, ordering and reporting quality, and dispensing and prescribing quality towards optimal use of limited resources and health care provision.

Mali: MTaPS supported two local training institutions to manage e-Learning on IPC and AMS for pre- and in-service training programs. To ensure the continued use of the e-Learning platform in Mali after the end of project, MTaPS helped the DGSHP and Faculté de Médecine et d'Odonto/Faculté de Pharmacie to develop a user guide. This activity improved the use and sustainability of the e-Learning platform in Mali for pre- and in-service learners.

Tanzania: MTaPS contributed to raising awareness of IPC countrywide through training 108 journalists (43 female) to build their capacity in advocating and sensitizing the community and facilities on IPC good practices. Following this training, the media began to engage IPC specialists in discussing and educating the community on IPC/AMR-related issues.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

Selected examples of country-based capacity strengthening achievements are highlighted below:

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

Nigeria: In collaboration with the national AMR TWG secretariat, MTaPS conducted two visits to provide IPC teams with mentoring across seven supported facilities in Enugu and Kebbi States from July to September 2023. The mentoring visits provided on-the-job support to facility IPC teams on core IPC components. Key outcomes of the visits included enhanced capacity of IPC teams to intervene on core components of IPC and commitment from all three facilities' management to provide budgetary support for procurement of IPC consumables and related materials for use in the facilities.

Nepal: The Codes on Sale and Distribution of Drugs, including the GPP and GSDP guidelines, were endorsed by the DDA on July 13, 2023, to be approved by the Drug Advisory Committee under the MOHP next quarter. The GPP IEC posters were drafted and four short GPP IEC videos were published on the MTaPS website and YouTube[3] and were broadcast on public and private television channels. In addition, GPP and GSDP e-Learning modules were finalized and are being uploaded to the DDA website.

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

Burkina Faso: MTaPS supported the Direction de la Pharmacie Hospitalière to organize supervision visits to the centres hospitaliers régionaux in Ziniare, Koudougou, and Tenkodogo. These visits were used to conduct post-training follow-up on the rational use of antibiotics conducted in October 2022. Positive findings include that more facility management teams want to develop and put into place recommended STGs, with some activities being considered in facilities' operational plans.

Philippines: MTaPS facilitated a workshop to co-develop an operational guide for supply chain outsourcing using best practice 3PL or 4PL. This document is expected to create an enabling environment for supply chain stakeholders to engage 4PL or best practice 3PL in supporting their supply chain. Through this activity, the DOH recognized its critical role in guiding the CHDs, LGUs, and rural health units in their possible outsourcing endeavors of supply chain functions.

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

Philippines: LTAPs is a private sector engagement strategy to leverage local capabilities to support and sustain supply chain systems strengthening initiatives. During this last quarter, MTaPS identified potential LTAPs around three tracks: Track A (four providers) - Support quantification, warehouse operations, and inventory management standards; Track B (seven providers) - Support eLMIS implementation; and Track C (six providers) - Training on SCM-related topics. These potential TA providers could deliver specified direct PSCM services and/or on-site TA.

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

[3] https://www.youtube.com/playlist?list=PLWSyISPtEE1Z73fB-iFUwbrrYiR9aOdVG

Asia Bureau: MTaPS worked in collaboration with member states of SEARN and the WHO South-East Asia Region (SEARO) to develop a regional capacity-building strategy for SEARN that was presented to and adopted by the assembly of SEARN members during a meeting held in Jakarta, Indonesia, on July 26-27, 2023.

MTaPS hosted a regional webinar series titled "Strengthening Pharmaceutical Regulatory Systems in the Asian Region" that featured speakers from various organizations, including WHO, SEARO, SEARN, PQM+, Therapeutic Goods Administration, as well as NRAs from Nepal and Bangladesh. The webinar provided insights into ongoing efforts to enhance pharmaceutical regulatory systems in Asia, identify existing needs and gaps, and discuss strategies for improvement.

BEST PRACTICES/LESSONS LEARNED

- Engagement with stakeholders in the development and delivery of webinar series helped to ensure success through increasing engagement and participant reach. MTaPS' HQ experience across the PSS skills exchange series and Asian regulatory strengthening series has confirmed this.
- As e-learning platforms become ubiquitous across pharmaceutical system actors, leveraging e-Learning can help maximize the reach of capacity building activities and enable sustainable learning beyond the scope of time-bound projects and activities. MTaPS' work in Tanzania, Kenya, and Mali are particularly good examples, with MTaPS HQ leveraging the GHeL for longer-term use of globally relevant PSS learning courses.
- Supportive supervision—when coupled with a continuous quality management approach and repeated monitoring and assessment of capacities, gaps, and strengths—is a sustainable way to increase provider knowledge and improve alignment with established best practices across pharmaceutical system functions. MTaPS' results from Burkina Faso, Nepal, and Nigeria emphasize this aspect.

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

MTaPS' overall strategic approach is to support governing bodies in using evidence-based recommendations and tested approaches to strengthen the pharmaceutical system. MTaPS is providing TA to ministries to build institutionalized and sustainable capacity, which is critical to achieving UHC, the SDGs, and self-reliance.

CUMULATIVE PERFORMANCE TO DATE

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

Bangladesh

With MTaPS' assistance, enhanced versions of the UIMS and WIMS were incorporated into the eLMIS in PY1 to streamline the functionalities of the two inventory management systems, ensure real-time logistics transactional data, and contribute to better management of supply chain functions. MTaPS completed scale-up of the eAMS in all 61 DHs across the country in PY2. In PY3, e-TB Manager was enhanced for electronic reporting of aDSM and interoperability with the Janao app to capture data on patients assisted by private practitioners. The transition plan for e-TB Manager was developed in PY4 and is being implemented as planned. The NTP received paperless reporting from 100% of the TB sites from its reporting quarter 2 (April–June 2023) and MTaPS quarter 3 of PY5.

Nepal

The DDA's expanding role and responsibilities in various domains, including medicines registration regulation, clinical trial oversight, PV, health technology product registration, and pharmacy and wholesaler inspection, have been formalized and digitized with TA from MTaPS through the development of a new MIS known as Drug Administration Management System 2 (DAMS-2). MTaPS and the DDA are collaborating with a local vendor to facilitate data migration to and customization of DAMS-2, including online payment.

Philippines

MTaPS facilitated the inclusion of the eLMIS into UHC regulations to ensure policy support and designed the inventory strategy at all levels. MTaPS supported the DOH in introducing and rolling out an end-to-end eLMIS to enhance supply chain visibility and efficiency, including COVID-19 vaccines. To date, 105

warehouses in the central level (7), regional level (28), LGUs (21), SDPs (45), and other (4) have functioning eLMIS.

Rwanda

To increase the efficiency of the Rwanda FDA's regulatory functions, MTaPS provided technical support to implement an IRIMS that was customized to the Authority's requirements and deployed with training of internal and external users. MTaPS worked with the Rwanda FDA and Rwanda Information Society Authority to facilitate hosting of the IRIMS in the country's National Data Center. The IRIMS has since gone live, enhancing efficiency and accountability in regulatory service provision and access to information for decision making at the Authority.

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

Bangladesh

MTaPS supported the evaluation of 162 AE reports and at least 6 regulatory decisions for selected medicines, including all injectable antibiotics. enhanced for electronic reporting of aDSM. In PY5, the system was enhanced with a dashboard to provide a graphic and quantitative summary of selected indicators for reporting and decision making.

Mozambique

ANARME, IP collected data in PViMS as part of a study on AEs in PLHIV receiving the newly introduced TLD regimen. A total of 149 AEs were reported by 105 patients out of the 3,317 enrolled over the life of the study, with the most recorded AEs being headache, insomnia, nausea, and skin rash. The study objectives included characterizing the AE profile among patients using TLD and estimation of the incidence of AEs, including adverse pregnancy outcomes. MTaPS is supporting ANARME, IP in data cleaning to improve the quality of the data collected during patient follow-up visits. Unique patient records were entered into PViMS. MTaPS then supported capacity building on causality assessment, including on practical use of PViMS, which enabled the nine trained individuals (5 female, 4 male) to capture records and analyze the resultant data set. In PY4, PViMS was updated with TPT data collection forms.

Philippines

Since the start of the PViMS roll out in PY3, MTaPS has reached all 199 TB facilities. To date, 597 AEs have been reported through PViMS, and causality assessments were conducted for decision making. MTaPS supported the DOH in analyzing stock information for key tracer TB, FP, and HIV commodities starting in PY3 to make informed decisions to ensure uninterrupted availability of key program commodities.

Rwanda

The IRIMS has gone live, enhancing efficiency and accountability in regulatory service provision and access to information for decision making. MTaPS supported the Rwanda FDA to adapt PViMS for spontaneous reporting of AEs, including AEFI for Ebola and COVID-19 vaccines, and for ASM of DTG-based ART regimens. From June 2021 to September 2023, 1,708 AEFI (776 of which were serious AEs) were reported to the Rwanda FDA, which subsequently reported them to WHO. The use of PViMS ensures that medicine safety monitoring reports are quickly received and analyzed by the Authority, which can provide timely regulatory feedback to clients, patients, and HFs.

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

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

YEAR 5 ACHIEVEMENTS AND RESULTS

Bangladesh

The DGFP's eLMIS was scaled up at all 23 warehouses and 71 selected upazila FP stores, which allows the DGFP access to real-time logistics data for instant decisions on commodity resupply to SDPs and helps ensure the availability of commodities to the population. MTaPS assisted in implementing the comprehensive eLMIS at the CMSD for better management of health commodities, which will help the CMSD make decisions by reviewing stock status of medicines and equipment. In PY5, 2,306 assets were recorded in the eAMS, 38 tickets were raised for repair, and 12 tickets were resolved at the district level. The expansion of the system to 429 sub-district-level primary health care facilities countrywide has been initiated to enhance service quality and promote the efficient allocation of resources for procuring medical equipment.

All 485 upazilas from all 64 districts of 8 divisions completed the quarterly stock report and submitted the quarterly commodity requisition using the eLMIS. The NTP will be able to track TB commodity flows; monitor stock levels at these facilities; and facilitate evidence-based decision making, which will be crucial in ensuring the availability of TB commodities throughout the country. The DGDA-Regulatory Information Management System for online registration of vaccines and biosimilars in Bangladesh and PViMS (now called OpenRIMS-PV) for online AE reporting and monitoring, which were implemented for piloting with MTaPS' support, are functional and live on the DGDA website (www.dgda.gov.bd).

Mozambique

The TLD ASM final report was developed and validated by the ANARME, IP and the HIV national program in August. All 60 pregnant women on TLD enrolled in the study had liveborn newborns, with 90% (54/60) being term deliveries and 87% (54/62) of babies having normal birthweight. No suspected congenital anomalies were reported at birth.

Philippines

In PY5, MTaPS supported the DOH in expanding the eLMIS to 123 central, regional, LGU, and facility warehouses and designing the inventory controlling and planning system, which dictates how commodities will flow across the entire supply chain echelon. MTaPS finalized the PV and gender e-Learning content, which is ready to be uploaded to the DOH Academy and sustained the implementation of PViMS in the country.

Rwanda

On May 22, 2023, with MTaPS' support, the Rwanda FDA held a go-live event that involved a live demonstration of the IRIMS to sensitize stakeholders and the launch of its online service portal. In addition, with MTaPS' support, the integration of the IRIMS to the Rwanda Government *iRembo* national payment gateway was completed. Since then, efficiency and transparency in processing applications at the Rwanda FDA has increased, with more than 3,800 import permit applications and a significant increase in revenue collection through the government's *iRembo* payment gateway, with RWF

2,126,618,526 (USD 1,728,781) of the total revenue collection of RWF 2,304,400,075 (USD 1,873,304). MTaPS supported the development of a data protection and privacy policy to support the use of IMS, including the IRIMS, that is under final review by the Rwanda FDA. MTaPS supported the enhancement of PViMS to include interoperability with VigiFlow through the generation of E2B files that can be uploaded into VigiBase. This will help the Authority progress in addressing GBT indicator VL06.03: Vigilance data and findings are shared with relevant regional and international partners.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Bangladesh

MTaPS worked with the DGFP to roll out the online inventory management system in all 58 upazila FP stores in Rangpur Division. Implementation of the system has helped to identify and obtain real-time logistics data and use them for decision making. The results of the data analysis were used to avoid expiries and stock-outs and to accelerate the current year's procurement. By September 15, 2023, PViMS had documented 136 AE reports, 29 of which were assessed by the ADRM cell. MTaPS collaborated with government entities to draft nine transition plans. MTaPS held discussions with stakeholders to facilitate the seamless handover of these systems. MTaPS has been a strong advocate for the allocation of essential budget resources in the upcoming Health, Population and Nutrition Sector Program with various entities, including the DGDA, DGFP, MIS-DGHS, CMSD, and NTP, and proactively engaged in enhancing their capacity to ensure sustained and independent system management, operation, and maintenance once MTaPS closes out.

Nepal

A local vendor was contracted to migrate data from DAMS to DAMS-2 and support customization and introduction of new features. Exploration of potential interoperability among the Risk-Based Inspection and Medicines Risk-Based Surveillance tools and DAMS-2 is underway. To facilitate this interoperability, the local vendor is actively engaged in the investigation and development of the application programming interface mechanisms within OpenRIMS. MTaPS initiated training in DAMS-2 for registration applications and renewals. A load test is underway across various server environments and capacities to determine the hardware requirements before going live. Once the final load tests are completed on infrastructure of the National Information Technology Center, which is the hosting location, the go-live will be scheduled.

Philippines

This quarter, MTaPS supported the DOH in expanding the roll out of eLMIS to more LGUs and SDPs. eLMIS is deployed to 123 sites, including 7 central warehouses, 28 regional warehouses, 28 LGU warehouses, and 60 SDPs. To ensure seamless transition and sustain these gains, MTaPS collaborated with the DOH and developed an eLMIS transition and sustainability plan that outlines key interventions with resource requirements. MTaPS worked with MyCure and ReachHealth to conduct UAT for the web-based PIES in the Mabini, Batangas City, Bauan, San Pascual, Sta Rosa City, Binan City and, Cabuyao City LGUs.

Rwanda

MTaPS continued to work with the Rwanda FDA and the software development consultant to support IRIMS operationalization and implementation of critical system integrations with other Rwandan national-level electronic systems. Integration with the e-signature platform through a Rwanda Information Society Authority digital certificate was completed, making the licenses issued by the Rwanda FDA more secure and authentic. MTaPS also supported the Rwanda FDA to prepare for the WHO GBT assessment, of which IRIMS is a critical component.

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

Bangladesh

During this quarter, 378 assets in 61 district hospitals were entered into the eAMS. The eAMS now contains information on 9,373 assets, including their location, functional status, repair, and maintenance history. Access to equipment information enables efficient tracking of operational status and inventory within a facility and facilitates prompt decision-making regarding repairs, maintenance, and procurement, ultimately optimizing operational efficiency. The eLMIS had been rolled out to 485 upazilas by the end of the quarter.

Mozambique

Supervision visits assessed implementation progress at four of five sites, including physical counting of forms, synchronization of patient data in PViMS, and verification of patients' clinical information relevant to the study in Form B against the patient master records.

Nepal

The dashboard report for key performance indicators in DAMS-2 was finalized using Google data studio.

Rwanda

MTaPS supported PViMS enhancement to include interoperability with VigiFlow through the generation of E2B version 3 files that can directly be uploaded into VigiBase. MTaPS trained 23 people (9 female), including Rwanda FDA PV staff and NPAC and AEFI committee members, on carrying out signal detection, validation, prioritization, assessment, and management of safety signals of both medicinal products and vaccines.

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

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

BEST PRACTICES/LESSONS LEARNED

- Timely engagement of government counterparts is a crucial factor in achieving sustainability of software systems. To achieve long-term sustainability of such systems, it is vital that counterparts in government are brought in early with a view to sustainability by creating governance committees and finding champions very early in the process.
- Consistent and well-orchestrated collaboration is key for successful software implementation, such as in the Philippines eLMIS project. Fostering and maintaining collaboration among stakeholders including project implementation owners and the project process owners assists in ensuring that key objectives are met on time.

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 and appropriate allocation and use of financial resources is critical for enhancing access to essential medicines and strengthening health systems to achieve UHC. Poor allocation and suboptimal use of existing resources, coupled with high financial barriers, can reduce access to medical products and diagnostics within health systems. Putting sound financing strategies into effect minimizes the incidence of stock-outs and reduces the inefficient use of resources. MTaPS' objectives include building country pharmaceutical financing systems by strengthening their ability to institutionalize transparent and evidence-based decision-making, building 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.

In **Asia**, MTaPS developed a report on the landscape analysis of country-level pricing policies and available pricing databases for pharmaceuticals in Asian countries in 2021. MTaPS documented publicly available unit price information paid by the public and private sectors for different medicines and reviewed the use of pricing indexes to standardize pharmaceutical purchase prices and negotiation of the best values. MTaPS published a blog in November 2022 on pharmaceutical pricing policies.

In **Nepal**, MTaPS supported the development of an evidence-based policy on a price control mechanism for pharmaceutical products. MTaPS prepared a concept note to describe the current legal provisions, price ceilings, and the pricing of pharmaceutical products. The government's Cabinet Secretariat provided approval to replace the current 1978 Drug Act. MTaPS prepared a preliminary report on pharmaceutical pricing regulations and drafted an updated pricing regulation based upon the situational analysis.

In **Mozambique**, MTaPS supported the DNF/ANARME, IP 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, IP to control product price mark-ups of medicines as they move through the supply chain, hence stimulating wider availability of and access to medicines and other health products.

In **DRC**, MTaPS successfully advocated to the government to grant health products "social product status" instead of "business product status," which has lower or no tariffs and taxes, resulting in a significant cost and price reduction.

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 identify health interventions to be included in—or removed from—the benefits package and EML for national health insurance programs. The 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 roadmap document for policy action in LMICs. In **Asia**, MTaPS wrote a report exploring the feasibility of an HTA hub or collaborative institution in the region, stemming from a survey and interviews of over 50 stakeholders in Asia. 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* in July 2022. MTaPS also finalized the HTA Institutionalization Canvas, adapted from Osterwalder's business model canvas.

In **Indonesia**, MTaPS is supporting MOH in redefining the criteria for selecting HTA topics and drafted the HTA Topic Selection Operational Manual. 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. MTaPS also organized a capacity building session with HTA researchers from MOH and Universitas Gadjah Mada and conducted a hands-on activity on incorporating real-world data into a Markov model evaluating trastuzumab, a breast cancer medicine.

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 outlined options for setting up an HTA agency in the Ethiopian context.

In the **Philippines**, MTaPS finalized the HTA Methodology Guidelines for Clinical Equipment and Devices outline with the HTA Division and HTA Council. The draft content of the guide is expected to

be completed by mid-July 2023. Once finalized and approved, the guide will be used to inform decision-making in selecting efficient, equitable, and innovative medical devices.

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 benefit 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, further resulting in Bangladesh's interest to use OHT to cost the Shasthyo Surokhsha Karmasuchi Social Health Protection Scheme benefits package. MTaPS developed a report entitled "Pharmaceutical Benefits and Benefits Packages in Asia: A Cross Country Mapping of Coverage Arrangements," a brief on defining pharmaceutical benefits packages, and a two-part report reviewing costing tools and offering guidance for costing pharmaceutical benefit 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. MTaPS supported the PE tracking exercise, documented standard processes on PE tracking for MNCH, and disseminated the progress of the work with the HEU with the participation of WHO and Data International. MTaPS is also drafting a technical report and processes on the PE tracking exercise to help the HEU showcase the results for the policy brief and perform future exercises for other commodities.

In **Indonesia**, MTaPS conducted a system-wide landscaping of existing and potential PE data sources and produced a summary document. MTaPS also collaborated with the Indonesian health accounts team to compile existing PE data from available national sources and drafted a final report on the implementation of the 2022 PE tracking. MTaPS facilitated a meeting on future management of data for PE tracking, including data cleaning, validation, mapping, and analysis, as well as the need for a PE tracking team decree. MTaPS also facilitated the PE tracking training workshop, which resulted in the development of the 2023 PE tracking implementation plan.

To support **COVID-19 immunization costing**, MTaPS reviewed 530 articles across 3 databases and conducted 2 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. In **Malawi**, MTaPS collected vaccine delivery expenditure data in 4 districts through surveys and interviews in the national offices and 20 facilities and analyzed the COVID-19 costing data.

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

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

In **Bangladesh** in year 2, MTaPS assisted the NTP 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 the DOH in developing guidelines for framework agreements to ensure that quality health commodities are procured efficiently. MTaPS also supported the Philippines DOH on procurement process and quantifying FP and TB commodities. This allows flexibility in the quantity of commodities, reducing the possibility of overstock or stockout.

YEAR 5 ACHIEVEMENTS AND RESULTS

In supporting the COVID-19 global costing activity in year 5, MTaPS gathered real data on vaccine delivery expenditures in Malawi, modeled estimates using the COVAX model, and deployed global surveys. In **Indonesia**, MTaPS spearheaded the use of MCDA to redefine HTA topic selection criteria and encouraged a wider range of stakeholders to submit topics, from 19 topics in 2022 to 46 HTA topics for 2023, and 131 HTA topics for 2024. MTaPS also pioneered Indonesia's first PE tracking that estimated the country's total PE. In **Bangladesh**, MTaPS assisted the HEU in completing the PE tracking exercise and developing the standard processes on PE tracking and customization of training modules on PE tracking, optimizing the HEU's capacity. With **Asia Bureau** support, MTaPS evaluated the demand for HTA hub in Asia and developed an HTA business model canvas, offering a practical tool for countries to implement or advance HTA. MTaPS developed capacity-strengthening materials for standardizing PE tracking in the Asia region.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

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

In **Nepal**, MTaPS collaborated with the DDA to draft six regulations, including the pricing regulation, and three codes necessary for the implementation of the updated Drug and Health Product Bill, which is awaiting approval from the Parliament of Nepal.

In **DRC**, after successfully advocating to the government to grant health products "social product status" instead of "business product status." MTaPS is continuing to support stakeholders and ministries to enact and promulgate the developed draft ministerial decrees to enforce the application of this status change.

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

Under Cross Bureau funding, MTaPS' manuscript entitled "Institutionalizing Health Technology Assessment in Ethiopia: Seizing the Window of Opportunity" was published in the International Journal of Technology Assessment in Health Care.

In **Asia**, MTaPS conducted a comprehensive study to assess the demand for a regional HTA hub in the Asia region and identify specific needs and received buy-in from stakeholders to develop an integrated regional strategy for building HTA capacity, improving the political economy for HTA, gaining buy-in from key policymakers, and providing targeted support to regional priorities.

In **Indonesia**, MTaPS drafted the HTA Topic Selection Manual. MTaPS successfully encouraged a wider range of stakeholders to submit topics, from 19 topics in 2022 to 46 HTA topics for 2023, and 131 HTA topics for 2024—increasing the breadth of lifesaving technology options to be evaluated for coverage to Indonesians. MTaPS collaborated with Pusjak PDK and the University of Gadjah Mada to apply a model calibration for estimating the cost and effectiveness of adjuvant trastuzumab in early breast cancer, resulting in a recommendation for coverage by the national health insurance. Three abstracts were accepted at the 2023 HTAsiaLink in Malaysia; the presentation on stakeholder engagement for HTA received a prestigious and competitive HTAsiaLink award.

In the **Philippines**, MTaPS drafted the HTA Method Guide for Clinical Equipment and Devices (CEDs) for review to inform decision-making regarding the use, coverage, and reimbursement of CEDs. MTaPS supported shared best practices and experiences from Nepal on the creation of Technical Specifications Banak which would facilitate for the Philippines in developing its own essential medical devices list.

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

In **Asia**, MTaPS conducted technical training on the utilization of the OHT for pharmaceutical benefits package costing. The tool was implemented in Bangladesh to cost the country's benefits package. MTaPS also developed comprehensive PE tracking training materials to support capacity strengthening, which was used in Indonesia and Bangladesh. In Indonesia, MTaPS supported Pusjak PDK in a meeting to commence the PE tracking activity and presented at the International Health Economics Association (IHEA) congress.

In **Nepal**, MTaPS evaluated the cost of implementing the SPARS pilot program in 12 districts, which in 44% of the 286 pilot facilities led to significant improvements of pharmaceutical management and resource use.

In supporting the USAID COVID-19 global activity, MTaPS disseminated findings of vaccine delivery costing in Malawi at the Immunization Economics Special Interest Group Pre-Congress Session of the IHEA congress in Cape Town. MTaPS rolled out a third global survey with a focus on integrating COVID-19 vaccination into immunization programs and primary health care, as well as country efforts to target sub-populations for vaccination.

In **Bangladesh**, MTaPS assisted the HEU to complete the PE tracking exercise and develop the standard processes on PE tracking and customization of PE tracking training modules for MNCH commodities following the SHA 2011 guideline and the country context.

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

In the **Philippines**, MTaPS facilitated a learning session on quantification of health commodities and on quantification systems, processes, and tools. The estimated quantities and budgets will be used for the DOH's application for multi-year contractual authority for FP and TB commodity procurement.

BEST PRACTICES/LESSONS LEARNED

- Ongoing engagement with government counterparts is essential when developing methodological processes and guiding documents. This helps to ensure that they reflect the country's priorities and can be feasibly implemented and sustainably executed. This principle can also be adapted for the regional level: Collaboration in supporting HTA hub in Asia should be co-developed with HTAsiaLink and undertaken carefully to ensure that differences in the needs perceptions of various regional stakeholders for hub support are addressed (experience from Asia Bureau, Indonesia, and the Philippines).
- Documenting the impact of our intervention, such as the cost-effectiveness of the SPARS program or improvement in the HTA topics submitted, fostered a sense of ownership and localization of leadership. This approach is paving the way for sustainability in the long term (*experience from Indonesia and Nepal*).

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

OVERVIEW

Ensuring the availability and appropriate use of safe, effective, quality-assured, and affordable medicines and health technologies is critical for effective health outcomes. It requires integration with other objectives, including reliable data for decisions (Objective 3), addressing finances and the evidence-based selection of medicines and health technologies (Objective 4), stewardship to allocate resources efficiently (Objective 1), and institutionalizing best practices to improve pharmaceutical care (Objective 2) and patient safety.

CUMULATIVE PERFORMANCE TO DATE

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

Bangladesh: MTaPS supported government counterparts to develop a long-term procurement strategic plan, a standard list of medical equipment and reference prices for tertiary hospitals, a strategy for regular revision of the lists and prices, and a checklist for monitoring the procurement performance using standard indicators. It supported a capacity assessment of the entities and developed key recommendations for the use of FP data for decision making, including for FP warehouses to maintain a stock-out rate below 1%. MTaPS also introduced and supported implementation of the eAMS in all DHs; to date, 9,373 assets, 183 repair requests, and resolution of 128 tickets have been recorded.

Philippines: MTaPS supported development of a 3-year supply chain strategy and supply chain road map, design of the inventory strategy, analysis of stock information for tracer commodities, and delivery of several supply chain trainings uploaded to the DOH e-Learning Academy. MTaPS supported the long-term requirements for TB, HIV, and FP commodities to guide and facilitate budgeting and procurement, as well as the inclusion of TLD and pre-exposure prophylaxis (PrEP) in the National Formulary, and it supported the DOH and the Commission on Population and Development (CPD) in updating and finalizing its warehouse operation manual (WOM) and training of staff from different levels to roll out its use. MTaPS organized alignment meetings among different bureaus in the DOH with the objective of ensuring sustainable supply chain supportive supervision visits in HIV facilities.

Jordan: MTaPS successfully assisted the JFDA and the MOH to achieve procurement reforms to facilitate supplier market entry and product availability. Following the reforms, the GPD, with support from MTaPS developed an FA, implemented guidelines, trained public sector procurement personnel, and developed procurement negotiation guidelines. To improve procurement and supply chain practices, MTaPS assisted the MOH's PSD to complete a comprehensive assessment of the pharmaceutical supply chain, the findings and recommendations of which were used in the development of the PSD's Operational Plan 2023–2025 and priority SCM policies.

SUB-OBJECTIVE 5.2: PATIENT-CENTERED PHARMACEUTICAL CARE IMPROVED

Nepal: MTaPS worked with the DDA to develop guidelines and tools, an e-Learning course, and IEC materials for GPP and GDSP. A GHPP situational analysis led to the formation of a TWG to revise hospital pharmacy guidelines. Additionally, a capacity-building program for public-sector hospital pharmacists was initiated to improve GHPP in health care.

Rwanda: To improve provision of pharmaceutical services in Rwanda, MTaPS collaborated with the MOH, Rwanda FDA, and the NPC in developing pharmaceutical service accreditation standards and a plan to guide their implementation. Subsequently approved by the Minister of Health, and aided by MTaPS, these standards were disseminated alongside medicine safety information to 440 participants (295 male, 145 female) during the NPC conference.

SUB-OBJECTIVE 5.3: PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS ASSURED

Bangladesh: MTaPS has strengthened the PV system of the DGDA through implementation of PViMS to hospitals and marketing authorization holders (MAH); scaling up PV to more than 30 government and private HFs; training and creating PV units to institutionalize PV 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 WHO Uppsala Monitoring Center. MTaPS supported the DGDA in achieving the highest GBT score for PV function among the implemented institutional development plans (IDP).

Jordan: MTaPS 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 center 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. Two active surveillance projects were implemented for TLD and TPT. MTaPS was also active in protocol development, training ANARME, IP personnel to act as trainers on the protocol and SOPs for the surveillance; in supporting ANARME, IP in the analysis of the active surveillance data, including causality assessment and report writing; in training of provincial and district focal persons, who cascaded similar training to facility HCWs at the TLD and TPT implementing sites; in enrollment of study participants, and in conducting follow-up visits, including support supervision to the sites.

Nepal: MTaPS supported the DDA to conduct a situational analysis of the PV system in the country. Based on the findings of this analysis, as well as on WHO's best PV practices and GBT assessment, MTaPS developed PV regulations, guidelines, risk management plans, and SOPs for regulation and reporting. 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. MTaPS also supported capacity development of the DDA through training on signal detection, analysis, and risk management in PV.

Philippines: MTaPS supported the implementation of PViMS for active surveillance for TB medicines and working with the DOH's pharmaceutical division and the FDA ensured interoperability between PViMS and WHO VigiFlow for ADR reporting. MTaPS has also supported the causality assessment of the AE reports submitted through PViMS. Since the start of the PViMS rollout in PY3, MTaPS has been able to reach 100% of the 199 TB facilities. To date, 597 AEs have been reported through PViMS and causality assessments have been conducted for decision making.

Rwanda: MTaPS has continuously supported the Rwanda FDA in institutionalization of PV through development of a PV national plan, training of PV personnel, creation of awareness on PV, adapting the electronic PViMS for spontaneous reporting of AEs and active safety monitoring of DTG-based antiretroviral therapy regimens, as well as through causality evaluation of safety reports for regulatory decision making and the development of a costed multiyear national PV plan to guide the implementation of medical safety monitoring activities.

Tanzania: MTaPS supported the revision of the TOR for the National PV Safety Advisory Committee, developed safety monitoring guidelines for the pediatric population, trained Vigilance Technical Committee (VTC) members on medicines, vaccines, medical devices, and diagnostics, which has helped the assessment of 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 practice-based training.

SUB-OBJECTIVE 5.4: ANTIMICROBIAL RESISTANCE CONTAINMENT SUPPORTED

Jordan: MTaPS assisted in operationalizing the NAP-AMR, conducting AMR/AMS stakeholder analysis, and implementing AMS programs in two pilot HFs. It also supported the development of a national policy to combat multidrug-resistant organisms (MDRO) and the launch of a certified IPC training course. MTaPS-led CASS initiatives were integrated into the NAP-AMR to raise AMR awareness. Additionally, protocols, audit tools, and key performance indicators (KPI) were developed for RUA in ICU infections, surgical procedures, and urinary tract infections (UTI). The PCPD was also supported to take the lead in initiating national IPC assessment in dental settings.

Philippines: MTaPS aided the DOH in finalizing and disseminating an HF IPC checklist tool and TOT materials for IPC and HCWM guidelines, and it supported IPC assessments in 30 HIV facilities and training on using the developed materials.

Rwanda: Following the first NAP-AMR, MTaPS collaborated with the MOH, Rwanda FDA, and stakeholders to develop a multisectoral communication strategy for AMR. MTaPS also supported the integration of AWaRe categorization of antibiotics into the NEML and the development of an MTC manual and accompanying training guide and job aids.

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 helped inform the development of an AMR training curriculum for journalists and IEC materials on AMR containment.

YEAR 5 ACHIEVEMENTS AND RESULTS

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

Bangladesh: DHs used the eAMS system to record a total of 2,306 assets, 38 tickets raised for repair, and 12 tickets resolved. The eAMS was expanded to 429 Primary Health Care (PHC) facilities by the MIS unit of the DGHS using government funds. In PY5, 485 upazilas from all 64 districts successfully submitted the quarterly reports and requisitions using the eLMIS system. MTaPS also assisted in finalizing three e-Learning courses on Logistics Management, e-TB Manager, and Procurement, now available on the Muktapaath government platform. A significant but still inadequate number of professionals has enrolled and completed the courses.

Philippines: MTaPS supported the DOH to complete the multiyear quantification of HIV, FP, and TB commodities, the results of which have been/are used for immediate and future fund management and procurement. MTaPS helped in designing the inventory controlling and planning system, which dictates the flow of commodities across the entire supply chain and the optimal levels of inventory at each level. In addition, MTaPS analyzed the country's CYP for the public and private sectors and provided analysis and recommendations to decision makers.

Jordan: MTaPS supported the PSD to develop six priority procurement and supply management policies, which were granted official approval from the MOH; the development and submission of the final versions of FA SOPs; and the procurement negotiation SOPs for final approval and dissemination. MTaPS conducted a training session with the GPD on implementing FA using the FA SOPs for the GPD information technology (IT) team and members of the Automation Consulting Committee at the GPD. In addition, MTaPS collaborated with the Public Financial Management Activity (PFMA) Project to deliver training on GPB.

SUB-OBJECTIVE 5.2: PATIENT-CENTERED PHARMACEUTICAL CARE IMPROVED

Nepal: MTaPS helped the DDA to endorse codes on sale and distribution of drugs, including GPP and GSDP guidelines, anticipated for approval by the MOHP Drug Advisory Committee. MTaPS also supported widespread dissemination of GPP and GSDP IEC materials, including engaging videos on MTaPS platforms and televised broadcasts for broader outreach. Additionally, 27 pharmacists were trained as GPP and GSDP tutors using MTaPS-developed materials.

SUB-OBJECTIVE 5.3: PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS ASSURED

Bangladesh: The DGDA implemented the PViMS (now called OpenRIMS-PV) for online AE reporting and monitoring on the DGDA website (www.dgda.gov.bd).

Mozambique: MTaPS finalized the TLD AMS study report that was able to provide local evidence of the safety of TLD. The TPT study was successfully initiated and has so far enrolled 458 patients across the 5 implementing facilities.

Nepal: To improve ADE reporting and strengthening of PV, MTaPS trained staff from the DDA and all regional PV centers and public health programs in PV reporting and finalized posters for ADE.

Philippines: MTaPS finalized the PV e-Learning course, which is ready to be uploaded to the DOH Academy and continued to support the implementation of PViMS, including the causality assessment of AEs received.

Rwanda: MTaPS supported the enhancement of PViMS to include interoperability with VigiFlow, the review and printing of patient alert cards (10,000 pieces)and IEC materials (1,200 pieces) to increase public awareness, and an in-depth review of the draft institutional communication strategy, which will guide the Rwanda FDA in internal communications to staff and external communications to stakeholders and the public.

Tanzania: MTaPS provided technical support to the TMDA to train; qualified persons responsible for pharmacovigilance (QPPV) from the industry and TMDA assessors on PSUR and risk management plan (RMP), health care providers from PV centers, and TMDA zonal offices on advanced PV to strengthen their PV system including conducting PV investigations.

SUB-OBJECTIVE 5.4: ANTIMICROBIAL RESISTANCE CONTAINMENT SUPPORTED

Jordan: In PY5, MTaPS supported the development and dissemination of protocols and procedures and accompanying KPIs and audit tools for ICU infection management and prophylaxis. Two HFs were aided by MTaPS to finalize antibiotic prophylaxis protocols for surgical procedures and UTI management. HCAD developed AMR awareness messages and integrated MTaPS-supported CASS initiatives into the NAP-AMR, with plans to extend the initiatives to more schools.

Philippines: In PY5, the DOH's Health Facility Development Bureau trained 221 HCWs (94 female, 127 male) on IPC and HCWM using the materials developed with MTaPS support.

Nepal: In PY5, MTaPS formally initiated national AMR containment efforts, including stocktaking of the AMR landscape, participation in WAAW 2022, and engagement and training of media personnel to raise public awareness about AMR, resulting in publication of over 200 news reports and TV and radio programs dedicated to AMR.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Bangladesh: MTaPS submitted the final draft of the Procurement Handbook, which is expected to standardize and improve procurement practices in the DGHS. MTaPS helped the DGFP to roll out the online inventory management system in all 58 Upazila Family Planning Stores in Rangpur Division. The real-time data analysis using the system by the DGFP contributed to avoiding expiration and stockout and to accelerating procurement of FP products. DHs entered data on 378 assets in eAMS. The implementation of the eAMS at subdistrict-level hospitals has been initiated by the MIS unit of DGHS using its own funds.

Philippines: MTaPS facilitated a virtual learning session on quantification of health commodities for 295 participants (219 female) from the DOH and CHDs; advanced face-to-face training on quantification systems, processes, and tools for 10 DOH staff who are capacitated to train other officers from all

levels; and a training on Public Procurement Law in collaboration with GPPB for 19 participants, 14 (11 female) from DOH and 5 (2 female) from the USAID Health Office. These trainings enhanced the capacity of the DOH to manage and ensure availability of commodities.

Jordan: MTaPS submitted the final draft of the FA SOPs and Procurement Negotiation SOPs to the GPD, which has submitted them to the National Committee for Procurement Policies (NCPP) for their endorsement and dissemination. MTaPS, in response to the GPD's request, conducted trainings on FA implementation; 17 (10 male and 7 female) representatives of the IT team and members of the Automating Consulting Committee at GPD attended.

SUB-OBJECTIVE 5.2: PATIENT-CENTERED PHARMACEUTICAL CARE IMPROVED.

Nepal: MTaPS assisted the DDA in endorsing the codes on sale and distribution of drugs, including GPP and GSDP guidelines, set for approval by the MOHP Drug Advisory Committee next quarter. MTaPS supported the dissemination of GPP and GSDP IEC materials, including engaging videos on MTaPS platforms and televised broadcasts. Additionally, 27 pharmacists were trained as GPP and GSDP tutors using MTaPS-developed materials.

SUB-OBJECTIVE 5.3: PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS ASSURED

Bangladesh: MTaPS provided technical assistance in the safety data evaluation by the adverse drug reaction monitoring (ADRM) cell (294 AE and 78 aDSM reports) and technical subcommittee (TSC) (18 AE and 5 aDSM reports), the drafting of a PV newsletter, and the implementation of and training on PViMS preceded by UAT. So far, 136 AE reports have been received through PViMS, of which 29 were assessed by the ADRM. MTaPS supported the DGDA to celebrate World Patient Safety Day.

Mozambique: Working with ANARME, IP, MTaPS supported the enrollment of a total of 458 patients in the TPT study, with 2,274 follow-up visits completed and 45 AEs reported. A fourth supportive supervision visit in September provided PViMS refresher training for site staff, assessed synchronization of patient information in the system, verified that form Bs could be introduced into PViMS, and followed up on the pending forms with missing data and patient follow-up.

Philippines: MTaPS conducted causality assessment for 16 AE (8 probable, 8 possible) of 28 AE reports received through PViMS between July and September 2023. Of those reports, 12 could not be assessed due to lack of baseline data. MTaPS finalized and shared 2 versions of the PV e-Learning course to the FDA, namely, Principles and Concepts of Pharmacovigilance and Reporting in Pharmacovigilance, and assisted the FDA to seek CPD accreditation from the Professional Regulatory Commission for the PV courses to encourage health care workers to enroll.

Rwanda: MTaPS supported PViMS interoperability with VigiFlow through generation of E2B files that can be directly uploaded into VigiBase and trained 4 Rwanda FDA staff (3 male, 1 female) on the updated PViMS. In addition, leveraging on COVID-19 funding, MTaPS trained 23 people (9 female), including Rwanda FDA PV staff, and NPAC and AEFI committee members to enhance their knowledge and skills in carrying out signal detection, validation, prioritization, assessment, and management of safety signals of both medicinal products and vaccines.

Tanzania: MTaPS Tanzania supported the TMDA to train 33 (16 female) QPPV from the MAHs and trained 24 (6 female) TMDA junior assessors on areas including PSUR and RMP. This enabled manufacturers to set up functional PV systems for safety follow-up on their products and submit PSUR and RMP and the TMDA to assess a backlog of 76 PSURs and 18 RMPs during the training. A total of 30 (16 female) health care providers from PV centers and TMDA Zonal offices were trained on PV to strengthen their PV centers through conducting regional PV investigations. Thereafter, MTaPS printed 10,080 PV-related guidelines, safety manuals, and reporting forms and distributed them to HFs and sensitized HFs in 5 regions (Dar es Salaam, Pwani, Iringa, Njombe, Singida) on PV reporting and encouraging clients and patients that were encountered at the facilities to report any AEFIs and ADRs that they experience.

SUB-OBJECTIVE 5.4: ANTIMICROBIAL RESISTANCE CONTAINMENT SUPPORTED

Jordan: MTaPS supported the RMS to approve and disseminate treatment protocols for ICU infection. The Institutional Development and Quality Control Directorate (IDQCD) and the PCPD approved an institutional policy for RUA, with accompanying audit tools and KPIs. MTaPS also supported the PCPD to develop an implementation plan for national IPC assessment in dental settings. The HCAD developed AMR/IPC awareness messages, and together with SHA, integrated the MTaPS-led CASS initiatives into the NAP-AMR.

Philippines: MTaPS collaborated with the DOH's Health Facility Development Bureau (HFDB) to train 75 HCWs from one region on HCWM and IPC, including practices to mitigate climate risk in HFs using training materials that MTaPS helped develop.

Nepal: To support efforts for raising awareness and educating communities about AMR, MTaPS supported the eighth AMR sensitization workshop for journalists in Kathmandu, which produced a notable publication on gender equity's impact on AMR in Nepal on the website of Gavi, the Vaccine Alliance.[4] MTaPS also disseminated the AMR situation analysis in Nepal to USAID and the MOHP.

BEST PRACTICES/LESSONS LEARNED

- Harmonizing intra- and interorganizational efforts helps accelerate the improvement of supply chain practices in managing and tracking commodities and the availability of accurate and timely information for decision making to mitigate stockouts. This was demonstrated in the Philippines, where different DOH bureaus and regions worked together to ensure availability of essential HIV commodities.
- Nontraditional in-service training through e-Learning is easy and accessible, making it popular with participants, even as compared to other non-traditional methods (including other forms of distance learning, such as webinars). In Philippines, for example, many participants chose e-Learning. In Y5 most participants taking part in non-traditional training chose the DOH Academy e-Learning (Q1: 74%; Q2: 72%; Q3: 93%; Q4: 55%).

[4] https://www.gavi.org/vaccineswork/how-gender-inequality-drives-drug-resistance-nepal.

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 IHR capacity levels measured by JEE scores in MSC-AMR, IPC, and AMS to enhance their ability to effectively implement their NAPs-AMR.

CUMULATIVE PERFORMANCE TO DATE

EFFECTIVE MSC-AMR: EXAMPLES FROM TWO COUNTRIES

To support **Burkina Faso's** advancement toward levels 3 and 4 of the WHO benchmarks for IHR capacities for MSC-AMR, MTaPS has helped strengthen the country's MSC structures and mechanisms, including collaborations with national counterparts and partners to establish and functionalize the country's OHP and technical steering committee, TS, OH focal points, and TTCs and their sub-commissions; establish and maintain coordination between the AMR-TCC and the OHP through regular meetings and information sharing; develop and implement the NAP-AMR (2021–2024); build capacity of veterinarians through TOT sessions; and print and disseminate guidelines and training packages.

In **Tanzania**, MTaPS' support to the AMR MCC strengthened coordination of NAP-AMR implementation; established and operationalized MCC TWGs; developed and operationalized the Multisectoral AMR Communication Strategy (2020–2025) that has facilitated effective OH communication, coordination among OH stakeholders, and NAP-AMR implementation; and enabled the country's first self-evaluation in preparation for the second external JEE.

IPC IMPROVED AND FUNCTIONAL: EXAMPLES FROM TWO COUNTRIES

To improve the JEE scores for IPC, MTaPS **Kenya** helped bolster IPC governance structures at the national and county levels; review and develop the IPC guidelines, including the national HAI surveillance guidelines; apply standardized IPC assessment tools; train HCWs; develop the relicensure-linked IPC CPD course; and effectively monitor IPC and WASH activities in specific counties and HFs.

MTaPS worked with **Senegal** to review and update the national IPC supervision checklist to include the WHO multimodal strategy to standardize IPC implementation nationally. Additionally, the first assessment of the national IPC program using the WHO IPCAT2 was done. The results complemented other IPC program-strengthening efforts, including revising the National IPC Policy and developing the National IPC Strategic Plan and operational work plan; in addition, the national IPC program revitalized 13 hospitals' ICCs; established IPC programs in five HFs; and conducted repeat IPC assessments in 10 HFs, which showed improvements.

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED: EXAMPLES FROM TWO COUNTRIES

To help **Mali** reach higher capacity levels for AMS as measured by the JEE, MTaPS supported the GCMN-RAM's AMS TWG to use the WHO AMS checklist to monitor AMS practices in supported HFs. To foster continuous AMS education, MTaPS developed and supported the dissemination of e-Learning courses on AMS and related topics, including IPC and COVID-19. Additionally, MTaPS supported the DGSHP, DPM, and the National Agency for the Accreditation and Evaluation of Health Facilities to establish and implement AMS programs in 16 HFs. To advance AMS implementation at the national and sub-national levels, MTaPS supported the National Institute of Public Health, DGSHP, DPM, and stakeholders to develop and disseminate the 2023–2027 NAP-AMR, 2021–2025 AMS action plan, AMS training toolkit, DTC toolkit, and STGs for infectious diseases.

MTaPS is helping **Mozambique** advance from a baseline JEE score of 1 for AMS capacity by supporting the DNAM-Department of Hospital Therapeutics; ANARME, IP; and National Institute of Health to improve AMS practices in three HFs. To regulate antimicrobial use, MTaPS supported the ANARME, IP to assess the country's AMS policies and regulatory framework for the human sector and develop a draft regulation for prescription-only sales of key antibiotics.

YEAR 5 ACHIEVEMENTS AND RESULTS

Global activities: As of September 2023, with the support of MTaPS, 13 countries have made significant progress toward achieving sustainable capacity in line with the WHO benchmarks. An average of 50% of benchmark actions (405 out of 806 benchmark actions of all collaborating countries) have been partially or fully supported, showcasing substantial strengthening of health care systems and emergency preparedness.

During FY23, MTaPS published five peer-reviewed journal articles sharing experiences, lessons learned, and expert opinions on topics related to developing and implementing AMS programs, antimicrobial use surveillance, and MSC-AMR. MTaPS also published 12 technical briefs, 7 blogs, and 6 success stories highlighting best practices and experiences on IPC, AMS, capacity building, sex and gender considerations, OH, MSC-AMR, and WHO benchmarks and JEE. MTaPS made seven presentations at four international conferences to share its work related to best practices for MSC-AMR, AMS, and IPC. In June 2023, MTaPS participated in the second meeting of WHO's Strategic and Technical Advisory Group for Antimicrobial Resistance, where participants reviewed and provided guidance on several areas of WHO's global AMR work. MTaPS presented to WHO in June 2023 on the experiences, challenges, and lessons learned from MTaPS' multicountry, multiyear GHSA work at the invitation of the organization's Evidence and Analytics for Health Security Unit. Lastly, MTaPS GHSA programs in **Mozambique** and **Uganda** ended in September 2023, with end-of-project presentations made to the USAID Mission and Washington.

Effective MSC-AMR: Throughout FY23, MTaPS continued to strengthen MSC mechanisms in all 13 countries by supporting regular MSC meetings, In **Kenya**, MTaPS strengthened MSC-AMR by supporting the NASIC and specific counties and their CASICs to develop and launch their work plans, In **Mali**, MTaPS helped streamline the functions of the GCMN-RAM and its IPC and AMS TWGs. MTaPS also helped monitor NAP-AMR implementation in **Côte d'Ivoire, Kenya, Mozambique, Nigeria,** and **Uganda** and develop new NAPs-AMR in **Cameroon, Kenya**, and **Tanzania**.

IPC improved and functional: During FY23, MTaPS worked with stakeholders to develop and update key IPC documents, including **Senegal's** national IPC work plan and national IPC guidelines; **Nigeria's** IPC for viral hemorrhagic fever management guidelines; **Ethiopia's** national IPC guidelines, technical guide for establishing IPC centers of excellence, and guidelines for HAI surveillance; **Mozambique's** IPC protocols and SOPs, national IPC manual, and guidelines for HAI surveillance; and **Uganda's** national IPC plan for the agriculture sector. IPC assessments, including baseline and repeat assessments for human and animal health using standard tools, were conducted with MTaPS' support in 11 countries.

Use of antimicrobial medicines optimized: During FY23, MTaPS collaborated on the development and updating of major AMS documents, including the national AMS plan, guidelines and STGs for common infections, and the accompanying mobile app for dissemination in **Bangladesh**; the AWaRe categorization of antibiotics in **Côte d'Ivoire** and **Nigeria**; national antibiotic use guidelines in **DRC**; an AMS practical guide, a NEML, STGs and an implementation manual that included the AWaRe categorization of antibiotics, and a manual on the hospital antimicrobial use policy in **Ethiopia**; a NEML and national medicines formulary that incorporated the AWaRe categorization in **Kenya**; a national AMC report (2020–2022) in **Tanzania**; and a tool for designating centers of excellence for AMS in **Uganda**.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

EFFECTIVE MSC-AMR

Strengthening MSC governance structures and functions: In **Burkina Faso**, MTaPS supported the TS-OHP to select members for the AMR TTC and obtain commitment from the Ministers of Health and Public Hygiene; Environment, Energy, Water and Sanitation; Agriculture, Animal Resources and Fisheries; and Higher Education, Research, and Innovation to appoint official representatives to the committee. MTaPS also supported **Ethiopia's** national AMR advisory committee to revise its TOR and develop its annual action plan on national efforts to prevent and contain AMR.

Holding multisectoral meetings or activities: During this quarter, MTaPS facilitated routine MSC meetings in **Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Ethiopia**, **Kenya**, **Mali, Mozambique,** and **Senegal**. In **DRC**, MTaPS supported the National Border Hygiene Program (*Programme national de l'hygiène aux frontières*), which is the AMR focal point, to coordinate meetings with other multisectoral stakeholders to conduct a self-assessment of the country's progress in all 19 IHR technical areas. In **Cameroon**, MTaPS collaborated with IDDS and AFROHUN to integrate IPC, AMS, and AMR surveillance course materials into the curriculum for Cameroon's recently adopted master's degree program for infectious diseases and AMR at the University of Buea.

Drafting or updating multisectoral policies, plans, or guidelines: During this quarter, MTaPS supported the review of NAPs-AMR in **Uganda, Côte d'Ivoire,** and **Mozambique**. In **Nigeria** and **Senegal**, MTaPS supported the development of new NAPs-AMR using WHO guidance.

IPC IMPROVED AND FUNCTIONAL

Strengthening facility IPC governance structures and functions: In **Mozambique**, MTaPS helped conduct the third WHO IPCAT2 assessment and used the results to update action plans to address

gaps. MTaPS helped **Nigeria** assess its IPC status using JEE v3.0; the country scored level 3 (developed capacity) for IPC programs, 2 (limited capacity) for HCAI surveillance, and 1 (no capacity) for health worker safety. MTaPS worked with **Bangladesh** to draft TOR for the national IPC committee.

Developing and implementing IPC policy and guidance documents: To ensure the availability of adequate IPC information in **Tanzania**, MTaPS collaborated with the MOH and other stakeholders to conduct the final review of the draft IPC communication strategy (2023–2028). In **Kenya**, MTaPS supported the review of the national IPC guidelines and HCWM guidelines and the drafting of the HAI surveillance guidelines. To improve **Cameroon's** HAI surveillance framework performance and integrate it into the national surveillance system to ensure sustainability, MTaPS helped evaluate the HAI surveillance system in 13 HFs. MTaPS supported **Nigeria** to disseminate the guidelines for managing IPC for viral hemorrhagic fever.

Developing individual and local training capacities: During this quarter, MTaPS **Mali** aided selected training institutions to manage their e-Learning platforms and develop user guides. To improve access to IPC training for HCWs in **Ethiopia**, MTaPS supported the development and validation of an e-Learning module for IPC. MTaPS assisted **Bangladesh** to translate the IPC e-Learning course into Bangla and conduct successful test runs. In **Cameroon**, MTaPS supported a cross-sectional KAP survey of HCWs on hand hygiene in 13 HFs, and in **Uganda**, MTaPS helped evaluate IPC programs in six HFs as part of the project's close-out activities.

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Developing and implementing AMS policies, plans, and guidance documents, including AWaRe classification: In **Kenya**, MTaPS supported the finalization of the KEML 2023, incorporated the AWaRe categorization, and aligned it with the KNMF. As a key step toward developing the AWaRe-integrated NEML and national STG in **Nigeria**, MTaPS provided the evidence needed to categorize antibiotics in the NEML. In **DRC**, MTaPS helped develop and disseminate national guidelines for antibiotic use in HFs, while in **Mali**, MTaPS collaborated on the development of IEC materials, including posters and flyers, to help raise awareness about AMS. MTaPS provided support to draft an AMS in-service training curriculum guide and manual in **Tanzania** and supported the finalization and formal handover of the assessment instrument and checklist for designating HFs as centers of excellence in **Uganda**.

Assessing AMS capacity at the national and local levels and developing action plans: MTaPS worked with **Ethiopia** to disseminate postintervention assessment results of AMS practices in five HFs, which showed improvements in key AMS indicators. In **Côte d'Ivoire**, MTaPS helped develop a protocol for the PPS on antibiotic use, and in **Kenya**, MTaPS facilitated a virtual training for PPS data collectors in MTaPS-supported facilities in Kilifi County. MTaPS collaborated with **DRC** to assess AMS practices in four HFs, demonstrating improvements in various indicators. MTaPS supported a national-level assessment of AMS core elements and development of an action plan addressing gaps in **Mozambique**. MTaPS facilitated a qualitative assessment to evaluate AMS interventions in six HFs in **Uganda** that showed that staff perceived the benefits of AMS interventions to be strengthening hospital AMS programs, promoting antimicrobial use, and improving HCWs' awareness about AMR and AMS.

Strengthening individual and local capacity: MTaPS helped hospital AMS teams in **Nigeria** strengthen their capacity to develop hospital antibiograms and helped to develop and validate an e-Learning module for AMS in **Ethiopia**. In **Bangladesh**, MTaPS supported training on the WHO AWaRe classification and STGs in two supported HFs. MTaPS supported mentorship and supportive supervision activities in two HFs in **Burkina Faso** to identify AMS problems and intervene appropriately; in addition, MTaPS strengthened the capacity of HFs to implement AMS activities through joint supervision and mentorship activities in **Côte d'Ivoire**. To improve antibiotic use in **Senegal**, MTaPS facilitated a prescribers training in one supported HF.

BEST PRACTICES/LESSONS LEARNED

- Aligning TOR for AMR governance structures with national strategic plans ensures coherence and synergy. Among national frameworks, this helps amplify NAP-AMR implementation as observed in Uganda and Kenya.
- Support, leadership and oversight from the national level is critical for guiding appropriate antibiotic use at lower levels. For example, in DRC, the leadership of the Congolese Pharmaceutical Regulatory Authority spearheaded the development of the national guidelines for antibiotic use in HFs, which facilitated the acceptance and involvement of key stakeholders and acceptance of the guideline at lower levels.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

	Activity & Description
Global	▪ Facilitate the USAID GHSA quarterly meeting ▪ Submit the GHSA semiannual report to USAID in early November and include USAID's global health security indicators that relate to MTaPS' GHSA work ▪ Finalize and publish the revision of the Global Health e-Learning AMR 2 course after receiving final feedback from USAID
MSC	▪ Continue facilitating meetings of MSC-AMR bodies and/or their TWGs (KE, ET, BD, BF) ▪ Finalize and launch the new NAPs-AMR and M&E frameworks (NG, KE) ▪ Participate in national IPC and AMS TWG meetings (ET) ▪ Continue supporting e-Learning courses on AMR-related topics (ML, ET)
IPC	▪ Launch the national IPC and HCWM guidelines and the HAI surveillance protocol (KE) ▪ Finalize the AMR mobile app (KE) ▪ Continue mentorship and support for the implementation of the quality improvement initiative on AMS and IPC (ET) ▪ Support the National IPC Committee to develop the national IPC action plan (BD)
AMS	▪ Support commemoration of WAAW 2023 (KE, ET, BD) ▪ Finalize the electronic AMC tool and disseminate it in selected facilities (KE) ▪ Finalize the AWaRe implementation guides (KE) ▪ Finalize and launch the KEML 2023 and KNMF 2023 (KE) ▪ Finalize the development of a PPS training package (KE) ▪ Support the development and dissemination of IEC materials on AMS (ML) ▪ Support the dissemination of the ministerial order regulating and enforcing the rational use of antimicrobials (BF) ▪ Support the DPH and DTCs to identify authorized prescribers, define prescribing criteria, and develop a guide regulating visits from pharmaceutical company representatives (BF)

B. COVID-19

COVID-19 RESPONSE AND VACCINE INTRODUCTION

In May 2023, WHO declared that COVID-19 no longer represented a global health emergency. Most MTaPS countries reported noticeable decline in COVID-19 cases and shifted the health priorities from pandemic response to strengthening the preparedness based on COVID-19 lessons learned. This marked the conclusion of the COVID-19 activities in most of the MTaPS counties in Quarter 4, with only 5 countries—Cameroon, Côte d'Ivoire, Madagascar, Philippines, and Rwanda continuing activities in in PY6. In these countries, MTaPS supports careful vaccination planning, reaching out to vulnerable and remote populations, actively promoting vaccine safety monitoring and evidence-based information, and engaging private-sector providers and communities. The governments are looking into health system improvements based on the innovations and lessons from the pandemic response and exploring the options for private sector engagement and mainstreaming COVID-19 vaccination into national immunization programs.

In PY5 and Quarter 4, all planned COVID-19 activities in Bangladesh, Burkina Faso, Kenya, Mali, Mozambique, Nigeria, Philippines, Senegal, and Tanzania had already been completed.

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 eight 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: PV 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

PY5 ANNUAL HIGHLIGHTS FROM THE COUNTRIES THAT COMPLETED ACTIVITIES BEFORE QUARTER 4

In **Bangladesh** in PY5, USAID MTaPS supported the integration of eLMIS into the MIS on the DGHS main server and developed a pool of staff skilled in the management of stock data and day-to-day stock transactions for effective supply decision-making through the now-functional CMSD online portal

(cmsd.gov.bd) for both COVID and non-COVID health commodities. Another element of the DGHS's integrated MIS established with MTaPS support is the COVID-19 Vaccine Logistic Management System (vLMIS), which monitors COVID-19 vaccine stock, inventory, and distribution. vLMIS is now fully functional, and the DGHS is planning to expand the system for the management of all vaccines for the national Expanded Program on Immunization (EPI).

In **Mozambique**, MTaPS supported the DNAM of the Ministry of Health to strengthen IPC for the ongoing COVID-19 vaccination campaign. MTaPS developed training materials and conducted cascade trainings for 130 health care workers (69 male, 61 female) in Maputo City and Maputo Province on COVID-19 vaccination-related IPC and waste management.

In **Nigeria**, MTaPS' COVID-19 program was 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 the states of Oyo, Akwa-Ibom, Cross River, Rivers, Kaduna, and Federal Capital Territory (FCT). MTaPS worked collaboratively with the state primary health care boards, the professional associations for pharmacists and doctors, and other implementing partners involved in COVID-19 vaccination, such as WHO, UNICEF, and Breakthrough Action Nigeria, to increase outreach and generate demand for COVID-19 vaccination. MTaPS developed a comprehensive manual on COVID-19 vaccination for private facilities, covering standards for immunization services, planning, logistics, vaccine administration, IPC, waste management, and a training curriculum for vaccinators. MTaPS trained 591 private-sector vaccinators (188 male, 403 female) on topics including vaccine handling, storage, delivery, and waste management; planning and organization of COVID-19 vaccination sessions; AEFI monitoring; recording and monitoring for COVID-19 vaccination; and communication with communities on COVID-19 issues. The vaccination manual and the training materials will be the basis for the Pharmacists Council of Nigeria (PCN) Mandatory Continuing Professional Development (MCPD) program for Nigeria pharmacists interested in providing vaccination services. In PY5, the 327 MTaPS-supported community pharmacies and private hospitals vaccinated 6,145 people (2,958 male, 3,187 female) with a first dose of an approved COVID-19 vaccine; 76,470 persons (37,075 male, 39,395 female) with a last recommended dose, and 40,528 people (20,119 male, 20,409 female) with a booster dose.

PY5 AND QUARTER 4 HIGHLIGHTS FROM THE MTAPS COUNTRIES THAT CONTINUED TO IMPLEMENT ACTIVITIES IN QUARTER 4

In **Cameroon**, in Quarter 4, MTaPS supported the EPI to conduct phase 2 of COVID-19 vaccination in selected hard-to-reach areas in the three MTaPS-supported regions (Center, Littoral, and West). Vaccination was delivered by 287 mobile teams, 50 data managers, and 1,496 supervisors previously trained by MTaPS. During phase 2, a total of 67,439 doses of vaccine were administered to 33,264 females and 34,173 males receiving the first, second, or recommended booster doses. With MTaPS support, the EPI conducted an evaluation workshop for the phase 2 vaccination campaign in hard-to-reach areas, as well as supportive supervision for 38 private health facilities that were trained on COVID-19 vaccination and related topics. Of these health facilities, 90% had integrated COVID-19 vaccination in their routine activities. MTaPS supported the development the EPI SOP manual on vaccine-related waste management. Overall, in PY5, 683,589 people received recommended COVID-19 vaccine doses in Cameroon with MTaPS support, including 576,850 during phase 1 (sex disaggregated

data is not available) and 106,739 during phase 2 (including 33,430 males and 32,079 females who received the first dose of the vaccine; 3,443 males and 3,037 females who received the second recommended dose; and 17,602 males and 17,148 females who received a recommended booster dose).

In Quarter 4, the **Côte d'Ivoire** MTaPS team focused on supporting the introduction of vaccination services in private health care facilities, such as private clinics and pharmacies. MTaPS supported the Directorate of Coordination of the Expanded Immunization Program (DCPEV) in organizing the official signing ceremony of the VACCIPHA initiative charter between the Ministère de la Santé, de l'Hygiène publique, et de la Couverture Maladie Universelle; l'Union Nationale des Pharmaciens privés de Côte d'Ivoire; l'Association des Cliniques privées de Côte d'Ivoire; l'Ordre des Médecins et l'Ordre des Pharmaciens de Côte d'Ivoire. This charter defines routine vaccination in private pharmacies and clinics in Abidjan. Through signing it, the heads of pharmacies and private clinics commit to supporting the government's efforts to protect the health of the population through vaccination. The launch campaign included 12 pharmacies from the districts of Yopougon East (1) Yopougon West (1) Cocody Bingerville (3) Abobo East (5) and Anyama (2), which had received training and coaching and were ready to vaccinate. A total of 54 people were mobilized, comprising 6 EPI health district coordinators, 12 vaccinators, 12 vaccination pharmacy focal points, and 24 mobilizers. A total of 213 doses were administered, including Pfizer (1 dose), Vaccin Anti Amaril (VAA: 3 doses), Measles and Rubella (MR: 141 doses), Human Papilloma Virus (HPV: 38 doses), and Bacille Calmette-Guérin (BCG: 9 doses). Overall, in PY5, the MTaPS Côte d'Ivoire team trained 2,017 health care workers and vaccinators (1,401 male, 616 female) on topics related to storage, handling, delivery, and waste management of COVID-19 vaccines, and it also trained 1,681 vaccinators (1,246 male, 435 female) on topics related to IPC. MTaPS remunerated 2,821workers who provided vaccination services during national vaccination campaigns. To protect people with diabetes and hypertension against COVID-19, MTaPS, in collaboration with the National Program for the Fight against Metabolic Diseases, integrated systematic vaccination against COVD-19 into the National Program for the Control of Metabolic Diseases (PNLMM) Diabetes and Hypertension Management Units. MTaPS developed training materials and trained 39 health workers (20 male, 19 female) on the new type 2 diabetes and hypertension guidelines and the COVID-19 guidelines.

In **Kenya**, in Quarter 4, MTaPS' COVID-19 work plan was completed, with its last activity focused on the strengthening of the clinical trial oversight function at Pharmacy and Poisons Board (PPB). MTaPS supported PPB Clinical Trials staff to undertake a learning visit to Indonesia's national medicines regulatory authority (Badan POM), which included a visit to a vaccine manufacturing facility (Biofarma) to learn about inspection of vaccine manufacturing plants. In PY5, MTaPS Kenya trained 870 health care workers (409 male, 461 female) on COVID-19 vaccine safety and reporting and assisted the PPB in reviewing 2,060 AEFI reports submitted through the MTaPS-supported electronic PV system (PvERS). PvERS was updated by MTaPS in PY5 with an improved landing page and dashboards, digitized AEFI investigation form, and links to the PPB and Kenya Health Information System (KHIS). MTaPS supported the government in establishing processes governing vaccine manufacturing. A WHO-facilitated virtual GBT status review of the PPB showed significant progress in implementing institutional development plans (IDP) since November 2022, especially on those supported by MTaPS. In partnership with the PPB, MTaPS assessed and mapped existing skills and competencies for selected pharmaceutical regulatory functions identified during the WHO GBT assessment, covering leadership/directors, marketing authorization, clinical trials, PV and post-marketing surveillance, licensing, and laboratory. MTaPS finalized the competency mapping report and disseminated it to the PPB team. MTaPS trained 826

persons (502 male, 324 female) engaged in vaccination on topics related to IPC, occupational safety, and waste management. This concluded the MTaPS COVID-19-related activities in Kenya.

In **Madagascar** in Quarter 4, MTaPS worked on the development of training materials to accompany the previously developed and validated laboratory supply management manual. MTaPS conducted 2 workshops to develop and validate the training curriculum to accompany the manual and another workshop to validate its monitoring and evaluation framework. The action plan for the networking of peripheral laboratories with Central Medical Laboratory of Madagascar (LA2M) was developed based on the results of the assessment of central LA2M. PY5 highlights also include MTaPS' capacity-strengthening activities, including the development of the training curriculum on COVID-19 RDT, the GeneXpert platform and harmonized electronic registers and data entry into the DHIS2 system, and training of 63 laboratory workers (33 male, 30 female) on COVID-19 testing.

In the **Philippines** in Quarter 4, MTaPS supported Central Visayas Council for Health and Development (CHD) to visit Cebu City Medical Center to check the functionality status of donated mechanical ventilators and identify any issues that could prevent access to these mechanical ventilators. The identified issues were reported to the Department of Health (DOH), USAID, and USAID IPs for appropriate action. Other PY5 highlights include MTaPS' work with the SCMS to track and complete the encoding of 300 units of mechanical ventilators donated by USAID and the Global Fund into the Inventory and Gap Analysis (IGA) system. As MTaPS' technical assistance was ending in Quarter 4, MTaPS met with the SCMS to discuss the sustainability of tracking and monitoring mechanical ventilators, critical equipment for treating patients with severe respiratory issues, such as those caused by COVID-19. It was agreed that the SCMS will be monitoring the equipment and devices annually and submitting the reports to the Bureau of International Health Cooperation (BIHC) for further coordination with the donors on the status of the donated mechanical ventilators, as required. MTaPS submitted the COVID-19 medical devices inventory tracking and process mapping report to USAID, as well as a report on Lessons Learned in Regulation of Medical Devices and In Vitro Diagnostics. This concluded MTaPS COVID-19 related activities in the country.

In **Rwanda** in Quarter 4, MTaPS partnered with the National Pharmacovigilance Centre Lareb (Netherlands) to support the Rwanda FDA, the National Pharmacovigilance Advisory Committee (NPAC), and the AEFI Committee in strengthening the capacity of 23 (14 male, 9 female) of their staff/members on adverse events signal detection, prioritization, validation, and analysis, including COVID-19 vaccines. This work strengthens the Rwanda health system, and specifically helps with data-informed decision making to increase patient safety and public confidence in COVID-19 vaccines and other medications on the Rwanda market. PY5 highlights include MTaPS' support in establishing the interoperability of the Integrated Regulatory Information Management System (IRIMS) with the Rwanda Government national payment gateway, iRembo. The completion of this integration improved intergovernmental efficiency in revenue collection and increased efficiency and transparency in processing applications at Rwanda FDA. Through this system, 3,819 import permit applications including for medicines and vaccines used in COVID-19 were issued, generating a significant increase in revenue collection through iRembo payment gateway. MTaPS also supported the development of a data protection and privacy policy to support the use of information management systems, including IRIMS, which is under final review by Rwanda FDA. With MTaPS support, the Rwanda FDA has conducted Good Clinical Practice (GCP) inspections in 10 clinical trial sites to review quality assurance tools, SOPs,

and staff competencies. The 10 clinical trial sites included 2 which administered COVID-19 vaccines to pregnant women and gave booster doses. The inspection involved coaching of Rwanda FDA staff on the level of GCP lead inspector expertise required for the WHO GBT ML 3 certification.

In **Tanzania** in Quarter 4, MTaPS supported Tanzania Medicines and Medical Devices Authority (TMDA) to develop audio messages to sensitize the country on the issues related to COVID-19 vaccines, potential ADR, and AEFI monitoring and reporting. The messages were aired by 6 radio stations covering all regions of Tanzania's Mainland, including Clouds radio, East Africa, TBC Taifa, Radio Free Africa, Wasafi Radio, and Radio One. MTaPS continued supporting the TMDA in collecting and reporting AEFI during the period July to September 2023, with 117 AEFI reports, including 100 minor, 15 moderate, and 2 serious events submitted to the country's monitoring system. Overall, in PY5, 598 AEFI reports were submitted and processed with MTaPS' technical support. MTaPS trained 424 health care workers (155 male, 239 female) on topics related to recording and monitoring COVID-19 vaccination and AEFI reporting. This concluded the MTaPS COVID-19-related activities in Tanzania.

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

Table 1. MTaPS COVID-19 Quarter 4, FY23 indicators (detailed breakdown can be found in Annex 3)

Indicator and Disaggregation		Q4 FY23[5]	FY23	Total from March 2020
Objective 1. Accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations				
CV. 1.2-2 Number of vaccine doses delivered to designated in-country destinations with USG support				
Number of vaccine doses delivered		67,439	683,589	683,589
CV.1.3-3 Number of people trained on COVID-19 vaccine-related topics with MTaPS' support				
Number of people trained		23	5,861	11,336
Sex	Male	14	3,107	6,126
	Female	9	2,734	5,190
	Unknown sex	0	20	20
CV.1.3-4 Number of health workers who are renumerated by the US Government (USG) to support workload required for COVID-19 vaccine delivery in the reporting period				
Number of people renumerated		1,590	7,008	8,137
Cadre	Clinical	0	820	873
	Community/law	36	92	271
	Data management	50	1,572	1,852
	Supervision and logistics	1,504	4,524	5,141
CV.1.4-5 Number of vaccination sites supported by USG during the reporting period				
Number of vaccination sites supported		299	17,083	26,628
Types of sites	Fixed sites	0	6,467	11,272
	Community-based outreach vaccination sites	12	8,095	12,835
	Mobile team (or clinic) or transit team strategy	287	1,097	1,097
	Mass vaccination sites/campaigns	0	1,424	1,424
	Unknown	0	0	0

[5] MTaPS Bangladesh, Kenya, and Nigeria completed COVID-19 activities by the end of PY5 Quarter 3. Therefore, there is no data to report on these countries for PY5 Quarter 4.

Indicator and Disaggregation		Q4 FY23[5]	FY23	Total from March 2020
CV.1.4-6 Number of people who received a first dose of an approved COVID-19 vaccine (COV-1) with USG direct support				
Number of people who received first dose		39,216	535,700	538,816
Sex	Male	19,780	34,950	36,510
	Female	19,436	33,923	35,387
	Unknown sex	0	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				
Number of people who received last dose		4,377	96,026	96,862
Sex	Male	2,240	40,472	40,518
	Female	2,137	42,350	42,432
	Unknown sex	0	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				
Number of people who received booster dose		23,846	171,987	172,097
Sex	Male	12,153	35,135	35,183
	Female	11,693	40,033	40,095
	Unknown sex	0	96,819	96,819
CV.1.5-9 Number of AEFI reports reviewed with MTaPS' support among those submitted to country monitoring systems				
Number of AEFI reports reviewed with MTaPS' support		117	2,880	9,387
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				
Number of health workers		0	63	63
Sex	Male	0	33	33
	Female	0	30	30
	Unknown sex	0	0	0
CV.2.4-17 Number of health facilities where MTaPS provided support for IPC and/or WASH for COVID-19				
Number of health facilities		N/A[6]	527	6,254
CV.2.4-18 Number of workers who received COVID-19-related training in IPC and/or WASH with MTaPS' support[7]				
Number of people trained		N/A	3,204	49,278
Sex	Male	N/A	2,050	22,205
	Female	N/A	1,136	26,834
	Unknown sex	N/A	18	239
CV.2.5-24 Number of facilities that received oxygen-related technical assistance within the reporting period				
Number of health facilities		1	3	3
Technical Assistance	Clinical	0	0	0
	Engineering	0	0	0
	Other	1	3	3
CV.2.5-25 Number of times oxygen-related technical assistance was provided within the reporting period				
Number of times assistance provided		3	10	10
Technical Assistance	Clinical	0	0	0
	Engineering	0	0	0
	Above site	3	10	10
	Other	0	0	0
CV.2.6-22 Number of policies, protocols, standards, and guidelines across any of the result areas developed or adapted with MTaPS' support				
Number of policies, protocols, standards, and guidelines		6	46	122

[6] Activities not planned for PY5 Quarter 4 to report on indicator CV 2.4-17.
[7] Activities not planned in PY5 Quarter 4 to report on indicator CV 2.4-18.

COVID-19 IMMUNIZATION COSTING

OVERVIEW

LMICs have been facing an incredibly challenging vaccine rollout and COVID-19 vaccine delivery and the cost to deliver these vaccines is highly uncertain. According to the WHO, as of June 2023, just 37% of Africa's population had completed their primary vaccination series, compared with the coverage of 70% at the global level.[8]

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. Although existing data, including pre-COVID-19, on the costs of routine immunization, immunization campaigns, and other health campaigns can be used to generate plausible estimates of these costs, targeted data collection efforts are necessary to refine these estimates and ensure that they remain grounded in the realities faced by LMICs.

There are some resources, such as tools and guidance developed by the WHO and its partners, which can be helpful in generating estimates of COVID-19 vaccine delivery costs. The modeled, top-down 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.

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–February 2022, MTaPS conducted a desk review across three databases, screened 530 articles, and identified 20 studies relevant on social mobilization (14) and campaign/outreach strategies (6). The purpose of this exercise was 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 online surveys 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, and integration of vaccine services into the health systems. Two surveys, completed in November 2021 and May 2022, identified evolving trends in vaccine delivery at the country level.

Furthermore, MTaPS has been gathering more detailed vaccine delivery expenditure data in Malawi. MTaPS designed protocol for the country studies based on the How to Cost Immunization Programs

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

Guide, WHO's COVID-19 vaccine introduction and deployment costing tool, and ThinkWell's COVID-19 Vaccine Delivery Costing protocol. In Malawi, MTaPS sought and was granted IRB approval. Data collectors have been gathering expenditure data through surveys and interviews in the national office, supplemented by 20 facility-level secondary data collection. Data collection was completed by the end of February 2023.

In Quarter 3/Year 5, the data analysis of the costing data was completed in Malawi. After MTaPS received IRB approval from the National Health Sciences Research Committee (NHSRC) of Malawi, a team of experts immediately started the data collection efforts in the Mangochi, Mwanza, Mzimba South and Lilongwe districts. The data cleaning and analysis were carried out and completed by the end of June 2023.

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

YEAR 5 ACHIEVEMENTS AND RESULTS

In Year 5, MTaPS gathered real data on vaccine delivery expenditures in Malawi. Although the global COVAX model was a powerful tool to estimate the cost to deliver COVID vaccinations at a time of great uncertainty, the real cost of delivering the COVID-19 vaccine at 20 health facilities in Malawi was found to be much higher than the modeled estimate, mostly due to hidden expenses, such as the time health workers had to dedicate to the vaccination efforts.

In addition to the country study, MTaPS conducted a third online survey of health experts working in each of its countries to gather real-time COVID-19 vaccine delivery data throughout the changing dynamics of the pandemic.

Findings from both the country study and the global surveys were presented at the Immunization Economics Special Interest Group (SIG) Pre-Congress Session of the International Health Economics Association (IHEA) Congress in Cape Town in July 2023 and to USAID in September 2023. The findings of two rounds of global surveys were published by the journal *Vaccine* in September 2023.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS disseminated the analysis of the costing data of the vaccine delivery in Malawi and presented results on July 8, 2023, at the Immunization Economics SIG Pre-Congress Session of the IHEA Congress in Cape Town.

MTaPS also presented results from the third global survey (completed in Quarter 3) on July 9, 2023, at the IHEA SIG on Immunization Economics. The survey focused on integrating COVID-19 vaccination into immunization programs and primary health care, as well as on country efforts to target sub-populations for vaccination.

MTaPS submitted the results of the first two surveys to the journal *Vaccine*. The journal article went through a round of revisions and was resubmitted in August, then published on September 22, 2023.

MTaPS presented the results of the project activities to USAID on September 27, 2023.

BEST PRACTICES/LESSONS LEARNED

- Collecting costing data during a pandemic is complex, as there are many competing priorities and project staff and government officials may not have the capacity to carry out the work.
  The Global Survey proved to be a quick and easy tool for gathering information on countries COVID-19 status and vaccine deployment.
- While the COVID-19 pandemic has ended, the results from the costing exercise continue to prove useful as countries work to integrate the vaccine delivery into their routine health care services.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Present the findings of costing data of the vaccine delivery in Malawi to the USAID Malawi mission/Malawi government.	October 2023
Present the Malawi findings to other USAID teams.	October 2023
Publish the results of the Malawi study.	October 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. 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 (including PV), financing, information, human resource capacity, and pharmaceutical services—that affect access to and appropriate use of medicines, technologies, and supplies.

CUMULATIVE PERFORMANCE TO DATE

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 and an accompanying summary brief of key message and action points 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. In Quarter 3 of PY5, MTaPS and the MOMENTUM Knowledge Accelerator cohosted a knowledge exchange on best practices in social accountability for more than 60 experts from other USAID-funded projects to discuss the lessons learned from the MTaPS discussion paper, underscoring similarities across varied contexts in the challenges and approaches to address social accountability.

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 9 countries, MTaPS supported Mozambique's regulatory authority, ANARME, IP, in streamlining registration of MNCH medicines by using findings and recommendations from the mapping. In PY4, MTaPS supported generic oral medicines and helped increase the visibility and transparency of registration procedures through a workshop of 70 manufacturers, importers, and distributors hosted by ANARME, IP. In PY4, MTaPS also 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. MTaPS has developed an advocacy document for NMRAs to prioritize the registration of MNCH medicines in their countries. A summary of this work was presented at the International Maternal and Newborn Health Conference in Cape Town in May 2023.

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 the management of medicines and supplies as well as guidance on quality in medicine procurement. MTaPS conducted webinars for GFF country teams on the importance of prioritizing a robust pharmaceutical system to support MNCH interventions and successfully advocated for inclusion of a section on managing medicines in the GFF annual report. As a result of the secondment, the GFF recruited a pharmaceutical advisor as 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 them. The FA is a means for counties implementing PBF to ensure availability of quality medicines.

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.

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 MOHP in understanding the challenges of subnational procurement of essential medicines, including for MNCH. MTaPS also supported the MOHP in identifying key interventions to improve the quality of, and access to, medicines procured at subnational levels and including them in annual budgets and plans at national and subnational levels.

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, aligning it with updated WHO recommendations. The updated RMNCH forecasting supplement, available in English and French, has been disseminated through several webinars to more than 160 people and 8 country teams and is referenced in the recent Global Fund (GF) guidance to countries to consider the inclusion of non-malaria commodities in their GF proposals.

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

In PY1, MTaPS updated a set of job aids and dispensing envelopes for HCPs and caregivers to promote adherence to correct treatment protocols for amoxicillin dispersible tablets (WHO-recommended first-line treatment for pneumonia in children under 5, and in combination with gentamicin, for possible serious bacterial infections in newborns). Following preparations in PY3, MTaPS in PY4, in collaboration with UNICEF, USAID, GHSC-PSM, and PQM+, held a series of consultative meetings with wide stakeholder engagement to address bottlenecks in access to, and appropriate use of, amoxicillin and

gentamicin. Key points are summarized in a call-to-action paper, which provides actionable solutions for countries and has been widely disseminated for example at the 2nd Global Pneumonia Forum in Madrid in April 2023.

YEAR 5 ACHIEVEMENTS AND RESULTS

To strengthen the regulation of MNCH medical devices and ensure their quality, safety, and effectiveness, MTaPS and the AMDF developed a guideline on specific considerations for regulating MNCH medical devices.

Building on the mapping of subnational procurement practices in Nepal, MTaPS developed a global guidance document on best practices in subnational procurement of MNCH commodities in the public sector. MTaPS, in collaboration with UNICEF, USAID, GHSC-PSM, and PQM+, developed a call-to-action paper, providing actionable solutions for countries to address key bottlenecks in access to and appropriate use of amoxicillin and gentamicin.

After identifying a gap in support for countries to ensure quality of medical oxygen, MTaPS developed a technical resource document for the quality assurance of medical oxygen from source throughout the distribution chain to delivery to the patient, using a consultative process.

MTaPS developed resources for countries to estimate their needs of non-malaria commodities for the community level and complete the table required for the GF funding request. MTaPS has supported six countries to consider including non-malaria iCCM commodities in their GF funding request, of which, three countries did include non-malaria commodities.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

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

Supporting regional collaboration to regulate MNCH medical devices: During this quarter, MTaPS supported the AMDF to disseminate the AMDF guidelines developed with MTaPS support on considerations for regulating MNCH medical devices through a virtual orientation which 49 people (26 female, 23 male) attended from 19 countries in Africa. MTaPS is working with the AMDF to plan an in-person capacity-building workshop in November 2023 on the assessment of technical files for MNCH medical devices.

Building capacity for regulating medical devices in a region, with a focus on MNCH medical devices: MTaPS is providing support to the Tanzania Medicines and Medical Devices Authority (TMDA) to improve the regulation of medical devices, with a focus on devices for MNCH, to position the agency to be considered as a regional center of excellence once the criteria have been established by AMDF. An exchange visit of TMDA staff to a strong regulatory authority for medical devices is being planned. MTaPS is coordinating with AMDF for the TMDA to host a few regulators from the African continent for a twinning visit to gain capacity to mentor and build the capacity of visiting regulators.

Implementing a regional approach to support national regulatory authorities to streamline registration of MNCH medicines in countries: This quarter MTaPS has planned the SADC/ZAZIBONA[9] special session on the joint review of MNCH medicines October 10–12, 2023 in Tanzania. Participants from the 16 SADC/ZAZIBONA countries will attend. Reviewers were identified for the four selected maternal health products, and manufacturers agreed that their products will be considered in the special session joint review. The aim of the discussion is to promote reliance practices among participating countries.

MTaPS shared the draft document to help NRAs advocate for the prioritization of registration of MNCH medicines for review with experts in the region ahead of sharing as a draft for discussion during the joint review session.

Supporting the streamlining of registration of MNCH medicines at the continental level: MTaPS continues to discuss with the technical committee responsible for the evaluation of medical products (EMP TC) and the focal point in AMRH on opportunities for prioritizing registration of MNCH medicines, also attending a meeting of the EMP TC to discuss the Draft of the Eligibility Criteria Guidance on Priority Medicinal Products for Continental Assessment through AMRH/Africa Medicines Agency. MTaPS is also discussing with the Africa CDC the inclusion of MNCH tracer medicines in the priority list of medical products to be considered for continental assessment.

Improving systems for managing and administering oxygen and other medical devices in the respiratory ecosystem: MTaPS held a virtual dissemination event on improving quality assurance for medical oxygen on September 27, 2023. It was moderated by Leith Greenslade of Every Breath Counts, with panelists of oxygen champions from Ethiopia, Malawi, Nigeria, and Rwanda. The webinar had 229 attendees (109 female, 120 male), with more than 2/3 from LMICs. The participants represented the various levels of the health systems and worked in government (35%), for NGOs (52%), and in the private sector (13%). There were lively discussions and a very active chat among attendees.

Invite for the September 27 webinar on improving quality assurance for oxygen.

[9] The Zazibona process is a collaboration between NMRAs of 16 countries.

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: MTaPS finalized and shared an English and French summary of the guidance document with GHSC-PSM for inclusion as an annex in their manual on procurement of quality-assured MNCH medicines. Planning for dissemination through an external webinar is under way for the first quarter of Year 6, with outreach conducted to potential speakers in Nepal, the Philippines, and Kenya.

Providing global technical leadership on pharmaceutical systems issues impacting MNCH: MTaPS had one of its two submitted abstracts accepted to the Reproductive Health Supplies Coalition (RHSC) general members meeting in Ghana in October. The accepted abstract, entitled *Improving Access to Maternal Health Medical Products through Optimization of Product Registration*, was selected for a panel presentation on *Maternal Health Manufacturing and Regulatory Concerns*. MTaPS also submitted three abstracts on its MNCH-focused work to the Global Health Supply Summit, to be held in November 2023 in Nairobi, Kenya. Two were accepted as posters, covering subnational procurement and social accountability.

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 (dispersible tablets or oral suspension) and gentamicin injection and implementation of actionable solutions: MTaPS collaborated with USAID, UNICEF, the Child Health Task Force, GHSC-PSM, and PQM+ to hold webinars on July 25 and 26, 2023, to introduce the call-to-action paper to a broad group of stakeholders to spark action at the country level. USAID hosted the first webinar on July 25, with representatives from USAID Missions on solutions and approaches to address key bottlenecks to the availability and appropriate use of quality pediatric amoxicillin and gentamicin. More than 30 people participated, including USAID supply chain advisors and MCH advisors from more than 10 countries. On July 26, the Child Health Task Force hosted a webinar with global child health stakeholders. The webinar had 57 participants, representing 23 countries and 29 organizations. The sessions saw active engagement from participants, with questions and comments on various topics, including on the importance of the link between the inappropriate use of antibiotics and resistance; supply of amoxicillin, including prequalification and local production of medicines; providers' hesitancy to treat sick newborns and use gentamicin; and financing, including domestic funding, donor support, and the new opportunity of Global Fund to fund amoxicillin as a non-malaria commodity in the iCCM package. An important next step was proposed in both webinars—use the call-to-action paper as a resource for country child health technical working groups to drive analysis of the current situation and identify initial "low-hanging fruit" actions.

Technical support to countries to implement Global Fund guidance for procurement of non-malaria commodities for community case management: MTaPS finalized an Excel spreadsheet and instructions (in English and French) to help countries complete the GF non-malaria commodities gap analysis tables and generate estimated quantities and costs of non-malaria commodities. The documents were shared with Liberia, Kenya, Ethiopia, Rwanda, and The Gambia. MTaPS also participated in the malaria mock technical review panel (TRP) in Ethiopia this quarter and held discussions on iCCM inclusion with several countries. Following the malaria mock TRP in Ethiopia, MTaPS has actively supported Liberia, Kenya, and Angola to estimate their non-malaria commodities needs for the August submission window. Liberia included non-malaria commodities in its allocation. In Kenya, the MOH Child Health responsible was not able to persuade the malaria program to include the pneumonia commodities in the grant for two counties, but commodities for diarrhea may have been included. Angola included only commodities for diarrhea. as there is no policy yet for pneumonia management at the community level. MTaPS continued advocacy with Rwanda to include non-malaria commodities. MTaPS supported the team in The Gambia to consider assumptions and estimate needs for inclusion in the revision of the malaria funding request. In Madagascar, MTaPS is supporting the GF Principal Recipient and County Coordinating Mechanism to revise the request made initially for nine regions and to justify the selection of the regions.

Jane Briggs, Kate Wilczynska Ketende, Dyness Kasungami, and Andualem Oumer at the Mock TRP in Addis Ababa, Ethiopia. Photo credit: MTaPS

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Conduct a joint assessment of MNCH medicines in SADC/ZAZIBONA region.	October 2023
Conduct the in-person capacity building on review of MNCH medical devices technical files.	November 2023
Plan for the exchange visit for the TMDA and for the TMDA to host the twinning visits from the continent.	October–December 2023
Conduct the country stakeholder workshop on quality assurance of oxygen.	November 2023
Disseminate the global guidance on best practices for subnational procurement through a webinar.	November 2023
Present at the RHSC general members meeting in Accra.	October 2023

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

OVERVIEW

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 and improving accessibility of a range of essential FP/RH commodities through analyzing and recommending approaches for increasing financing and strengthening supply and logistics services.

MTaPS' strategic approach is based on the understanding that implementing a system 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 contribute to improved 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 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 enabled 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, essential medicines and health products more broadly (at different levels of the system), and possible entry points and interventions. In addition, 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. From the analysis of the desk review and PEA interview data, MTaPS developed a policy brief: *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 MTaPS found effective. The PEA in Uganda was included in a recent webinar *How Can Thinking and Working Politically Strengthen Your Health Commodity Supply Chain?* organized by the USAID LHSS and the policy brief and methods module were referred to in the primer *The importance of political economy analysis for strengthening health commodity supply chains* by USAID LHSS.

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

In 2021, MTaPS—in collaboration with government counterparts—undertook the first phase of a project to leverage capabilities of best practice third-party logistics (3PL) service providers and lead logistics service providers (LLPs). Political economy, operational capability, and cost-benefit analyses were conducted in Nigeria and the Philippines. Following analyses of evidence and deliberations, MTaPS developed and disseminated technical reports for Nigeria and the Philippines describing study results and recommendations. In addition, MTaPS produced two advocacy briefs entitled Building a More Efficient Public-Health Supply Chain through 4PL—one for each country. MTaPS also facilitated a webinar for USAID staff in July 2022 on leveraging best practice 3PL or 4PL providers. As part of this phase of the activity, MTaPS developed and used an outsourcing decision framework. This tool could help public-sector decision-makers to navigate critical factors and steps to leverage private sector service providers in supporting the public health supply chain.

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. 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 and mitigates 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 published in the Journal of Pharmaceutical Policy and Practice.

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 started an impact evaluation of a client, stock, and workflow management application on unmet FP need at the last mile in Luapula Province, Zambia. MTaPS is equipping community-based distributors (CBDs) with tablets configured with the application and using an experimental design to:

- Assess the impact of the intervention on satisfaction and continued use of modern FP methods among people of childbearing potential at the last mile
- Understand the impact of the intervention on CHWs' FP stock management and dispensing
- Understand the key drivers of the stock management, dispensing, quality service provision, and clinical outcomes associated with the implementation of OpenSRP at the last mile

After securing ethical clearance from ERES Converge in Zambia and BU School of Medicine IRB, the team obtained study approval from Zambia's Ministry of Health and National Health Research Authority. The team completed baseline data collection in year 5 quarter 1 with a sample of 221 active CBDs at 40 study sites. The team conducted physical stock counts at each study site and with each CBD to assess stock availability and stock management practices at baseline. The team also conducted phone surveys with 1,139 clients using FP products to determine the level of unmet FP needs and satisfaction with FP counselling. After analysis of the data, a baseline report of the findings was produced, which showed that one-third of sampled clients have reported a recent lapse in their FP method, frequent FP stock-outs at HFs, and generally poor FP stock recordkeeping among CBDs. The development of the workflow management application and the procurement and configuration of the requisite devices and accessories have been completed. Implementation of the intervention started with a 2-week training in April of 4 cohorts of CBDs (a total of 104 participants; 63 female, 41 male) on using the application.

The team completed the final building of the application, which went live in early May 2023. CBDs are now using the application, and the team has been conducting in-person supervisory visits and remote monitoring, resolving any issues that arise along the way.

DISABILITY INCLUSION IN THE HEALTH SUPPLY CHAIN WORKFORCE

MTaPS started a study to understand the status of disability inclusion in the health supply chain labor market in LMICs to provide recommendations to USAID and its partners on strategies for improving inclusive employment practices in the health supply chain. MTaPS formed a TWG to facilitate and guide the study, including identifying key stakeholders and nascent disability inclusion efforts in the various contexts with which TWG members are familiar. The TWG has met three times, providing feedback and recommendations on preliminary findings and next steps with the study. MTaPS has completed a landscape analysis and a global survey on disability inclusion efforts that was disseminated in English and French to health supply chain stakeholders. A case study in Ethiopia is underway.

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

In 2022-2023, MTaPS focused on implementation of some of the major recommendations from the first phase of the activity in Nigeria. MTaPS—in close collaboration with the National Products Supply Chain Management Program (NPSCMP), state health supply chain management teams, and development partners—produced an implementation guide that is expected to be incorporated into a larger government document to guide outsourcing of components of the health product logistics services to the private sector. The implementation guide is expected to facilitate the operationalizing of FMOH's policy on engaging with private sector service providers. Kaduna State was chosen for further assessment and technical assistance from MTaPS. Consequently, MTaPS—in collaboration with national and state level stakeholders—developed service specifications and the performance management plan to increase effectiveness and efficiency of engagement of best practice 3PL and LLPs for outsourcing health commodities, including family planning products, and distribution activities in Kaduna State. Though the documents focused on Kaduna State, the general approaches can easily be modified to be used in any state for any single element of a supply chain or the entire end-to-end supply chain operations. In addition, MTaPS facilitated two face-to-face advocacy and learning workshops in Nasarawa, Nigeria, involving major stakeholders from NPSCMP, MOH, and state and development partners. The

workshops were used to create more awareness, strengthen local capacity, and advocate for more effective and efficient leveraging of the private sector capabilities to support the public sector health commodity logistics management. The resources developed for national and state level use were also validated during the workshops. Furthermore, MTaPS assessed various capacity strengthening initiatives supported so far and future capacity strengthening needs and potential organizations that could continue the work to further strengthen the local capacity for outsourcing.

YEAR 5 ACHIEVEMENTS AND RESULTS

As the first phase of the impact evaluation of a client, stock, and workflow management application on unmet FP need, the baseline assessment was completed and the Open SRP intervention for use by CBDs was launched in four districts of Luapula Province, Zambia.

MTaPS has completed the study of disability inclusion in the health supply chain labor market in LMICs and is finalizing the documentation. A key finding is that whereas countries are increasingly more aware of the importance of disability inclusion in the labor market, there are no specific efforts for the health supply chain relative to the broader labor market. While there is an increase in policies and guidelines, implementation, enforcement, and monitoring remain a key challenge.

During year 5, MTaPS—in close collaboration with the NPSCMP (Nigeria), state health supply chain management teams, and development partners—produced an implementation guide for outsourcing of components of the health product logistics services to the private sector. In addition, MTaPS engaged the Kaduna State stakeholders, including Kaduna State Health Supplies Management Agency (KADHSMA), and developed service specification and a performance management plan to increase effectiveness and efficiency of engagement of best practice 3PL and LLPs for outsourcing health commodity distribution activities in Kaduna State.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

ACTIVITY 1: 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

Throughout the quarter, the team continued to follow up with the facility in-charges and the CBDs in Luapula Province, Zambia, to ensure that monthly reports are being submitted and any issues are troubleshooted. During a field visit on August 7-11, the team identified two recurring issues. The first issue was that some CBDs continued to make errors when entering batch numbers. The team reinforced the need for careful data entry and processes for making corrections. The second identified issue was that CBDs belonging to multiple zones were using only one of their zone profiles for all their service provision, which led to 'inactive CBD profiles' in some zones when the team examined the data on the backend of the application. The team confirmed that these 'inactive CBDs' are accounted for under another zone, and this will also be accounted for accordingly in data cleaning for the endline analysis. The team has been planning for endline data collection, reviewing and finalizing the data collection instrument and training material. Data collection in three districts in Luapula is planned for October-November 2023, and phone surveys are planned for November 2023.

ACTIVITY 2: DISABILITY INCLUSION IN THE HEALTH SUPPLY CHAIN WORKFORCE

Following approval of the research protocol by the ethics board in Ethiopia, MTaPS worked with a consultant to conduct key informant interviews with supply chain and disability inclusion stakeholders in Ethiopia. The consultant then coded and analyzed the interviews and developed a draft report on the case study findings. The consultant is incorporating MTaPS' feedback into the report. During this quarter, MTaPS also submitted an abstract to the Global Health Supply Chain Summit 2023 entitled "Making the health supply chain workforce inclusive for persons with disabilities," which has been accepted as a poster. The poster will draw on the global landscape analysis and global survey, as well as the Ethiopia case study.

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

During this quarter, MTaPS completed preparations for the second advocacy and learning workshop in Nasarawa, Nigeria. In preparation of the workshop MTaPS circulated draft versions of the service specification and the performance management plan, prepared for Kaduna State, to participants for feedback before the workshop. The workshop was successfully held on July 26-27, 2023, with active participation of 18 representatives (5 female, 13 male) from the FMOH, NPSCMP, Kaduna State Ministry of Health, KADHSMA, and various other stakeholders and partners. The workshop helped to continue the capacity strengthening initiative with regard to best practice outsourcing with the focus on operationalizing the FMOH's policy of engaging with private sector 3PLs. The workshop also helped to validate the two project deliverables that were shared earlier to participants, namely the service specification for the outsourcing of distribution activities in Kaduna State and an associated performance management plan for the monitoring of the 3PLs'/LLPs' performance relating to the service specification once a contract has been awarded. The MTaPS team also collected data during the workshop that was eventually used in developing the training report. The team was not able to conduct a baseline assessment of Kaduna State's performance using the M&E/performance management framework as planned because data from Kaduna State were unavailable. MTaPS developed revised versions of the service specification, performance management plan, and training report based on feedback obtained from workshop participants and submitted them to USAID for review and further feedback.

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
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 ▪ Conduct endline data collection and start analysis	October – December 2023
Activity 2: Disability inclusion in the health supply chain workforce ▪ Complete case study report ▪ Draft and submit manuscript	October – December 2023
Activity 3: Engaging 3PLs/4PLs to support the public health supply chain ▪ Revise and finalize the deliverables based on feedback from USAID CSL team ▪ Develop one-page flyer and presentation to support dissemination ▪ Upload resources from phase one and two of the activity on the MTaPS website	October – December 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 strengthening health systems, 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 program's overall goal and objectives. Through the Cross Bureau portfolio, MTaPS works to develop evidence-based approaches and tools and identify best practices in PSS that address emerging health problems. MTaPS collaborates with regional and global stakeholders to shape the norms and discourse on pharmaceutical systems and coordinate efforts to identify and promote 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 to streamline regulatory harmonization program implementation and strengthen the impact and sustainability of program results and outcomes. In collaboration with the USAID PQM+ Program, MTaPS developed a set of minimum common standards for regulatory IMS, which the programs validated through a consultative process with key global stakeholders and representatives from national regulatory authorities. MTaPS and PQM+ also developed an advocacy brief, and a guidance document to promote and guide adoption of the standards in LMICs was finalized. As part of the dissemination strategy, MTaPS and PQM+ have shared the standards and supporting documents with partners, including WHO, USAID Missions, and regulatory networks such as the AMRH IMS technical committee. MTaPS has also been working with the AMRH Secretariat to develop, for AMA's consideration, a continental reliance framework and strategy for digitalization of the regulatory IMS. MTaPS has worked with various AMRH technical committees, such as the African Medical Devices Forum, Evaluation of Medical Products, IMS, and Medicines Policy and Regulatory Reforms, to strengthen and harmonize regulatory systems on the continent.

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 and Good Governance courses on the USAID-supported GHeL platform. Through the GHeL, the program issued 4,868 certificates between October 2022 and September 2023 to participants across the globe for completing PSS 101 (913 certificates), Good Governance in the Management of Medicines (605 certificates), Antimicrobial Resistance (Part 1) (2,227 certificates), and Antimicrobial Resistance (Part 2) (1,123 certificates).

Previously, the program conducted two peer-to-peer learning exchanges: one on medical products pricing strategies and a second on preventing and managing conflicts of interest in national pharmaceutical committees. Together, the two learning exchanges engaged approximately 60 government officials from more than 30 countries. MTaPS has submitted more than 105 global conference abstracts and has published 18 peer-reviewed manuscripts since the start of the project.

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 Health Technology Assessment (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 pharmaceutical expenditure using the SHA2011 framework. The team drafted a pharmaceutical expenditure tracking guide and, following pilots in two countries, developed two policy briefs that will serve as resources for countries to capture population-per-capita pharmaceutical expenditure per disease or drug therapeutic class more accurately. The team also published a manuscript entitled *Institutionalizing health technology assessment in Ethiopia: seizing the window of opportunity* in the *International Journal of Technology Assessment in Health Care*. The paper outlines a problem-driven policy analysis for the formulation, adoption, and implementation of HTA and an evidence-informed priority setting approach in Ethiopia.

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 Economic Community of West African States 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 the integration of IPC/WASH critical conditions into the quality of care and quality improvement tools and processes. In PY5, MTaPS developed a chapter entitled "Institutional and Individual Capacity Building in Pharmacovigilance" for inclusion in a book on PV, which is with the publishers.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS successfully engaged local institutions from East Africa and Southeast Asia in a series of PSS skills exchange workshops. Following the workshops, the program designed two levels of mentorship—deep dive and tutorials—to accommodate more than 40 organizations that expressed interest. Through this engagement, MTaPS was able to facilitate change at the organizational level using a remote approach. For example, as a result of the mentorship, staff at a private hospital in Tanzania improved their reporting for adverse events as part of strengthening their PV system, and staff in Zimbabwe district-level facilities improved ordering procedures.

This year, MTaPS successfully piloted PSS Insight in Bangladesh, Nepal, Tanzania, and Uganda. The program also finalized development of the web-based version of the tool. With the reduction to 41 indicators, PSS Insight v2.0 provides a practical and highly relevant tool for governments to assess their pharmaceutical system performance and set strategic priorities to guide their PSS efforts. The tool primarily uses existing validated indicators and relies heavily on existing data collection and reporting mechanisms, meaning that governments can sustainably implement the tool at low cost without the need for new data collection systems. During in-country dissemination workshops, country stakeholders confirmed that pharmaceutical data are highly siloed within national contexts and expressed tremendous interest in PSS Insight as a data management platform to collate pharmaceutical system data to support better decision making.

This year, MTaPS submitted 74 conference abstracts to a range of global and regional conferences and three cases to the USAID Health Systems Strengthening Case Competition. As a result of these efforts, the program presented a variety of posters and presentations at 22 global and regional conferences, demonstrating its technical leadership and helping to advance the PSS global learning agenda. MTaPS also conducted PSS skills-building workshops at PtD Indaba 2022, Global Health Supply Chain Summit 2022, SAPICS 2023, and PharmaConnect 2023, disseminating PSS-related tools and approaches to more than 200 individuals and encouraging their adaptation and use in local contexts.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

ACTIVITY 2.4.6: SUPPORT AUDA-NEPAD IN THE ONGOING CREATION AND OPERATIONALIZATION OF THE AMA

MTaPS continued work with the engaged consultant, finalizing the situational analysis report on the existent mechanisms for reliance on the continent. The report on the situational analysis informed the framing of the continental reliance framework. The draft framework is awaiting review by the AMRH Secretariat and technical committees.

In July, MTaPS and PQM+ developed an outline of the strategy for digitalization of the regulatory IMS on the continent. After agreeing on an implementation plan for the development of the strategy with the AMRH Secretariat, MTaPS and PQM+ collaborated with the AMRH IMS technical committee to begin drafting the strategy. MTaPS held weekly meetings with PQM+, the AMRH Secretariat, and the IMS technical committee to review the draft strategy. Preparations are underway to present the draft strategy to a group of selected key stakeholders during a virtual workshop.

ACTIVITY 3.3.1: MEASURING PSS, INCLUDING ACCESS TO MEDICINE

MTaPS drafted the technical report on the PSS Insight v2.0 pilots, and it is undergoing finalization. The accompanying country reports have been finalized and will be included as annexes in the technical report. MTaPS finalized the indicators for PSS Insight v2.0, reducing the number from 43 piloted indicators to 41 final indicators. The performance indicator reference sheets are being finalized to reflect the updates to the indicators. The team has also developed a dissemination plan.

The software development package for the web-based version of PSS Insight v2.0 was completed. MTaPS is procuring hosting services from Amazon Web Services to host both the international and national versions of the tool. Once procurement is complete, the team will migrate the tool from the developer's test environment to the MTaPS-hosted server and submit it to USAID for final approval.

MTaPS restarted discussions with WHO and shared the draft technical report with the WHO team. Ongoing engagement is planned to determine how PSS Insight v2.0 can be incorporated into WHO's support for PSS.

ACTIVITY 3.3.2: PSS 101 COURSE

MTaPS finalized the new AMR module and translated it into French. The finalized modules will be integrated into the GHeL English and French versions of the PSS 101 course, and the English version of the module will be integrated into the USAID University PSS 101 course. The team also finalized the course handover package, which will be submitted for approval after copyediting.

The GHeL PSS 101 and Good Governance courses saw 134 and 91 certificates earned this quarter, respectively. The AMR (Part 1) and AMR (Part 2) courses saw 537 and 302 certificates earned this quarter, respectively. In October, MTaPS will complete a round of awareness raising through social media and professional channels to advertise the availability of the PSS 101 and governance courses on GHeL.

ACTIVITY 3.3.3: EQUIP LOCAL INSTITUTIONS WITH PSS LEARNING RESOURCES

MTaPS concluded the mentorship program. A report-out session took place on July 26 with five presentations from participants on their experiences with the mentoring program, demonstrating positive changes in PSS through the application of learning from this activity. MTaPS has finalized and submitted the report on the program. MTaPS is developing a dissemination approach to increase awareness of our experience with equipping local institutions remotely to develop PSS skills in country-based organizations.

Senior Principal Technical Advisor Andrew Brown presenting to academics on pharmacy curriculum development at PharmaConnect

ACTIVITY 3.3.4: MTAPS CLOSEOUT EVENT/PSS LEARNING SERIES WEBINARS

MTaPS participated in PharmaConnect in Lusaka, Zambia, including moderating a panel on streamlining regulatory systems and delivering a plenary presentation on findings from the study on national pharmaceutical services units (NPSUs). The team successfully delivered a PSS skills-building workshop and a PSS curriculum development workshop for pharmacy academics.

MTaPS received notification that seven of nine abstracts were accepted to the Global Health Supply Chain Summit 2023 (five posters, two oral presentations). The team also prepared and submitted 13 abstracts to CPHIA.

MTaPS is continuing preparations for the PSS learning webinar series. The team has finalized a proposal for a special issue on PSS in the *Journal of Pharmaceutical Policy and Practice*.

ACTIVITY 3.3.5: HIGH-PERFORMING HEALTH CARE (HPHC) TOOL IMPLEMENTATION

In Bangladesh, MTaPS completed the survey in July with 138 respondents (22 females, 114 males and 2 other) from the four groups of organizations and all regions, making data representative of the whole country. The team developed the report and prepared a presentation for the planned half-day workshop. The Mission is now in the process of seeking approval from USAID to share the data publicly.

In Tanzania, the government was unfamiliar with the short-listed candidates from the first recruitment round. As such, the Mission requested that MTaPS conduct a second recruitment to identify other candidates. MTaPS recently concluded the second round of recruitment and shared a shortlist with the Mission for feedback from itself and the government. Based on the feedback, MTaPS has since selected a top candidate who has experience working with the President's Office Regional Administration and Local Government Directorate of Health Services, as that unit is the point of entry for implementing the tool. The team aims to finalize the contracting process by the end of October and begin implementation.

EXTENDED YEAR 4 ACTIVITIES

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

In July, MTaPS disseminated a global survey to validate the case study findings and recommendations. MTaPS then analyzed the 129 responses received and incorporated the results into the technical report. The team has completed the first draft of a brief on the findings from the Nepal case study and a zero draft of the manuscript, which is currently under review. The team has also initiated planning for a virtual webinar on the importance of NPSUs in achieving UHC as part of the SDGs. The webinar will be

incorporated in the PSS webinar series planned as part of the year 5/6 closeout activity. MTaPS presented the study findings as a plenary at PharmaConnect in August.

ACTIVITY 5.4.1: TESTING BEHAVIORAL NUDGES FOR AMS

Intervention activities, including educational workshops and ward leaderboards, continued in all five study hospitals this quarter. All interventions were completed by the end of August 2023. The team then completed immediate post-intervention data collection in the five hospitals. Data entry and cleaning are underway. The team also provided feedback to the hospital MTCs on the observations made during data collection activities.

The team obtained ethics approval for an extension of the study period to April 8, 2024.

BEST PRACTICES/LESSONS LEARNED

- Through the equipping local institutions activity, MTaPS has been able to demonstrate the effectiveness of virtual approaches to increase PSS implementation by local organizations in their areas of responsibility. Examples include improved PV reporting systems in private hospitals in Tanzania and improved health supply chain quantification approaches in health facilities in Zimbabwe.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 2.4.6: Support AUDA-NEPAD in the ongoing creation and operationalization of the AMA ▪ Present the final draft Continental Reliance Framework to the AMRH Secretariat for review and endorsement ▪ Present draft strategy to key stakeholders	October–December 2023
Activity 3.3.1: Measuring PSS, including access to medicine ▪ Finalize and submit the technical report, including the country reports and final indicator reference sheets ▪ Continue engagement with WHO regarding opportunities to incorporate PSS Insight v2.0 into ongoing WHO country support ▪ Once the hosting services have been established, update the web-based tool to incorporate the final set of indicators ▪ Pending USAID approval, launch pssinsight.org	October–December 2023
Activity 3.3.2: PSS 101 course ▪ Professional and social media marketing of PSS 101 and Good Governance in Pharmaceutical systems ▪ Integration of AMR module in PSS 101 GHeL and USAID University	October 2023 November–December 2023
Activity 3.3.3: Equip local institutions with PSS learning resources ▪ Dissemination activities to increase awareness of the effectiveness of remote PSS approaches	October–December 2023
Activity 3.3.4: MTaPS closeout event/PSS learning series webinars ▪ Start drafting papers for the journal special series ▪ Plan participation in GHSC Summit ▪ Prepare and submit abstracts to PtD Indaba	October–December 2023
▪ Activity 3.3.5: HPHC tool implementation ▪ Conduct the workshop in Bangladesh ▪ Onboard the consultant for Tanzania and begin implementation	October–December 2023
Activity 2.2.1: Developing a methodology for assessing the roles of NPSUs and their capacity to fulfill their mandate ▪ Finalize the manuscript for peer review ▪ Submit technical report and brief	October–December 2023

Activity & Description	Date
Activity 5.4.1: Testing behavioral nudges for AMS ▪ Collect information on the experiences of the study participants ▪ Follow-up on post-intervention PPS data collection ▪ Continue building certain sections of the manuscript draft	October–December 2023

F. GENDER

OVERVIEW

The goal of the MTaPS' gender core-funded portfolio is to address both the biological (sex) and social (gender) differences that impact equity in pharmaceutical systems. This focus is critical to MTaPS' goal of ensuring sustainable and equitable access to, and effective use of, affordable medicines for all sexes and genders. A pharmaceutical system comprises 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. The words "sex" and "gender" are often inappropriately used interchangeably. The full spectrum includes sex, which is defined as male, female, or intersex and is based on sex chromosomes, reproductive tissues, and hormones; and gender, which encompasses cisgender men, cisgender women, transgender men, transgender women, and non-binary individuals. Gender defines norms, roles, and responsibilities that impact decision-making and access to resources, which in turn influence the incidence and severity of disease as well as pathogenesis, morbidity, mortality, and disability.

The impacts of sex and gender on the pharmaceutical system are numerous and have important implications, yet they are often under-appreciated. Sex and gender must be considered in pharmacovigilance, for example, as adverse drug reactions differ both by sex (metabolism/excretion) and by gender (risks/exposure). Considering and addressing the sex (biological) and gender (social) differences with respect to pharmaceutical systems is essential for ensuring equitable access to safe, effective, quality-assured medical products and related services and sustainably improving health outcomes for persons of all sexes and genders. Furthermore, we cannot ignore half the population or sexual and gender minorities who are vulnerable.

PSS health equity means we do not avoid addressing inequalities and that we understand, analyze, and overcome them to create fairness and respect for human rights norms. MTaPS does this by striving for the highest possible standard of health for all people and giving special attention to the needs of those at greatest risk for poor health based on social conditions and biological differences. 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 sex and gender impacts on PSS to the forefront of MTaPS through the following activities:

In PY2, the GWG helped connect those across the different MTaPS portfolios in discussions about gender activities and areas of possible collaboration and learning. In addition, GWG has been used to discuss and get feedback on document development and utility. Active as needed in PY2 and PY3, the working group in PY4 was only held as needed due to the concern of line-item funding for participation in this group by other members.

In coordination with the monitoring, evaluation, and learning team, the MTaPS gender advisor provided key inputs and recommendations for useful gender indicators, which resulted in two indicators

specifically measuring gender inclusion across the program: number of pharmaceutical sector-related policy, legislation, regulation, or operational documents with gender inclusive language that are developed or updated with technical assistance from MTaPS, and number of gender-related technical guidance documents and other capacity building products produced by MTaPS. These broad gender-specific indicators will be used going forward and will assist the entire program in measuring progress.

Three key capacity-building documents and presentations stand out as important to highlight as key successes in PY2. 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 SMT, and disseminated to all program staff to assist them in including gender activities in their PY3 work plans. Lastly, a presentation entitled "Transforming Health and Pharmaceutical Policies to be Gender Inclusive" was given by the MTaPS gender advisor during one of the bi-weekly MTaPS staff meetings in August 2020. This presentation offered an overview of what a gender-inclusive policy entails across distinct levels within a health system and why it is a critical element of gender mainstreaming, and it provided context-specific examples of how gender-inclusive policies fit into MTaPS' five program objectives. The above key activities built on and increased MTaPS' gender integration into activities and learning and improved MTaPS gender indicators.

The PY3 focus for core-funded gender activities was to better define the impacts of not just gender but also sex on 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 PY2) for PY3 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, the guide 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 said sex/gender-specific activities were added to their PY3 work plans. Moreover, if gender activities were added, they focused largely on "equal" participation and did not consider important sex/gender pharmacodynamics, especially within the Global Health Security Agenda (GHSA) portfolios. A review of approved PY3 work plans found that 75% did not include any sex/gender activities and that many opportunities for sex/gender activities were missed. Based on survey findings, it was determined that training was necessary for MTaPS staff on sex/gender considerations in PSS and that providing practical examples would help staff integrate sex/gender into work planning.

Based on survey results—and to address MTaPS staff's lack of understanding on how sex and gender need to be integrated into PSS—the gender advisor in PY3 started an informational series geared for field practitioners called the "Gender Gist" blog, which addresses sex and gender considerations important to PSS that are tied to MTaPS activities. The Gist includes useful, concise, and practical information on different topics in PSS. Since their start, these blogs have remained the most accessed pages on the MTaPS website. Five blogs were published in PY3.

- 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 COR and MTaPS staff. The gender advisor also participated in a technical review of annual work plans for MTaPS countries and reviewed and finalized sex and gender indicators in MERL plans to ensure that both sex and gender differences were noted and accounted for in relevant indicators.

Throughout PY3, MTaPS' gender advisor identified opportunities for interventions to mitigate sex and gender disparities within pharmaceutical systems and within country-specific technical activities and/or those that are cross-cutting to the project, such as for antimicrobial stewardship under the GHSA. In addition to the blogs, 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 PY4.

The PY4 focus for the core-funded gender portfolio included country-specific sex and gender activities and continuing the momentum for bringing sex and gender to the forefront of MTaPS through scholarly activity, education, and mentorship. Capitalizing on gains in sex and gender awareness, PY4 activities included developing knowledge products such as IEC materials and eLearning modules; writing and publishing academic products such as journal articles to address the need for standardized PSS tools to incorporate sex-disaggregated data; and developing technical guidance on incorporating sex-disaggregated data and gender considerations as part of antimicrobial stewardship interventions and MTaPS-supported MISs. To continue building sex and gender awareness in MTaPS, the senior gender advisor gave Knowledge Exchange and webinar presentations to staff, the COR, and partners and presented a module on PSS 101 for USAID staff. A panel presentation in support of the action package 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 was published following the conference to add to the series from previous years. These blogs remain among the top pages viewed on the MTaPS website. At

the end of PY4, due to new requirements of the Philippine DOH, the eLearning modules developed in Q3 required additional knowledge checks and pre/post-test questions.

YEAR 5 ACHIEVEMENTS AND RESULTS

In PY5, MTaPS capitalized on normalizing sex and gender impacts as a cross-cutting issue in the countries where it works and across PSS activities. One of the most important achievements for this year was the successful inclusion of sex and gender concepts into Tanzania's NAP-AMR 2023–2028. In PY5, the gender advisor continued to publish the highly successful Gender Gist blogs, including:

- 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/
- Lawry LL. I Bang My Head Less Often: Reflections on Integrating Gender in Pharmaceutical Systems Strengthening. The Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program. August 28, 2023. https://www.mtapsprogram.org/news-blog/i-bang-my-head-less-often-now-reflections-on-integrating-gender-in-pharmaceutical-systems-strengthening/?fbclid=IwAR1GHhEdSTaRV4uiY7BOncHx-pVSFRnb3f-aoa94L5wGZKkjn00oCih2bV8

PY5 activities included finalizing/publishing technical documents like the MIS guidance and the Philippines workforce development plan written during Q1. The gender advisor worked with Nepal on surveying and educating journalists on AMR-specific sex and gender reporting. For the second year, the PSS 101 course included a sex and gender section and participatory exercises to illustrate sex and gender concepts in small groups. Peer-reviewed publications in PY5 that included or were solely focused on sex and gender issues in PSS included:

- Lieberman Lawry LL, Konduri N, Gitonga N, Kiggundu R Mbaye M, Stergachis A. Gaps in data collection for sex and gender must be addressed in point prevalence surveys on antibiotic use. Frontiers in Antibiotics 2023; volume 2. doi: 10.3389/frabi.2023.1154506
- Waswa JP, Kiggundu R, Konduri N, Kasujja H, Lieberman Lawry L, Joshi MP. What is the appropriate antimicrobial use surveillance tool at the health facility level for Uganda and other low- and middle-income countries? Journal of Global AMR. 2023. doi: https://doi.org/10.1016/j.jgar.2023.07.003

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

During Q4, MTaPS draft PY6 work plans were reviewed for integration of sex and gender activities. The eLearning slides for the DOH in the Philippines required multiple rounds of reviews to finalize the narration script and slides. With a new reviewer at the DOH, successive rounds of reviewing, commenting, and editing were needed. MTaPS finalized and published the new Gender Gist blog post, entitled "I Bang My Head Less Often: Reflections on Integrating Gender in Pharmaceutical Systems Strengthening.".

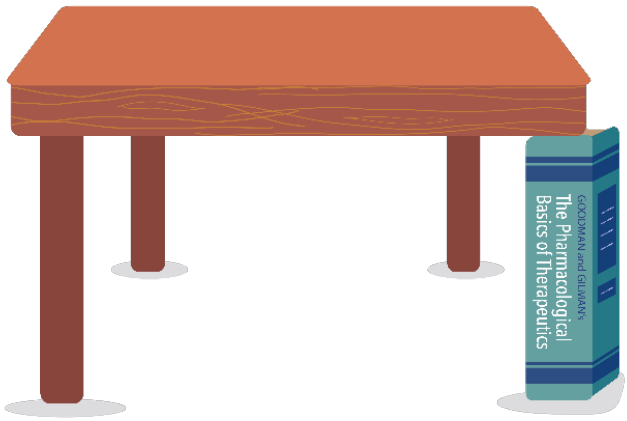


Figure 2. Graphic from the blog post, "I Bang My Head Less Often: Reflections on Integrating Gender in Pharmaceutical Systems Strengthening."

BEST PRACTICES/LESSONS LEARNED

- Sex and gender impacts need to be relevant to pharmacokinetics, pharmacodynamics, and pharmacovigilance, with easy-to-understand examples to explain concepts and their importance in programming.
- Repetition is key—frequent discussions and presentations on simple sex and gender concepts are needed to reinforce how important these concepts are to program activities.
- Multiple modalities for learning (e.g., blogs, webinars with activities, eLearning, exercises) need to be incorporated to allow different learners to uptake these concepts.
- Changes in DOH staff reviewing eLearning modules that have been in development for two years have delayed finalization due to strong opinions on definitions and basic concepts of sex and gender.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Develop a new task order for PY6 after workplans are approved	December 2023
Finalize and upload eLearning modules to the DOH platform	December 2023
Participate in biweekly staff, quarterly technical, and expanded COR meetings	October–December 2023

4. PROGRESS BY COUNTRY

A. BANGLADESH

FIELD SUPPORT

OVERVIEW

The 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 aligned with the Government of Bangladesh's health objectives and commitment to achieving UHC. MTaPS' overall strategic approach is to support the GOB to strengthen pharmaceutical services and the supply chain management system.

CUMULATIVE PERFORMANCE TO DATE

In PY1, MTaPS supported government counterparts to develop a long-term procurement strategic plan. MTaPS developed the TOE for health facilities in PY2 and updated its reference prices in PY4. The program updated the specifications of the Medical Surgical Requisite (MSR) list in PY2 and assisted the MSR List Updating Committee in developing a strategy for regularly reviewing standard reference prices on the updated list in PY3. With TA from MTaPS, the procurement oversight bodies at the Ministry of Health and Family Welfare (MOHFW) and the DGHS have started implementing a system to measure and monitor procurement performance that includes standard key performance indicators through quarterly assessments.

With MTaPS' assistance, enhanced versions of the UIMS and WIMS were incorporated into the eLMIS in PY1 to streamline the functionalities of the two inventory management systems, ensure real-time logistics transactional data, and contribute to better management of supply chain functions. MTaPS supported FP warehouses to ensure uninterrupted availability of FP commodities, maintaining a stock-out rate below 1% at service delivery points and saving resources. MTaPS completed the scale-up of the eAMS in all 61 DHs across the country in PY2.

MTaPS completed a peripheral storage system assessment for TB medicines at stores where options for storage integration were analyzed, and a phased transition plan was proposed. MTaPS continued assisting the NTP in accurately recording and reporting quality TB data using the e-TB Manager digital platform, making the reporting system fully paperless nationwide. The NTP received paperless reporting from 100% of the TB sites from April–June 2023 (NTP's Q2/ MTaPS Q3 Y5.) In PY3, e-TB Manager was enhanced for electronic reporting of aDSM and for interoperability with the Janao app to capture the data of patients assisted by private practitioners. In PY5, the system was enhanced with a dashboard to provide graphic and quantitative summaries of selected indicators for reporting and decision-making. The transition plan for e-TB Manager is being implemented successfully. As of Q3 PY5, MTaPS, in collaboration with the NTP, had rolled out the eLMIS for TB commodities in 70% (45/64) of districts and, within these districts, in 73% (354/485) of the sub-districts (upazilas).

MTaPS assisted the DGDA in developing an inspection strategy to ensure good pharmacy practices in PY1 and PY2 and an electronic inspection and licensing system for pharmacies in PY3. In PY4, MTaPS supported the CAPA plan development to address WHO GBT assessment gaps; establish an effective QMS; and employ the convergence of regional technical standards for medicines registration and application of good review practices. In PY5, MTaPS assisted with training and the dissemination of the DGDA five-year strategic plan (2022–2026). MTaPS supported the DGDA in achieving the highest GBT score for PV function in PY3. For improved patient safety, MTaPS supported the evaluation of 162 AE reports and 6 regulatory decisions.

MTaPS worked with the MOHFW and other stakeholders to develop a situational analysis report for supporting the implementation of pharmaceutical-related components of the Bangladesh Health Care Financing Strategy (2012–2032). The MOHFW's HEU validated the questionnaire, methodology, and data collection protocol following the SHA 2011 guideline in PY5 as part of the pharmaceutical expenditure (PE) tracking exercise for selected MNCH commodities.

YEAR 5 ACHIEVEMENTS AND RESULTS

- The DGFP online eLMIS was scaled up at all 23 warehouses and 71 selected upazila FP stores. Implementation of the eLMIS allows DGFP to access real-time logistics data for decisions on commodity re-supply to service delivery points, contributing to ensuring the availability of commodities.
- The comprehensive eLMIS was implemented at CMSD for better management of health commodities and evidence-based decision-making.
- A total of 2,306 assets were recorded in the eAMS, 38 tickets raised for repair, and 12 tickets resolved at the district level. The expansion of the system to 429 primary health care facilities countrywide (sub-district level) has been initiated by the DGHS MIS. All 485 upazilas from all 64 districts of the 8 divisions trained by MTaPS on eLMIS for TB commodities successfully completed the quarterly stock report and submitted the quarterly commodity requisition using the system.
- Three e-Learning courses on Basic Logistics Management, e-TB Manager Basics, and Procurement Basics were finalized and published on the "Muktapaath" government platform. Government officials and non-government individuals have been enrolled in and are completing the courses.
- The Drugs and Cosmetics Act 2023 was approved in the parliament of Bangladesh, replacing both the 1940 Drug Act and the 1982 Drug Control Ordinance. MTaPS provided technical assistance to DGDA in drafting legal provisions for the new Drugs and Cosmetics Act as part of addressing WHO GBT indicator 1.
- The DGDA-Regulatory Information Management System (DGDA-RIMS) for online registration of vaccines and biosimilars in Bangladesh and PViMS, which is being piloted for online AE reporting and monitoring with MTaPS support, are functional on www.dgda.gov.bd.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PROCUREMENT AND SUPPLY CHAIN SYSTEMS IMPROVED AND MODERNIZED

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).

After incorporating feedback from DGHS, MTaPS submitted the final draft of the Procurement Handbook based on the GOB Procurement Act 2006 and the Procurement Rules 2008. This tool will be a guiding reference for DGHS and MOHFW officials and key entities to complete procurement processes using good governance and fairness within a reasonable timeline.

Activity 1.2.1: Collaborate with DGFP to implement the transition to the online inventory management system.

MTaPS worked with the DGFP to roll out the online inventory management system in all 58 upazila FP stores in Rangpur division. Implementation of the system has helped with understanding the real-time logistics data and its use for decision-making. With MTaPS support, DGFP was able to use the system's stock and consumption data analysis to avoid the expiration and stockout of major contraceptives and to accelerate the current year's procurement.

Activity 1.2.2: Institutionalize the eAMS use at district hospitals.

During the quarter, 378 assets in 61 DHs were entered in the eAMS. Since 2017, a total of 183 repair requests have been received and 128 tickets have been successfully resolved. The eAMS now contains information on 9,373 assets, including their location, functional status, and repair and maintenance history. The implementation of the eAMS at 278 sub-district-level hospitals has been initiated by the MIS unit of DGHS and supported by MTaPS, using government funding. Access to information on equipment enables efficient tracking of their operational status and inventory within a facility, facilitating prompt decision-making regarding repairs, maintenance, and procurement and ultimately optimizing operational efficiency.

Activity 1.2.3: Assist CMSD to implement the comprehensive eLMIS.

MTaPS continued TA for the smooth functioning of the online inventory management system for CMSD. A two-day refresher hands-on training on day-to-day logistics management practices using the CMSD eLMIS was conducted to ensure users' competence. This system can be replicated in other health facilities to ensure the availability of quality health commodities, reduce waste, and improve the transparency and accountability of health product supply chain management, which can contribute to the health of the population of Bangladesh.

Activity 1.3.1: In collaboration with NTP roll out eLMIS for TB commodities in all subdistricts.

To complete the scaling up of the system to all sub-districts nationwide, MTaPS resumed the eLMIS for TB commodities training for the remaining 131 upazilas of Dhaka, Barishal, and Sylhet divisions. It is expected that all the newly trained upazilas will complete the quarterly stock reports and submit the quarterly commodity requisitions for the next quarter using the eLMIS for all transactions.

Challenge: NGOs working with NTP have differing TB commodity stock management practices. Damien Foundation, HEED Bangladesh, and smaller implementing NGOs provide TB care services directly from UHCs alongside government staff; therefore, much of the stock remains in the UHCs. The Bangladesh Rural Advancement Committee operates separate sub-offices and sub-centers that receive a significant portion of upazila supplies, resulting in consistently depleted stock at UHCs within their implementing areas. This hampers accurate stock representation and reduces government leadership and involvement in delivering TB care at the upazila level.

Activity 1.3.2: Institutionalize eLearning courses of the relevant directorates of the MOHFW.

MTaPS advocated for respective stakeholders to notify staff from different programs about the availability of, and opportunity to attend, the eLearning courses on Basic Logistics Management, eTB Manager Basics, and Procurement Basics to enrich their knowledge and skills in those specific areas.

OBJECTIVE 2: PHARMACEUTICAL REGULATORY SYSTEMS STRENGTHENED

Activity 2.1.1: Continue to provide technical assistance 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.

MTaPS participated in the rally and discussion marking the World Patient Safety Day 2023, organized by DGDA in Dhaka. Photo Credit: Md. Abdul Kaium, Photographer, DGDA

MTaPS assisted DGDA in drafting an action plan based on DGDA's five-year strategic plan. Aiming to enhance DGDA's efficiency, MTaPS provided TA to DGDA for its review of four vaccine and biosimilar applications submitted to DGDA RIMS and for training additional staff on the system. Technical review and feedback were provided to help finalize DGDA's regulatory framework and the five-year strategic plan for the National Control Laboratory (2023–2028), supported by the PQM+ program. The MTaPS-supported National Guideline on the Pharmacovigilance System in Bangladesh and the Good Pharmacovigilance Practices Guideline were endorsed by the MOHFW in August 2023. These efforts will contribute to increasing the DGDA's scores on the WHO GBT towards attaining ML3 by addressing sub-indicators RS03.02, RS03.03, MA05.02, VL01.02, and VL04.03.

Activity 2.2.1: Continue to provide technical assistance for generating evidence-based regulatory decisions towards ensuring medicine safety.

MTaPS conducted training on the state of the art in PV and the utilization of PViMS. By September 15, 2023, PViMS documented 136 AE reports, of which 29 were assessed by the ADRM cell. MTaPS supported the DGDA in celebrating World Patient Safety Day. These combined efforts will contribute to ensuring medicine and patient safety in Bangladesh.

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

Activity 3.1.1: Assist National TB Control Program to implement relevant components of e-TB Manager transition plan.

MTaPS regularly meets with the NTP to review the implementation progress of the e-TB Manager transition plan. MTaPS has actively engaged the NTP MIS team to orient and enhance the local IT vendor's capabilities in managing software issues, integrating new features, and troubleshooting effectively. Consequently, the NTP MIS team has developed the competence to report bugs, validate system edits, and engage in troubleshooting with the vendor.

Activity 3.2.1: Develop handover documents for major IT systems supported by MTaPS in consultation with the respective GOB units.

In collaboration with the government entities, MTaPS drafted the nine planned transition plans and held discussions with relevant stakeholders to facilitate the seamless handover of the plans. MTaPS has been a strong advocate for the allocation of essential budget resources in the upcoming Health, Population, and Nutrition Sector Program with various entities, including DGDA, DGFP, MIS-DGHS, CMSD, and NTP, and proactively engaged in enhancing their capacity to ensure independently sustained system management, operation, and maintenance once MTaPS closes out. This approach strengthens the path to long-term sustainability of the systems and has the potential to contribute significantly to the overall improvement of health care services.

OBJECTIVE 5: PHARMACEUTICAL FINANCIAL RESOURCE ALLOCATION AND USE OPTIMIZED

Activity 5.1.1: Assist HEU to build capacity on pharmaceutical expenditure tracking for MNCH commodities.

MTaPS assisted the HEU in completing the PE tracking exercise, developing the standard processes, and customizing training modules on PE tracking for MNCH commodities following the SHA 2011 guideline and the country context. All three documents were presented and discussed in a workshop held in July and supported by MTaPS with the participation of MOHFW, WHO, Data International, DGHS, and UNICEF and shared with the HEU for endorsement. These efforts are expected to contribute to optimizing the HEU's capacity, showcase results for a policy brief, and strengthen health financing mechanisms in Bangladesh.

BEST PRACTICES/LESSONS LEARNED

- Providing curriculum/ training materials is not always sufficient for country partners to implement the training effectively. For example, the DGHS' MIS unit adopted the MTaPS-developed eAMS and conducted computer-based training at the division level for a very large group using MTaPS' training materials. However, it was evident that the logistical challenges of training such a large a group compromised the quality and effectiveness of the training. To ensure quality training moving forward, it will be important to advocate with government counterparts to establish an understanding of logistical requirements and ensure prerequisites are in place to allow for effective online training, including scale-up of automated systems for pharmaceutical strengthening.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1.1.1: Provide technical assistance to the MOHFW and to the DGHS to improve procurement functions of different procuring entities. *MTaPS will facilitate technical review of procurement documents.*	Oct.–Dec. 2023
Activity 1.2.1: Assists the DGHS and CMSD in implementing the comprehensive eLMIS in selected districts as part of transition plan. *Select districts through meeting and visit to assess the existing practice. Organize a consultative meeting with CMSD and MIS unit to share the implementation concept of the comprehensive eLMIS.*	Oct.–Dec. 2023
Activity 1.2.2: Assists the DGFP in implementing the DGFP eLMIS in selected Maternal and Child Welfare Centers (MCWCs) as part of the transition plan. *Organize a consultative workshop with the respective units of DGFP to share the activity implementation concept. Select the MCWCs and visit to assess the existing practice.*	Oct.–Dec. 2023
Activity 1.2.3: Assists the DGHS to roll out eAMS in selected tertiary-level hospitals as part of the transition plan. *Organize a consultative meeting with Hospital Services Management of DGHS to share the eAMS implementation concept at tertiary-level hospitals. Select one hospital through the meeting and visit to assess the current situation.*	Oct.–Dec. 2023
Activity 1.2.4: Assists the NTP in ensuring the functioning of the quantification and early warning system (EWS) technical sub-group, as part of the PSM coordination mechanism. *Assist NTP in organizing one EWS sub-group meeting.*	Oct.–Dec. 2023
Activity 1.3.1: Strengthen the use of the eLearning courses in collaboration with a2i of Information and Communication Technology (ICT) division. *Work with DGHS MIS unit to incorporate the eLearning courses link in the DGHS website and issue a notification to all concerned.*	Oct.–Dec. 2023
Activity 2.1.1: Assist DGDA to implement CAPA plan and scaleup of DGDA RIMS and PViMS toward attaining the DGDA's ML3. *Assist DGDA to prepare and implement SOPs on PViMS and DGDA RIMS and to address implementation feedback.*	Oct.–Dec. 2023
Activity 3.1.1: Assist the NTP in ensuring the functioning of TB eLMIS and eTB Manager. *Continue the weekly meeting with NTP for effective transition of both systems and their functionalities. Addition of feature changes required for TB eLMIS.*	Oct.–Dec. 2023
Activity 3.2.1: Support the transition of MTaPS-developed IT systems to the relevant stakeholders. *Capacity building of MIS for maintaining the MTaPS-developed systems and eLearning platform. Advocate to assign personnel for managing the systems.*	Oct.–Dec. 2023
Activity 5.1.1: Assist the HEU to increase capability on PE tracking toward institutionalization. *Work to contract a suitable partner to conduct PE training. Arrange training in collaboration with the HEU.*	Oct.–Dec. 2023

Table 2. Quarter 4, FY23, Activity Progress, Bangladesh – FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Continue to assist MOHFW and DGHS in addressing issues with procurement processes and documents of different PEs to improve efficiency (quality improvement). **Activity Description:** MTaPS will facilitate technical review of procurement documents and assist in developing the annual procurement plan for FY 2023–24 of all PEs.	Obj1, SO 1.1	▪ DGHS organized two workshops, with MTaPS facilitation, on the preparation of the annual procurement plan. Draft Procurement Handbook was reviewed by DGHS, and MTaPS incorporated all feedback and resubmitted to DGHS for further action. ▪ On August 31, 2023, a meeting was held at the office of the Director of Planning & Research (P&R) to discuss MTaPS' scope on establishing a "Procurement Cell" at DGHS. Representatives from USAID, MTaPS, and DGHS attended this meeting.
Activity 1.2.1: Collaborate with DGFP to implement the transition to the online inventory management system. **Activity Description:** MTaPS will work with DGFP to scale up the online version of the DGFP eLMIS as part of the transition process from offline to online.	Obj 1, SO 1.2	▪ DGFP inventory management system shifted from offline to online at all 58 sub-districts in 8 districts of Rangpur Division. A total of 116 participants (37 women and 79 men) were oriented on the features and use of the new system. ▪ As of now, 23 warehouses and 71 sub-districts (out of 493) have been shifted from the offline to the online system.
Activity 1.2.2: Institutionalize the eAMS use at district hospitals. **Activity Description:** Monitor eAMS implementation progress through regular monitoring visits and provide needed technical support to system users.	Obj 1, SO 1.2	▪ MTaPS visited 11 DHs to provide TA on eAMS operation and roles and responsibilities of users. Since its inception, information on a total of 9,751 assets has been entered from all 61 district-level hospitals. ▪ MIS-DGHS organized training on eAMS for the remaining 4 divisions with MTaPS facilitation, as part of the system expansion to all primary health care health facilities. ▪ Information on a total of 91 assets has been entered by one regional TB referral laboratory.
Activity 1.2.3: Assist CMSD to implement the comprehensive eLMIS **Activity Description:** MTaPS will continue providing TA to users of the CMSD eLMIS for streamlined functioning of the system and troubleshooting support as required.	Obj 1, SO 1.2	▪ MTaPS conducted a two-day refresher training on comprehensive eLMIS at CMSD for 15 users (3 women and 12 men). ▪ A total of 1,586 invoices were generated by the CMSD eLMIS for the supply of products to health facilities. ▪ CMSD organized the first meeting of the "Inventory Tools Management Committee" on August 31, 2023. The committee decided to engage an IT person from CMSD to work with MTaPS on the eLMIS.
Activity 1.3.1: In collaboration with NTP roll out eLMIS for TB commodities in all subdistricts.		▪ A total of 485 persons (75 female, 410 male) from 131 upazilas and 19 districts of Dhaka, Barishal, and Sylhet divisions were trained on the eLMIS for TB commodities. ▪ A total of 18 persons (7 female, 11 male) participated in a two-day TOT on logistics management and eLMIS for TB commodities.

<table>
<tr><th>Activity</th><th>MTaPS Objective(s)</th><th>Activity Progress</th></tr>
<tr><td>Activity 1.3.2: Institutionalize eLearning course of the relevant directorates of MOHFW.

Activity Description: Advocate to the relevant government directorates about the objectives, benefits, and features of the eLearning courses and issue notifications to attend the courses.</td><td>Obj 1, SO 1.3</td><td>▪ A total of 19 professionals (7 female, 12 male) from DGHS participated in the field-testing of the Procurement Basics course on August 21, 2023. MTaPS incorporated the feedback and uploaded the course on the Muktapaath platform.
▪ The number of participants enrolled, and certificates obtained for the three eLearning courses as of September 30, 2023, are shown below:
<table>
<tr><th>eLearning Course</th><th>Participants Enrolled</th><th>Certificates Obtained</th></tr>
<tr><td>Basic Logistics Management Training</td><td>3,120 (M-2,018, F-1,032, Other-70)</td><td>860 (M-543, F-307, Other-10)</td></tr>
<tr><td>e-TB Manager Basics</td><td>541 (M-463, F-72, Other-6)</td><td>192 (M-173, F-19)</td></tr>
<tr><td>Procurement Basics</td><td>250 (M-176, F-69, Other-5)</td><td>41 (M-35, F-5, Other-1)</td></tr>
</table></td></tr>
<tr><td>Activity 2.1.1: Continue to provide technical assistance 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

Activity Description: Support the DGDA in addressing the CAPA plan, including implementation of the DGDA-RIMS.</td><td>Obj 2, SO 2.1</td><td>▪ MTaPS provided TA to DGDA in drafting an action plan based on DGDA's five-year strategic plan and reviewed four applications of vaccine and biosimilar submitted to the DGDA RIMS. Trained three DGDA staff (one female, two male) on DGDA RIMS.
▪ MTaPS shared RSS implementation experiences in Asia at an MTaPS global webinar. The participants attended from various NRAs, the Southeast Asian Regulatory Network (SEARN), the Therapeutic Goods Administration (TGA) Australia, WHO, and PQM+ aiming to streamline regulatory practices and harmonize regulatory standards.</td></tr>
<tr><td>Activity 2.2.1: Continue to provide technical assistance for generating evidence-based regulatory decisions towards ensuring medicine safety.

Activity Description: Support AE assessment and evaluation, including implementation of the PViMS.</td><td>Obj 2, SO 2.2</td><td>▪ On September 15, 2023, MTaPS supported the DGDA in celebrating World Patient Safety Day as a contribution to increasing awareness for ensuring patient safety.
▪ As of September 15, 2023, the PViMS captured 136 AE reports, 29 of which were assessed by the ADRM cell.
▪ MTaPS facilitated training on the state of art and recent developments in PV and the introduction and use of PViMS to 35 participants (5 female, 30 male) and 64 MAHs and DGDA participants (13 female, 51 male).</td></tr>
</table>

Activity		MTaPS Objective(s)	Activity Progress
Activity 3.2.1: Develop handover documents for major IT systems supported by MTaPS in consultation with the respective GOB units. **Activity Description:** Produce comprehensive handover documents that capture all relevant information necessary to ensure the continued functioning of the systems after completion of the MTaPS program. MTaPS has been ensuring that the handover documents meet the stakeholders' interests and needs and are easily understandable.	Obj 3, SO 3.2	▪ MTaPS drafted the nine planned transition plans (i.e., DGDA RIMS, PViMS, DGDA Web Portal, eLearning courses, eAMS, eLMIS for TB, eLMIS for CMSD, eLMIS for DGFP, and AMR Web Portal & STG app), which will be further reviewed for finalization. ▪ MTaPS regularly meets with key stakeholders to discuss transition plan activities, their implementation, and the pathway to sustainability.	
Activity 5.1.1: Assist HEU to build capacity on pharmaceutical expenditure tracking for MNCH commodities. **Activity Description:** Discussion on the customized training modules to address feedback and finalization.	Obj 5, SO 5.1	▪ On July 20, 2023, MTaPS, in collaboration with the HEU, organized a workshop to finalize the customized training modules on PE tracking developed following the SHA 2011 guideline and the standard processes developed and contextualized for Bangladesh on PE tracking. The Director General of the HEU chaired the program, with the active participation of representatives from the MOHFW, WHO, MTaPS, Data International, DGHS, and UNICEF. The customized training module was finalized and shared with the HEU for endorsement.	

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

As part of Objective 4 of the PY5 country workplan, MTaPS Bangladesh has been providing technical assistance to strengthen ARC by supporting the implementation of the NAP-AMR. The GHSA-related goal of MTaPS Bangladesh is to improve ARC by strengthening the IHR capacity of in-country stakeholders and institutions in three result areas—effective MSC on AMR, IPC, and optimizing AMS—to help the country progress to the next higher JEE capacity level.

CUMULATIVE PERFORMANCE TO DATE

In PY2, MTaPS conducted a mapping exercise to assess the implementation status of the NAP-AMR and identify gaps and priorities, 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 the CDC, MTaPS updated the National AMR Strategy, updated and costed the NAP-AMR, and developed the STG, AMS guidelines, and National Multisectoral AMS Plan. MTaPS assisted the CDC in developing, field-testing, and disseminating a mobile app to facilitate the use of the STG by medical practitioners while on the move. MTaPS facilitated and continued providing TA to strengthen the implementation of IPC and AMS interventions at nine targeted health facilities. In PY5, MTaPS facilitated another mapping exercise to track the status of activities and indicators in the NAP. MTaPS facilitated the development of the eLearning course on IPC standard guidelines, translating it into Bangla, and uploading it onto Muktapaath. Another important MTaPS activity in FY23 has been to assist the CDC and DGHS in establishing the National IPC Committee (with TOR) as a subunit of the NTC. The combined effect of these interventions is contributing to improving the country's IHR capacity in AMR on the JEE scale.

YEAR 5 ACHIEVEMENTS AND RESULTS

- In PY5, MTaPS successfully mapped the AMR interventions undertaken by different stakeholders of all the relevant sectors of AMR, tracked the activities and indicators identified in the Operational Plan of the National Strategy and the NAP for ARC in Bangladesh (2021–2026), assessed the country capacity using the WHO JEE IHR benchmarks, identified gaps for intervention, and recommended actions to overcome the gaps. MTaPS facilitated roundtable discussion and social media boosting, participated in rallies and other events at the national level as well as at MTaPS-supported facilities, and developed awareness materials such as T-shirts and banners for the observance of World Antimicrobial Awareness Week (WAAW) 2022. MTaPS also participated in the international conference organized by the One Health Secretariat, Bangladesh. Besides providing logistical support, this participation included a technical presence in the scientific sessions (plenary as well as open paper session), sharing lessons learned in Bangladesh and across the other 13 GHSA countries, and screening a video on AMR. These presentations improved the visibility of the MTaPS program among the country's AMR stakeholders, showcasing MTaPS' contribution to improving the country's capacity in AMR and, more specifically, in MSC.
- Major achievements in the capacity area of IPC are conducting the national level repeat IPC assessment using the WHO IPC Assessment Tool (IPCAT), customized for Bangladesh, to

understand the progress made in the core components of IPC. The results of this assessment were presented in the Core Working Group (CWG) meeting, showing evidence of the significant progress made so far in comparison to the baseline assessment conducted in PY2. The other significant achievement in the IPC area is the formation of the National IPC Committee with TOR. To reduce the burden of providing physical training to build the capacity of the health workforce, MTaPS facilitated the enhancement of the eLearning course on IPC basics, field testing the same and uploading it to the government platform.

- MTaPS intensified its assistance in the implementation of IPC and AMS at the facility level, engaging a field-based consultant to provide more mentorship and monitoring of IPC and AMS activities, thereby improving program performance (as evidenced by assessment scores in the respective components).
- MTaPS field-tested the STG app developed under PY4 activities. The feedback from the field-testing was incorporated into the final app, which was presented to the STG working group for final approval so it could be made available on the government platform. The uploading of the app was followed by some dissemination activities aimed at increasing its use.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

RESULT 1.1: GOVERNANCE FOR MSC STRENGTHENED

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

Sub-activity 1.1.1.1: Assist CDC to conduct a partner mapping of AMR containment activities and follow up focus group discussions to refine the information captured in the mapping exercise.

MTaPS provided technical assistance to CDC, DGHS in organizing a workshop on Mapping of AMR Interventions in Bangladesh, August 28, 2023. Photo Credit: Md. Rasel Khan, MTaPS

After conducting key informant interviews targeting all four One Health ministerial sectors, USAID MTaPS prepared and circulated a draft mapping that included information on partners and stakeholders, interventions, and key IHR benchmark actions completed in each sector with support from partners. This was followed by a workshop on "Mapping of AMR Interventions in Bangladesh" on August 28, 2023, organized by the CDC of DGHS, which brough together stakeholders from the human, livestock, fisheries, environment, agricultural extension, and forestry sectors to provide input into the draft document. The workshop agenda included sector-specific focused group work to discuss probing questions, followed by presentations in plenary. A cross-

sector group discussion on coordination and communication was also held, followed by presentations and further discussions. MTaPS integrated all feedback and produced a final report with key recommendations that will support the implementation of the new NAP-AMR.

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.

MTaPS and CDC, DGHS jointly organized and held the third CWG meeting of PY5, where all relevant stakeholders (i.e., government, development partners, and associations) were present to provide input to strengthen ARC. The main agenda for the meeting was to finalize the AMS guidelines, discuss and approve the National IPC Committee and its TOR, and review the national IPC assessment report. MTaPS supported the drafting of the AMS guidelines and the National IPC Committee TOR and conducted national IPC repeat assessments to support the CDC in identifying priority areas of intervention. The meeting was chaired by the Additional Director General-Planning, co-chaired by the Line Director of the CDC, and facilitated by the Deputy Program Manager of the CDC. The meeting started with a presentation by Dr. Aninda Rahman, DPM CDC, titled "An overview of ARC," which covered the global and national context and current needs. Then, the AMS guidelines and the draft of the TOR of the National IPC Committee were discussed and approved by the CWG. Finally, the National IPC Assessment Report was presented and discussed among the stakeholders, who appreciated such significant work done by MTaPS.

RESULT AREA 2: IPC ACTIVITIES:

RESULT 2.1: GOVERNANCE FOR IPC STRENGTHENED.

Activity 2.1.1: Strengthen IPC governance structures at the national level, including updating of the multi-year IPC national action plan.

Sub-activity 2.1.1.1: Assist CDC/DGHS to finalize the on-going effort to constitute the national multisectoral IPC committee and to develop the National IPC Action Plan.

With the assistance of MTaPS, the National IPC Committee has been formed. MTaPS provided technical assistance to draft the TOR of the National IPC Committee. National level IPC repeat IPCAT2 assessment was conducted by MTaPS to provide the basis for initial action once the committee starts meeting.

Activity 2.2.1: Help expand and sustain the use of newly developed IPC e-Learning module in collaboration with key stakeholders

Sub-activity 2.2.1.1: Finalize the IPC e-Learning course, provide support to implementation and maximize the use rate.

The IPC eLearning course has been enhanced and translated into Bangla, a test run has been conducted with CDC, DGHS, and field testing was completed in one MTaPS-supported health facility. MTaPS uploaded the courses onto the Muktapaath platform after incorporating the feedback from field testing to ensure that the course is used by health care providers.

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.

Sub-activity 2.5.1.1: Support joint supervisory visits with CDC/DGHS and Quality Improvement Secretariate (QIS) officials.

MTaPS regularly conducted monitoring visits and on-the-job training at MTaPS-supported health facilities to monitor the functionalities of the IPC committees and IPC teams in implementing the IPC plan and to identify any challenges. The visits showed that the facilities in general are following the cycle of planning, implementing, and reviewing in the monthly meetings and are improving their IPC scores, although adherence to that cycle varies among the facilities.

Sub-activity 2.5.1.2: Facilitate lessons learned workshop and cross-fertilization visits to disseminate the repeat assessment findings with recommendations for IPC committees and IPC champions and replicate best practices.

To provide an opportunity for MTaPS-supported facilities to share experiences, a cross-learning visit was conducted between an MTaPS-supported health facility, Jhenaidah DH, and a non-MTaPS-supported health facility, Magura DH. Individuals participating in the cross-learning visit included authorities and representatives from Khulna Divisional Directorate Office; Magura District Hospital administrative authorities (i.e., hospital superintendent, Additional Director-AD, Resident Medical Officer-RMO); consultants from different departments of both health facilities; IPC and AMS committee members from Jhenaidah DH; senior staff nurses from both the health facilities; and representatives from MTaPS GHSA portfolio. The learning and sharing visit included a range of activities to facilitate the exchange of knowledge and collaboration, such as presentations, discussions, ward visits, and observations. The cross-learning visit program provides a platform for health facility staff to share their challenges, solutions, and lessons learned in the implementation of IPC and AMS activities. It encourages collaboration and networking among facilities, with the goal of enhancing the overall quality of IPC and AMS service delivery. Overall, the cross-learning visit program plays a vital role in promoting knowledge sharing, capacity building, and continuous improvement in IPC and AMS implementation among both MTaPS-supported and non-MTaPS-supported health facilities.

Sub-activity 2.5.1.3: Continue to support facility authorities and committees to review progress and support implementation of facility-based IPC activities.

With MTaPS support and facilitation, each of the nine supported facilities held monthly meetings of IPC and AMS committees, blended with the meeting of the Quality Improvement Committee, at which MTaPS emphasized the importance of continuing the meetings after MTaPS closeout from a sustainable point of view.

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

Activity 3.5.1: Help strengthen AMS program at facility level

Sub-activity 3.5.1.1: Support joint supervisory visits with CDC/DGHS and QIS officials to improve facility-based AMS committee efficiency and effectiveness.

MTaPS performed a joint supervisory and mentoring visit to Jhalokathi DH with the Program Manager–QIS to oversee the functionality of the AMS Committee. The oversight visits included, among other things, a review of practices of ward rounds by AMS teams and committee members, the adoption of STG by

practicing doctors in both inpatient and outpatient departments, and a review of records and meeting minutes. The PM-QIS also reviewed the facility's time-bounded updated action plans and progress.

During the visits, supervisors conducted training on STG, which included a practical session on the use of the app, with the support of MTaPS. Nilphamari DH (NDH) was represented by 39 participants (12 women and 27 men), Munshiganj DH (MDH) by 18 participants (6 women and 12 men), and Cumilla Medical College Hospital by 32 participants (9 women and 23 men). The training aimed to help doctors prescribe antibiotics according to the WHO AWaRE classification.

BEST PRACTICES/LESSONS LEARNED

- Cross-learning visits are effective in improving coordination, collaboration, and networking among health care professionals on IPC and AMR. This was demonstrated by a cross-learning visit among MTaPS-supported health facilities and non-MTaPS-supported health facilities to exchange knowledge on best practices, strategies, and policies related to IPC and AMR programs. Brief discussions among the host and guest facilities help the participants understand the challenges and opportunities at the district-level health facilities.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1.1.1. Continue to support governance, functionality, and implementation capacity of the national MSC mechanism. *MTaPS will support CDC to conduct activities for WAAW 2023.*	November 2023
Activity 2.1.1: Strengthen IPC governance structures at the national level, including updating of the multi-year IPC national action plan. *MTaPS will assist the newly formed National IPC Committee to develop the National IPC action plan vetted in the CWG meeting.*	November 2023
Activity 3.1.1. Collaborate with CDC/DGHS and QIS to strengthen AMS governance, planning and implementation at national level. *MTaPS, in collaboration with CDC/DGDA/Department of Livestock Services (DLS), will prioritize the AMS activities from the national multisectoral AMS plan to be implemented by respective departments in the short run. All relevant stakeholders, including the CDC, will review the prioritized activities through a workshop engaging CWG/NTC members.*	November 2023

Table 3. Quarter 4, 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 the National MSC Mechanism. **Activity description:** MTaPS will focus support to the NTC and its CWG to complement ongoing interventions aiming the country's progress toward higher JEE capacity levels, consolidate gains, and ensure smooth transition of interventions to the government. A key activity under MSC will be to support the 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-AMR.	5	1.1	▪ The AMR Mapping document has been drafted, shared, and discussed with stakeholders and approved. A workshop on AMR mapping was conducted with multi-sector participation. ▪ MTaPS supported one CWG meeting to discuss and approve the National IPC Committee and the TOR for that committee. The National IPCAT report was also shared in the CWG meeting.
Activity 2.1.1: Strengthen IPC governance structures at national level, including updating the multisectoral IPC NAP **Activity Description:** MTaPS provides TA to draft TOR for the National IPC Committee, to constitute IPC committees, and to develop facility IPC plans following the assessment findings, and other areas, such as drafting meeting minutes and invitation letters and translating documents, when needed. MTaPS is also coordinating CWG meetings to identify agenda for actions (i.e., various assessment, NAP updates, developing AMS guidelines, etc.).	5	2.1	The National IPC Committee has been formed and its TOR approved. The committee will develop the National IPC Plan and will submit it to the CWG meeting for vetting.
Activity 2.2.1: Help expand and sustain the use of newly developed IPC e-Learning module in collaboration with key stakeholders **Activity description:** The modified IPC eLearning course is under development. MTaPS will upload the course into the Muktapaath platform to ensure its use by health care providers.	5	2.2	▪ After incorporating feedback from the field testing, MTaPS uploaded the course into the Muktapaath platform to ensure its use by health care providers. ▪ A test run on the IPC eLearning course was first conducted at CDC, DGHS with 5 participants (1 woman and 4 men). ▪ Thereafter, field testing on IPC was conducted at the MDH. A total of 39 individuals (28 women and 11 men) participated in the field testing.

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:** Continue support to strengthen the IPC activities through IPC committee in the nine MTaPS-targeted facilities and introduce a mechanism to implement actions and update plans. Conduct monitoring visits at MTaPS-supported health facilities.	5	2.5	▪ MTaPS regularly conducted monitoring visits and on-the-job training at MTaPS-supported health facilities to monitor the functionalities of the IPC committees and IPC teams in implementing the IPC plan and to identify any challenges. ▪ A cross-learning visit was conducted between MTaPS-supported Jhenaidah DH and non-MTaPS-supported Magura DH. Participants from Magura DH visited Jhenaidah DH.
Activity 3.5.1: Help strengthen AMS program at facility level **Activity description:** Improve facility-based AMS implementation efficiency through joint supervisory visits, on-the-job assistance, and peer-to-peer visits.	5	3.5	▪ MTaPS performed joint supervisory visit to Jhalokathi DH with Program Manager-QIS to oversee the functionality of AMS, including ward rounds by AMS teams and committee members, adaptation of STG by practicing doctors in both inpatient and outpatient departments, and a review of records and meeting minutes. ▪ Training on AMS/STG was conducted with the support of MTaPS in NDH (39 participants (12 women and 27 men)), MDH (18 participants (6 women and 12 men)) and Cumilla Medical College Hospital (32 participants (9 women and 23 men). The use of the STG app was also demonstrated during the training session.

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.

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 HCFs and strengthening the capacity of 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.

CUMULATIVE PERFORMANCE TO DATE

To facilitate the official establishment of the OHP in Burkina Faso, MTaPS worked in collaboration with the USAID GHSC-PSM program and OHP members to support 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. The order was signed on June 30, 2020.

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 on how to effectively govern 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 the 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. 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 the DGSV to develop a training package based on the guidelines. To strengthen the capacity of service providers, MTaPS then supported three TOT sessions for 15 veterinarians (2 female, 13 male) and 42 livestock technicians (4 female, 38 male) using the developed training package. MTaPS supported the DGSV to print 500 copies of the guidelines for dissemination to support AMS at the peripheral level of the health system. MTaPS also supported the DGSV to draft and validate a ministerial order establishing PV in the animal health sector to align the country with West African Economic and Monetary Union requirements.

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 for Burkina Faso.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS, the AMR-TTC, and its sub-commissions supported the TS to organize the celebration of World Antimicrobial Awareness Week. MTaPS also collaborated with the FAO, Country Health Information Systems and Data Use, Jhpiego, and WHO to facilitate the organization of regular OHP meetings to review plans and progress in implementing the NAP-AMR and to strengthen coordination between the OHP and the TTCs, including the AMR-TTC. MTaPS supported the TS and related partners to organize a two-day meeting to carry out an assessment of the country's progress toward WHO benchmark actions for IHR capacities related to MSC, AMS, and IPC.

MTaPS supported the RUA sub-commission to organize, lead, and manage four quarterly meetings. In addition, MTaPS supported five RUA sub-commission focal points to participate in an interuniversity diploma course on antimicrobials entitled: "Antibiologie et Antibiothérapie en Afrique Sub-Saharienne." MTaPS supported the OHP and RUA sub-commission to carry out a sensitization workshop on RUA for 89 students (51 male, 38 female) in their sixth and final year of studies in medicine and pharmacy. MTaPS also supported the TS-OHP to conduct a sensitization workshop on RUA for 16 (all male) health region and health district officers.

MTaPS supported the DGSV to organize a workshop to develop the draft ministerial order and design a PV data collection tool and reporting mechanism.

MTaPS—under the leadership of the Direction de la Pharmacie Hospitalière 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. MTaPS supported the Direction de la Pharmacie Hospitalière (DPH) to lead supportive supervision activities with the established DTCs. The DPH also assisted DTC members to measure progress with the implementation

of the developed AMS CQI plans in their respective hospitals. MTaPS also worked with the DPH to select three hospitals (Koudougou, Tenkodogo, and Banfora) to conduct audits of antibiotic use. The audits were based on the following criteria: compliance with the recommended molecule, antibiotic prescription, duration of antibiotic therapy, and treatment at 72 hours and at seven days. The audits highlighted that in most cases the antibiotic prescription was necessary, and the administration route was appropriate; however, it was found that most antibiotic prescriptions are not based on laboratory results, nor are they prescribed per the guidelines. Audit findings and recommendations were used to inform and streamline the CQI plans.

QUARTER 4/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 sub-committee, including its human, animal, agricultural, and environmental sector TWGs

On July 28, in collaboration with the OH TS, MTaPS organized the fourth RUA sub-committee quarterly meeting. The meeting was focused on presenting the results of national AMR surveillance in the laboratory spanning 2018 to 2022. Lessons learned from the five years of AMR surveillance highlighted opportunities to best implement the OH approach to combat AMR.

On August 22, 2023, MTaPS engaged with the recently appointed executive secretary of OHP to discuss finalizing the selection of members for the AMR technical thematic committee. The executive secretary committed to reviewing the nomination list for the AMR TTC president and vice-president, as well as for various focal points. TS-OHP sent correspondence to the Minister of Health and Public Hygiene; Minister of Environment, Energy, Water and Sanitation; Minister of Agriculture, Animal Resources and Fisheries; and the Minister of Higher Education, Research, and Innovation requesting that they appoint ministry representatives to the AMR-TTC.

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

Activity 3.5.1: Support the DPH, TTC-AMR, and DTCs to monitor the implementation of AMS interventions in selected health facilities

On July 5-6 and July 13-14, MTaPS, in collaboration with the DPH, conducted supervision visits and quarterly DTC meetings at Centre Hospitalier Universitaire-Regional (CHU-R) in Ouahigouya and Centre Hospitalier Regional (CHR) in Gaoua. While the DTCs noted positive feedback from the October 2022 training seminars, they continue to face challenges. DTC meetings are irregular. DTC activities are also not included in hospital and other health facility budgets. Another issue is the lack of appropriate electronic tools for antibiotic data analysis. Further, there is an insufficient quantity of reagents and consumables to perform appropriate laboratory diagnostics. MTaPS continues to support the Direction Générale de l'Accès aux Produits de Santé to sensitize the hospital management teams to integrate the CQI plans into their respective operational plans and to ensure that the DTCs have the necessary tools to perform their work to hospital standards.

On August 7-11 and August 21-25, 2023, MTaPS supported the DPH in organizing supervision visits to CHRs in Ziniare, Koudougou, and Tenkodogo. During the visits, the team conducted post-training follow-up on the RUA courses which were conducted in October 2022. Findings were uneven. Positive findings include effective support for the DTCs by the hospital management team, and that an increasing number of facility management teams have a desire to develop and put into place recommended STGs. In fact, some activities contained in the DTCs' CQI plans are being considered in the hospitals and other facilities' operational plans.

Areas for improvement were also identified. These include a lack of regulation for medical representatives, absence of updated and validated hospital drug lists, and insufficient post-training follow-up. Antibiotic prescription audits in Koudougou and Tenkodogo indicated non-compliance with prescribing guidelines. Recommendations were agreed upon to continue to enhance practices and antimicrobial stewardship in supported health facilities. Continued activities include raising awareness on antibiotic use, promoting adherence to prescribing guidelines, adhering to procedures switching from IV to oral treatment, conducting germ identification before antibiotic treatment, re-evaluating treatment based on test results, disseminating conditions for antibiotic prescribing, and evaluating surgical prophylaxis effectiveness in Koudougou and Tenkodogo. The supervision team will share its recommendations with the respective hospital health providers and will follow up with the facilities to support implementation of the recommendations.

BEST PRACTICES/LESSONS LEARNED

- Engaging beneficiaries at each step of the planned activity from design to implementation is critical to the successful implementation of activities. Early technical engagement not only positively influences implementation but also allows for stronger country ownership of the activity.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5) Activity 1.1.2: Strengthen the functionality of the TTC-AMR and the RUA sub-commission Description: MTaPS will support the TTC-AMR leadership to organize and lead semi-annual meetings to review the implementation of AMR activities.	October 2023
(PY5) Activity 3.2.1: Support the DGSV to disseminate the ministerial order regulating and enforcing RUA and to draft a ministerial order on PV in the animal health sector Description: MTaPS will support the DGSV to disseminate the ministerial order regulating and enforcing RUA.	October 2023
Activity 3.5.1: Support the DPH, TTC-AMR, and DTCs to monitor the implementation of AMS interventions in selected health facilities Description: MTaPS will support the DPH and the respective DTCs to develop a list of authorized prescribers, define prescribing criteria, and develop a guide regulating visits from pharmaceutical company representatives visiting the facility to promote their products.	October 2023

Table 4. Quarter 4, FY23, Activity Progress, Burkina Faso – GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Support the functionality of the TS-OHP **Activity Description:** Provide technical assistance to the AMR-TTC to complete the establishment of and capacitate the AMS sub-committee, including its human, animal, agricultural, and environmental sector TWGs	5.4	1.1	MTaPS supported the RUA sub-commission to organize its quarterly coordination meeting.
Activity 1.1.2: Strengthen the functionality of the TTC-AMR and the RUA sub-commission **Activity Description:** Provide technical assistance to the AMR-TTC to complete the establishment of and capacitate the AMS sub-committee, including its human, animal, agricultural, and environmental sector TWGs	5.4	1.1	MTaPS supported TS-OHP and the TTC-AMR through the RUA sub-commission to conduct a sensitization workshop on AMR.
Activity 3.2.1: Support the DGSV to disseminate the ministerial order regulating and enforcing RUA 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 ministerial order creating the national veterinary PV system in Burkina Faso and to design a PV data collection tool and reporting mechanism. The ministerial order is now with the Ministry of Agriculture, Animal Resources and Fisheries for finalization and official endorsement.
Activity 3.5.1: Support the DPH, TTC-AMR, and DTCs to monitor the implementation of AMS interventions in selected health facilities **Activity Description:** Support DPH and the DTCs to conduct supervision visits and antibiotic audits	5.4	3.5	MTaPS supported the DPH to conduct supervision visits and quarterly DTC meetings at CHU-R in Ouahigouya and CHR in Gaoua. MTaPS also supported the DPH to conduct antibiotic prescription audits in Koudougou and Tenkodogo.

C. CAMEROON

PMI

OVERVIEW

The Ministry of Public Health has adopted artemisinin-based combination therapy as the first-line treatment for malaria, due to the development of resistance to previously extensively used antimalarial combinations. The 2018 WHO Quality of Selected Antimalarial Medicines Circulating in Six Countries of Sub-Saharan Africa (QAMSA) study found that in Cameroon, 37% of the 41 tested antimalarial samples, including artemether/lumefantrine, failed quality testing. This underscores the essential responsibility of both the General Inspectorate of Pharmaceutical Services and the National Pharmaceutical Regulatory Authority. Legislators in Cameroon have adopted a number of laws to govern the production, importation, and distribution of pharmaceutical items, including Law No. 90-035 of August 10, 1990. The DPML is Cameroon's national pharmaceutical regulatory authority, which operates under the MOPH. The National Laboratory for Medicine Quality Control, the Health Research Division, and the National Ethics Committee support the regulatory function of the DPML.

To improve its regulatory system, the DPML carried out a self-assessment in 2020 using the WHO GBT. The WHO GBT is a tool designed to assess various regulatory functions and assign a country's regulatory system an ML level score, ranging from 1 (few elements of regulatory functions) to 4 (regulatory system operating at an advanced level). The results of this assessment showed that the DPML is currently operating at ML 1, and that it had not fully implemented 167 of the 195 indicators required to reach WHO ML 3, which corresponds to a stable, high-performing, and integrated regulatory system.

Under its Malaria Operation Plan FY21 (revised in January 2022), the US President's Malaria Initiative (PMI) allocated funding to the MTaPS program to support the MOPH to strengthen the registration process for antimalarial commodities.

CUMULATIVE PERFORMANCE TO DATE

MTaPS began implementing its PMI work plan in Cameroon in October 2022. Three activities were initially planned: Activity 1.2.1: Support the development of legislation to create an autonomous national medicines regulatory agency; Activity 2.4.1: Streamline the system for the registration of medical products, including antimalarial products, by developing registration guidelines and SOPs; and Activity 2.4.3: Enhance the capacity of DPML assessors by training assessors on medicine dossier evaluation according to common technical document (CTD) guidelines. In December 2022, Activity 1.2.1 was canceled because the DPML preferred to allocate all funding to support medicines registration. In February 2023, the work plan was revised and approved, and in April 2023, MTaPS recruited a consultant to facilitate support to national counterparts in April 2023. During the third quarter of FY23, MTaPS supported the DPML to train evaluators on marketing authorization applications for pharmaceutical products. MTaPS also supported the DPML to organize four workshops to develop

registration guidelines and variation guidelines for marketing authorization of pharmaceutical products. All planned activities in the PMI work plan for FY23 were implemented during Quarter 3.

YEAR 5 ACHIEVEMENTS AND RESULTS

From April 25-29, 2023, MTaPS supported the DPML to train evaluators on marketing authorization applications for pharmaceutical products. This training brought together 24 participants (17 female). Evaluators received training on a variety of topics, including an overview of medical devices, classification of medical devices, Japan's Pharmaceutical and Medical Device Agency (PMDA) experience, essential principles of safety and performance of medical devices and IVDs, clinical investigation and evaluation of medical devices, table of contents of medical devices other than IVD, software as medical device, post-marketing surveillance, medical devices review content, and essential principles of labeling and quality management system. The training is expected to enable DPML staff to be more precise in their technical evaluation of pharmaceutical products, and to help them to evaluate MA applications more quickly, so that MOPH can deliver top-quality products to the market.

MTaPS supported the DPML to organize four workshops to develop registration guidelines and variation guidelines for marketing authorization of pharmaceutical products.

- From May 11 to 12, 2023, MTaPS supported the DPML to organize a two-day preparatory workshop with 14 participants (9 female, 5 male) in Yaoundé to develop the registration guidelines. Participants focused on the structure of the two guidelines, the working methodology for the review workshops, and the timetable of activities.
- From May 15 to 18, 2023, MTaPS organized a four-day workshop with 26 participants (14 female, 12 male) in Ebolowa to review the registration guidelines. During the workshop, multidisciplinary participants from the DPML licensing department, subcommittee chairs, academics, and experts in pharmaceutical regulation reviewed the first draft of the guidelines.
- From June 13 to 16, 2023, MTaPS supported the organization of a 4-day workshop in Ebolowa to review variation guidelines. A total of 25 participants (13 female, 12 male) took part in the workshop. Participants reviewed the entirety of the first draft of the marketing authorization variation guide for pharmaceutical products.
- From June 19 to 23, 2023, MTaPS supported the organization of a workshop to validate the registration and variation guidelines. This workshop brought together 23 participants (13 female). During the first 3 days of the workshop, participants reviewed and validated the draft registration guide, and during the remaining 2 days, they also reviewed and validated the marketing authorization variations guide. Workshop participants included DPML staff, the General Inspectorate of Pharmaceutical Services, the Legal Affairs and Litigation Department, the Translation Unit, and priority health programs.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

All activities in the FY23 PMI work plan were completed during the third quarter of FY23.

BEST PRACTICES/LESSONS LEARNED

- Coordination, communication, and flexibility are crucial for the successful implementation of joint activities with stakeholders. For example, to accommodate unforeseen changes in the DPML schedule, MTaPS had to reschedule the training for evaluators on marketing authorization multiple times. Ongoing flexibility and communication allowed MTaPS to eventually hold the training at a time that was suitable for the partner.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

FY24 work plan activities are still under review and pending approval.

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of MTaPS in Cameroon is to support AMR containment, slow the emergence of resistant bacteria, and prevent the spread of resistant infections. In Cameroon, MTaPS 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 TOR and 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 a strong governance mechanism in place, 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 TOR 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. MTaPS is also supporting the MOPH to establish a surveillance system to monitor HCAI in HFs as well as to strengthen compliance of health workers with IPC guidelines, including those for hand hygiene.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' GHSA work in Cameroon is guided by the WHO JEE benchmark actions for IPC, AMS, and MSC. As of June 2023, MTaPS has supported the achievement of 37 (60%) of the 62 total WHO benchmark actions.

Since MTaPS began its work in Cameroon in 2019, the program has supported MSC on AMR through contributing to the organization of 19 routine meetings of the TS of the AMS MCC, the AMS and IPC TWGs, and other OHP members and partners to monitor the implementation of AMR activities. MTaPS supported the organization of a coordination meeting between the TS-MCC and the OHP to strengthen linkages between these two bodies and to advocate for officially creating the MCC. MTaPS also supported a workshop for OHP stakeholders to review the regulatory framework of the OHP, as well as a workshop to review and finalize Cameroon's NAP-AMR. Additionally, MTaPS 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. MTaPS also supported the Directorate of Health Promotion (DPS) to evaluate key surveillance attributes and some performance indicators of the HCAI surveillance system. MTaPS equally supported the DPS to carry out a KAP survey on hand hygiene of healthcare workers in 13 MTaPS-supported HFs.

MTaPS supported the DPML to carry out a situational analysis of AMS-related policies in the animal and human health sectors, to develop a national integrated AMS action plan, to establish DTCs in 12 HFs, to train 239 health care providers (134 female, 105 male) in AMS, to conduct CQI of AMS activities in supported HFs, and to classify antibiotics in Cameroon's national essential medicines list according to the WHO AWaRe categorization.

YEAR 5 ACHIEVEMENTS AND RESULTS

In FY23, MTaPS supported the TS-MCC, One Health Platform, and other relevant technical departments of the MOPH to develop a NAP-AMR monitoring framework to monitor and track implementation progress of the plan across different health sectors. MTaPS also partnered with IDDS and AFROHUN to develop course content for a master's degree program in infectious diseases and AMR at the University of Buea and to establish a Moodle e-Learning platform on the university's website to facilitate blended learning.

MTaPS supported IPC committees to become more autonomous, implement self-initiated IPC activities, and continue to implement a CQI approach with incremental self-improvement targets to ensure effective activity progress. MTaPS supported the DPS to evaluate selected surveillance attributes and performance indicators of the HCAI surveillance system in the CQI process. MTaPS provided assistance to the IPC committees via the DPS to carry out a cross-sectional KAP survey of health care workers on hand hygiene in MTaPS-supported HFs, using the adapted WHO tools to improve compliance of health staff on hand hygiene. MTaPS also supported the DPS to carry out follow-up assessments of IPC program core components at the national and HF levels, using the WHO IPCAT2 and IPCAF tools, respectively, to identify the areas still requiring action and update the national and facility IPC action plans.

Under the leadership of the DPML, MTaPS continued to support DTCs to take ownership over the implementation of their own AMS programs. MTaPS supported the DTCs to implement self-initiated AMS activities and continue to implement a CQI approach with incremental self-improvement targets.

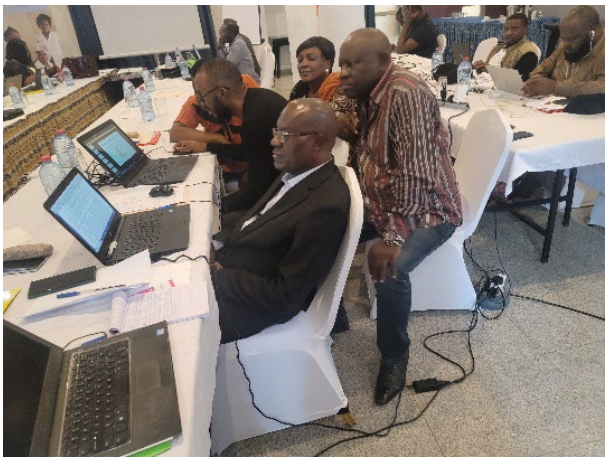
QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

In July 2023, MTaPS supported the DPS to evaluate selected surveillance attributes of the HCAI surveillance system, including simplicity, stability, acceptability, flexibility, and data management. MTaPS assisted the DPS to carry out a cross-sectional KAP survey of health workers on hand hygiene. MTaPS also supported a follow-up assessment of IPC core components at the national level.

RESULT AREA 1: EFFECTIVE MSC OF AMR

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

MTaPS partnered with AFROHUN and IDDS to integrate IPC, AMS, and surveillance course materials currently available on the MOPH website for in-service training into the curriculum for Cameroon's recently adopted master's degree program for Infectious Diseases and AMR at the University of Buea. MTaPS organized a 5-day workshop from July 3 to 7, 2023, bringing together 30 participants (8 female) from the University of Buea and other sister universities to develop course content for the master's degree program. IDDS then supported the recruitment of a national consultant to support the transformation or conversion of the courses into e-Learning modules, develop an e-Learning platform at the University of Buea website, and upload the course content to the platform. A total of 41 courses were developed: 20 for the master's degree curriculum and 21 short professional development courses. The master's program courses are already online and in use by master's students at the University of Buea, while the short professional development courses will be made available to students once the platform is officially launched in November 2023.



Group work during the development of course content for the master's program in infectious diseases and AMR at University of Buea, July 2023. Photo credit: MTaPS

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.

From July 10-22, 2023, MTaPS supported the DPS to conduct a cross sectional KAP survey of health care workers on hand hygiene in 13 HFs in four regions. A total of 388 health workers were sampled, with 367 completely filling out the questionnaire, giving a response rate of 94.6%. The ages of the respondents ranged from 18 to 60 years, with a median age of 34 years. Of the respondents, about 3 quarters (74.1%) of respondents were female, and 51% were nurses. Most (74.7%) of the respondents were not members of an IPC committee, and most (85%) reported having received a form of training or briefing in hand hygiene. Out of the respondents who received such training or briefing, only 24% reported having been trained before 2020 (e.g., before the COVID-19 pandemic began). About 3 quarters (73.6%) of participants cited the two recommended methods of practicing hand hygiene (hand washing with soap and water; and using a hand rub with alcohol-based gel or solution) and more than half (62.7%) also reported that health workers' hands constitute the main route of cross-infection. Hand washing with water and soap was the preferred method of hand hygiene, as reported by the majority (59.9%) of the respondents. More than half (52.3%) of the respondents reported that they always follow all the required steps of hand hygiene practices. Findings from the KAP survey will be used to fine tune and adapt Cameroon's training modules for hand hygiene, and to inform refresher trainings of health care workers.

Activity 2.5.2: Support the functionality and scale-up of the newly established pilot systems for HCAIs and multidrug-resistant organism (MDRO) surveillance under the leadership of the facility IPC focal persons and committees to strengthen pandemic preparedness.

MTaPS supported the DPS and the Directorate for the Fight against Disease, Epidemics, and Pandemics (DLMEP) to evaluate selected attributes of the surveillance system, including data quality (timeliness and completeness of data), simplicity, flexibility, acceptability, and usefulness of the surveillance system in 13 MTaPS-supported HFs from July 10 to 22, 2023. The purpose of this evaluation was to improve surveillance framework performance and integration into the national surveillance system to ensure sustainability. The results of the evaluation showed that the HCAI surveillance system is flexible, acceptable, and useful, as it has enabled the HFs to strengthen their IPC precautions as they report suspected cases of HCAI. However, timeliness and completeness of data reporting is a challenge; some health staff complained that the data collection tools (notification and investigation forms) are too cumbersome and have too many variables to fill out. MTaPS plans to support the DPS to fine-tune the data collection tools in FY24.

BEST PRACTICES/LESSONS LEARNED

- When planning activities, international partners should be careful to include only the activities under their control as work plan deliverables. This is important because international partners who assist the country in developing policy documents cannot control how long it takes for the relevant national counterparts to validate them. For example, MTaPS could not support the quarterly evaluation of the AMR-NAP activities as planned because the validation of the AMR-NAP was still pending during this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

FY24 work plan activities are still under review and pending approval.

Table 5. Quarter 4, FY23, activity progress, Cameroon—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.2.1: Continue to support the institutionalization, ownership, and uptake of AMR-related e-Learning courses through multisectoral efforts. **Activity description:** MTaPS supported the integration of IPC, AMS, and surveillance course materials into the curriculum for the University of Buea's master's degree program for Infectious Diseases and AMR.	5.4	1.2	MTaPS partnered with AFROHUN and IDDS to jointly support the integration of IPC, AMS, and surveillance course materials are currently available on the MOPH website for in-service training into the curriculum for Cameroon's recently adopted master's degree program for Infectious Diseases and AMR at the University of Buea. A total of 41 courses were developed: 20 for the master's curriculum and 21 short professional development courses.
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 DPS to supervise IPC committees and support them to implement self-initiated activities.	5.4	2.5	MTaPS supported the DPS to conduct supervision of IPC committees and to carry out a cross-sectional KAP survey of health care workers on hand hygiene in 13 HFs in four regions. MTaPS also supported IPC committees to develop and implement self-initiated activities.
Activity 2.5.2: Support the functionality and scale-up of the newly established pilot systems for HCAI and MDRO surveillance under the leadership of the facility IPC focal persons and committees to strengthen pandemic preparedness. **Activity description:** MTaPS supported the DPS and the DLMEP to evaluate the surveillance systems for HCAIs and MDROs in Cameroon.	5.4	2.5	MTaPS supported the DPS and the DLMEP to evaluate selected attributes of the surveillance system, including data quality (timeliness and completeness of data), simplicity, flexibility, acceptability, and usefulness of the surveillance system in 13 MTaPS-supported HFs.

D. CÔTE D'IVOIRE

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of MTaPS in Côte d'Ivoire is to support sustained AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. MTaPS is supporting strategic objectives 4 (reduce incidence of infections through effective sanitation, hygiene, and prevention measures) and 5 (improve RUA in human and animal health and environmental sectors) of the Côte d'Ivoire 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 the government of 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' support to the government of Côte d'Ivoire to strengthen AMR containment is guided by WHO IHR benchmark actions. MTaPS aims to help the country move up to the next JEE level across the three result areas. As of June 2023, MTaPS has supported the completion of 41 WHO benchmark actions—11 contributing to MSC/AMR, 19 to IPC, and 11 to AMS.

Since MTaPS' inception 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. This TWG is connected to the OHP through a national coordinating body called the MSC Group (or MCG). MTaPS helped to 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 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 also supported the AMS MTC to develop the AMR M&E plan and the AMR operational advocacy plan and to update the inter-ministerial decree officially establishing DTCs in Côte d'Ivoire.

MTaPS supported a situational analysis of the capacity and functionality of ICCs and DTCs in four university teaching hospitals, 12 regional hospitals, and 4 private clinics in the human health sector, as well as in the veterinary clinic of the Ministry of Animal Resources and Fisheries' Regional Directorate of Bouaké and in 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 20 HFs. Supported ICCs and DTCs are now functional, with clear TORs and capacity building plans. MTaPS also supported the AMS TWG to develop and finalize a list of antibiotics based on the AWaRe classification. The IPC TWG and the AMS TWG identified and selected three MTaPS-supported facilities as centers of excellence for IPC and AMS activities. MTaPS assisted the AMR TWG for the deployment of the AMR 2021–2025 M&E system, through the development of an AMR 2021–2025 M&E plan, data collection tools, and the training of MTC monitoring and evaluation focal points in the use of these data collection tools. 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.

YEAR 5 ACHIEVEMENTS AND RESULTS

In year 5, MTaPS supported the AMR TWG in completing four WHO benchmark actions: one contributing to MSC/AMR, 1 to IPC, and 2 to AMS. As a result, the number of benchmark actions completed has increased from 35 to 36, with 2 benchmark actions in progress in year 5.

During the year, MTaPS supported the MCG in organizing its bi-annual coordination meeting, enabling the MCG to meet and take strategic decisions. MTaPS supported the AMR TWG in providing the country with three centers of excellence for IPC and AMS activities. MTaPS has also supported the AMR TWG in strengthening the institutional framework for AMS activities by validating the decree governing the functioning of the drug committees and finalizing the AWaRe categorization of antibiotics.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULTS AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Support the MCG to monitor the implementation of the approved NAP-AMR

On July 11, 2023, MTaPS provided technical support to the MTC5 to organize a meeting to review the progress made in implementing AMS activities in the first half of 2023. The meeting was attended by 16 participants (6 female, 10 male). Nine AMS activities were implemented over this period and five more are planned for the next. During the meeting, the MTC5 updated the AMS guidelines and the monitoring antimicrobial consumption and use procedures. Participants also made recommendations for improving antibiotic stewardship in the animal sector.

On July 28, MTaPS supported the AMR TWG in organizing a meeting for the AMR secretary to present on NAP-AMR activity implementation. Sixteen participants (8 female) attended the meeting. This workshop made it possible to collect a list of available activity reports reflecting the number of

completed activities. As of the meeting, only 12% of NAP-AMR activities had been implemented; this can be attributed to limited availability of funding for NAP-AMR activities.

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

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

On July 5-6, 2023, MTaPS provided support to the MTC5 to organize a joint mission in the Grand Centre Medical Clinic of Yopougon in Abidjan. The aim of this activity was to strengthen the capacities of centers of excellence health personnel for the implementation of AMS activities and to supervise DTC members with a focus on the functionality of the DTC. The DTC supervision grid and the WHO tool for assessing AMS in health care facilities, adapted by MTaPS, were utilized for this exercise. While the capacities of the DTC are improving, this is not reflected in their score. The score has not significantly changed since the last assessment because the work that is conducted is not accurately or completely documented. The score utilizing the WHO AMS health facility tool is on level with the two other centers of excellence. The supervisors recommended that the DTC properly document all implemented activities. With this change, scores will improve.

On August 8-25, 2023, in collaboration with the MTC5, MTaPS supported the AMR TWG to organize a joint supervision visit of the DTCs at 17 health facilities. This exercise was conducted in each health facility in Abidjan by two MTC5 members and in the regional hospitals by two regional trainers. The supervision took place over two days at each site. The aim of this exercise was to improve the implementation of AMS activities by DTCs in the 17 health care facilities in the human sector supported by MTaPS. The DTC supervision tool was used to conduct this exercise. Out of the 17 planned DTC supervision visits, 13 were completed and were postponed to quarter 1 of FY24.

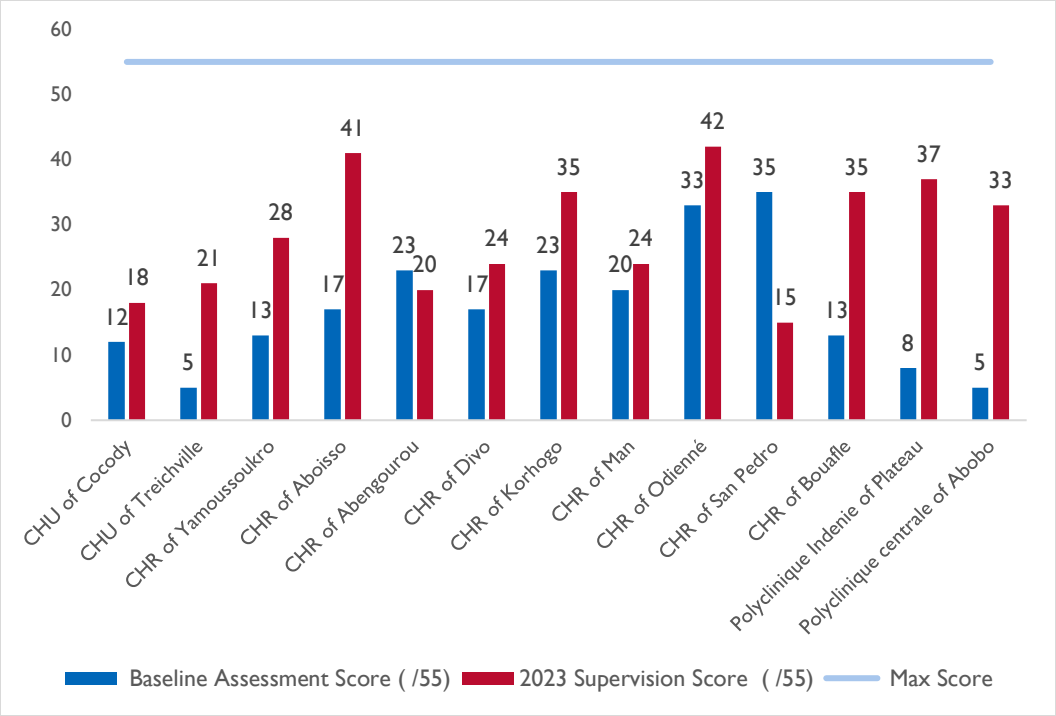


Figure 3. AMS capacity scores in MTaPS-supported health facilities

As can be seen in figure 2, 11 of the 13 DTCs visited in August showed an improved score compared to the scores attained in 2022. The score of two DTCs decreased for reasons linked to either the relocation of the health facility (San Pedro), DTC team member turnover (Abengourou health facility with the departure of both the president and the secretary), or internal dysfunction within the committee including leadership problems, administrative issues, or lack of motivation.

MTaPS also supported the AMR TWG and the MTC5 to hold a meeting on September 6, 2023, to develop a protocol for PPS in MTaPS-supported facilities. Fifteen participants (11 male, 4 female) attended the meeting. The meeting objectives were to review the draft of the PPS protocol, establish the team that will carry out the PPS, and validate next steps towards the PPS implementation in the three centers of excellence in AMS. The finalized protocol will be submitted to the ethics committee before data collection in the three health facilities.

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER*

Activity & Description	Date
(PY5) Activity 1.2.1: Support the AMR TWG to use e-Learning platforms to scale up training on AMS and IPC for health professionals Support 30 participants from each of the 20 MTaPS-supported health facilities to take e-Learning courses	Nov-Dec 2023

* FY24 work plan activities are still under review and pending approval.

Table 6. Quarter 4, FY23 activity progress, Côte d'Ivoire—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Support the MCG to monitor the implementation of the approved NAP-AMR **Activity Description**: Support the AMR TWG to organize a meeting for the AMR secretary	5.4	1.1	Following the MCG meeting, MTaPS supported the AMR TWG in organizing the quarterly secretariat meeting to analyze the level of implementation of AMR 2021-2025 NAP activities and the MTC5 to organize a meeting to review the progress made in implementing AMS activities in the first half of 2023. These meetings were attended respectively by members of the AMR secretariat and members of MTC5, including MTaPS staff. No major difficulties were encountered.
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 **Activity Description**: Provide support to the MTC5 to organize a joint mission in the Grand Centre Medical Clinic of Yopougon in Abidjan	5.4	1.1	Following the identification of Grand Centre Clinic in Yopougon as an AMS center of excellence, MTaPS provided support to MTC5 to strengthen the center's AMS management capabilities and to build the capacity of regional and local drug committees to conduct capacity assessments of drug committees in the 17 other health centers. The availability of reports on activities carried out by the drug committee of Grand Centre Clinic had an impact on the evaluation score. It was therefore recommended that all these reports be made available for future evaluations.

E. DRC

GHSA ACTIVITIES

OVERVIEW

The goal of MTaPS' AMR work in DRC is to support AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. To achieve this goal, MTaPS works to build 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 improved.

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

A 2023 self-assessment carried out in DRC using the JEE version 3.0 to estimate progress against the baseline results obtained by the JEE conducted in 2018 revealed significant improvement in MSC on AMR, AMS (optimized use of antimicrobials), and IPC.

CUMULATIVE PERFORMANCE TO DATE

Since the JEE was conducted in March 2018, MTaPS has supported DRC in making significant progress in the fight against AMR. This progress has included the establishment of an NC-AMR and the development of a NAP-AMR. MTaPS supported the NC-AMR in establishing three thematic TWGs (or subcommittees) for IPC, the rational use of antimicrobials, and AMR detection and surveillance. MTaPS supported the NC-AMR and the related TWGs to implement the NAP-AMR and achieve progress in the MSC, AMS, and IPC technical areas. As of March 2023, MTaPS supported DRC in achieving 27 (44%) of the 62 WHO benchmark capacity actions, including 10 contributing to MSC on AMR, eight to IPC, and nine to AMS.

As a pilot, MTaPS supported the establishment of 12 DTCs in five provinces to oversee AMS interventions at the HF level and promote the rational and appropriate use of medicines, including antimicrobials, to prevent AMR. To this end, MTaPS supported DTCs in implementing AMS CQI activities by iteratively collecting antibiotic prescription patterns and patients' knowledge on antibiotic prescriptions, as part of a CQI effort. MTaPS collaborated with WHO to support the National Pharmaceutical Regulatory Authority (ACOREP) in revising the NEML and integrating the WHO AWaRe categorization of antibiotics into the revised NEML. In collaboration with WHO, MTaPS

supported ACOREP in conducting a national survey on the aggregate consumption of antimicrobials in DRC using the atomical, therapeutic, chemical/defined daily dose model. The study revealed that at least 70% of antibacterial medicines consumed were in the WHO access category, which is above the WHO's recommended minimum of 60%.

In collaboration with WHO and FAO, MTaPS supported the Directorate of Animal Disease Control (*Direction de Lutte contre les Maladies Animales* [DLMA]) in conducting IPC assessments in the animal health sector. Using an adapted IPCAF tool, the DLMA, ACOREP, and the MOH's Directorate of Hygiene (*Direction d'Hygiène*) carried out the assessment at four farms and four animal health clinics. Based on the results obtained, each facility developed an improvement plan to reduce HCAIs and inappropriate AMU. MTaPS also supported the Directorate of Hygiene in using the WHO IPCAT2 to assess hygiene conditions in the human health sector at the central level and to develop an improvement plan, which is currently being implemented.

YEAR 5 ACHIEVEMENTS AND RESULTS

In PY5, MTaPS continued to support the implementation of the DRC NAP-AMR. MTaPS supported the NC-AMR and the AMS and IPC TWGs in holding three quarterly AMR activity planning and monitoring meetings under the leadership of ACOREP. Meeting participants evaluated the implementation status of the recommendations from previously held meetings.

In the animal health sector, MTaPS supported the NC-AMR in conducting joint MSC field supportive supervision visits to five animal health institutions. MTaPS also collaborated with WHO to support the NC-AMR in conducting the 2023 annual Tripartite Country Self-Assessment Survey (TrACSS). The results of 2023 TrACSS are currently under review and will be published on the WHO website.

Additionally, MTaPS continued to support the Directorate of Hygiene in assessing the coordination of IPC practices at the national level of the health system using the WHO IPCAT. For this assessment, seven MTaPS-supported HFs were assessed in Kinshasa, Nord Kivu, and Ituri provinces. In addition, MTaPS supported the MOH in disseminating the circular note officially requiring the establishment of DTCs in referral hospitals across the country. During FY23, MTaPS supported the establishment of additional DTCs in DRC to play a pivotal role in promoting appropriate AMU at the HF level, bringing the total number of DTCs established with MTaPS' support to 12.

Finally, MTaPS supported ACOREP, in collaboration with the *Cliniques Universitaires de Kinshasa*, *Cliniques Universitaires de Kisangani*, *Hôpital Saint Joseph*, INRB, *Département de Pharmacologie Clinique et Thérapeutique* of the University of Kinshasa, and *Département de Soins de Santé*, in developing the National Guidelines for the Use of Antibiotics in Healthcare Facilities and Services in the Democratic Republic of the Congo (*Guide national d'utilisation des antibiotiques dans les établissements des soins de santé et services en République Démocratique du Congo*), which will serve as the country's standard guidelines for the appropriate use of antibiotics and take into consideration the WHO AWaRe categorization of antibiotics. These guidelines will be officially adopted in October 2023, and MTaPS will support ACOREP in printing and disseminating them to MTaPS-supported HZs.

Q4/YEAR 5 ACHIEVEMENTS AND RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Provide technical and logistical support to the NC-AMR and the related TWGs (AMS and IPC) for effective monitoring and planning of AMR interventions

In preparation for the DRC's next JEE, MTaPS collaborated with WHO to support the DRC's National Border Hygiene Program (*Programme national de l'hygiène aux frontières*), which plays the role of IHR focal point in DRC, and ACOREP, which plays the role of AMR focal point in DRC, to organize a meeting on August 10 to carry out a self-assessment of the country's progress in all 19 IHR technical areas since the baseline assessment performed in March 2018. This self-evaluation produced the following results for the components of AMR:

- MSC on AMR (P4.1) improved from level 1 to 4.
- AMR surveillance (P4.2) improved from level 1 to 3.
- AMS, or optimization of AMU in human health (P4.4), improved from level 1 to 3.
- Optimization of AMU in animal health and agriculture (P4.5) improved from level 1 to 2.
- Prevention of multiresistant organisms (P4.3) remains at level 1, as the country has not done sufficient work to support this area.

Activity 1.2.1: Support NC-AMR in conducting joint MSC field support supervision visits in the human, animal, and environmental sectors and using the supervision findings to conduct the annual TrACSS

From July 14-26, MTaPS supported ACOREP, in collaboration with the DLMA, in conducting joint MSC field support visits to five facilities, including two veterinary clinics (*Clinique Zoogle* and *Clinique Dr. Venance*), one farm (Eggs for Congo), and two plant clinics (*Clinique Siforco* and *Clinque Kimwenze*). The objectives of the visits were to promote rational AMU and discourage the use of antibiotics in animals other than for the treatment of infectious diseases (such as using antibiotics as growth promoters in animals).

The findings from supervision visits were used to verify the information provided during the TrACSS conducted during Q3 in the human, animal, and environmental health sectors and check for any significant disparities between information provided in the TrACSS and the findings of the visits.

RESULT AREA 2: IPC

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

From July 21 to 31, MTaPS supported the Directorate of Hygiene to organize IPC assessments in the animal health sector at two veterinary clinics and four farms in Kinshasa using a modified version of the IPCAF. The assessment revealed that three of the five assessed institutions were at a basic level for IPC practices and two out of the five were at an inadequate level as detailed below:

- *Société congolaise pour l'élevage des poules* (farm): basic
- New *Domaine Agro Industriel Presidential de la Nsele* (farm): basic
- Ngrayi (farm): basic

- Aberdeen (clinic): inadequate
- Gombe Clinic (clinic): inadequate

These results show that there is still much work to do to promote good IPC practices in the animal health sector. Planned actions to address IPC deficiencies include the following:

- Support each facility in developing an improvement plan with available resources.
- In the long term, support the DLMA in the development of IPC standards and guidelines for the animal health sector.

RESULT AREA 3: OPTIMIZE AMU IN HUMAN AND ANIMAL HEALTH AND AGRICULTURE

Activity 3.5.1: Strengthen DTCs established with MTaPS' support to oversee implementation of AMS activities and conduct stewardship practices at their respective facilities

MTaPS supported the DTCs at Kyeshero and Heal Africa hospitals in Goma (Nord Kivu province) and at HGR Bunia and CME Hospital in Bunia (Ituri province) in conducting their CQI reviews from August 21-25 and from August 24-29, respectively. The overall results indicate an improvement in rational prescription practices compared to the previous quarter—i.e., at Heal Africa Hospital, the average number of medicines per prescription decreased from 2.8 to 2.2, and the percentage of injectable antibiotics per prescription decreased from 10% to 0%. Additionally, the results indicate that patients' knowledge about the treatment, duration, and route of administration of medicines in general has improved at the four hospitals.

Regarding the use of antibiotics from WHO AWaRe categories, Kyeshero Hospital made significant improvement since the previous review. During FY23 Q3, 56.25% of antibiotics prescribed were from the WHO access group; this increased to 70.59% during Q4 (Table 7). However, HGR Bunia saw no change in performance, maintaining 72% of prescriptions from the access group in both quarters.

Table 7. Percentage of WHO access group antibiotics used at Kyeshero Hospital

Indicator	Review 1	Review 2	Review 3	Review 4	Review 5	Review 6
% of access group antibiotics used at Kyeshero Hospital	55%	55%	57%	61.90%	56.25%	70.59%

Activity 3.5.2: Develop/update and disseminate national stewardship and clinical/treatment guidelines that include the AWaRe categorization for promoting appropriate use of antibiotics

In July 2023, following the development of the first draft of the National Guidelines for the Use of Antibiotics in Healthcare Facilities and Services in the Democratic Republic of the Congo, MTaPS supported ACOREP in sharing the draft guidelines with experts in various health fields, including internal medicine, pediatrics, gastroenterology, gynecology and obstetrics, and cardiology, from four university teaching hospitals (University of Kinshasa, University of Lubumbashi, University of Goma, and University of Kisangani) and other general referral hospitals for their input before adopting the guidelines.

From August 9-11, MTaPS supported ACOREP in organizing a workshop to integrate the expert feedback and inputs received into the draft guidelines. Following this, MTaPS supported a workshop

from August 30 to September 5 in Matadi to complete the final draft of the guidelines in alignment with the WHO AWaRe categorization. As a next step, MTaPS will support ACOREP in printing around 30 copies of the guidelines and submitting them to the technical coordination committee of the Ministry of Health, Hygiene and Prevention for adoption and validation.

Workshop on WHO AWaRe categorization, Matadi, DRC, September 2023. Photo credit: Bony Muya

BEST PRACTICES/LESSONS LEARNED

- Including highly respected and influential clinicians in the development of national tools (such as antimicrobial treatment guidelines) provides strategic support for the nationwide acceptance of and adherence to these tools.
- MOH leadership and management of activities are crucial to ensuring national ownership and buy-in by stakeholders. ACOREP's leadership in spearheading the development of the National Guidelines for the Use of Antibiotics in Healthcare Facilities and Services in the Democratic Republic of the Congo facilitated the involvement of all key stakeholders.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

FY24 work plan activities are still under review and pending approval.

Table 8. Q4, 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:** MTaPS will support ACOREP in organizing meetings of the IPC and AMS subcommittees to evaluate their work plans and prepare for the next meeting of the NC-AMR.	N/A	1.1	MTaPS continued to support the NC-AMR in preparing for the DRC's next JEE. This evaluation will use JEE 3.0, while previous evaluations and results were drawn from JEE 2.0.
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 TrACSS **Activity description:** MTaPS will support the different sectors in organizing joint supervision visits to collect information to fill out the template for the TrACSS.	N/A	1.2	MTaPS supported ACOREP, in collaboration with DLMA, in conducting joint MSC field supportive supervision visits to six facilities, including veterinary clinics, farms, and plant clinics.
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 **Activity description:** MTaPS will support the Directorate of Hygiene in carrying out an evaluation of IPC components at the central level and in HFs in Kinshasa and the provinces of North Kivu and Ituri. In the same vein, MTaPS will work with ACOREP on an evaluation of IPC components in animal HFs in Kinshasa.	N/A	2.1	MTaPS supported the Directorate of Hygiene in conducting six facility-level IPC assessments in the animal health sector, including farms and veterinary clinics, and helped supervise institutions to produce remedial action plans.
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:** MTaPS will support the DTCs, ACOREP, and the PV center to organize a quarterly data analysis meeting.	N/A	3.5	MTaPS continued to support DTCs in organizing meetings and conducting quarterly data collection as part of their CQI programs.
Activity 3.5.2: Develop/update and disseminate national stewardship and clinical/treatment guidelines, which include the WHO AWaRe categorization of antibiotics **Activity description:** MTaPS will support the MOH in developing the National Guidelines for the Use of Antibiotics in Healthcare Facilities and Services in the Democratic Republic of the Congo.	N/A	3.5	Under the leadership of ACOREP, MTaPS collaborated with universities, health institutions, and other stakeholders to validate the first draft of the National Guidelines for the Use of Antibiotics in Healthcare Facilities and Services in the Democratic Republic of the Congo, which include the WHO AWaRe categorization of antibiotics. Next quarter, the guide will be printed and submitted for adoption and dissemination.

MNCH, FP, AND RH 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 Y5 were built on the work that MTaPS achieved in previous years, as well as achievements from the USAID-funded SIAPS Program that ended in 2018. These activities include 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, Integrated Health Program, and the new MIHR and MSSFPO projects in eastern DRC), and strengthening civil society engagement by enhancing the involvement of formal groups that have community representation in medical product management.

CUMULATIVE PERFORMANCE TO DATE

During previous years, MTaPS supported the medicine TWGs in Nord Kivu and Ituri in strengthening their stewardship roles and establishing a subgroup focused on MNCH products, thereby improving the use of the national supply chain system to distribute medicines and collaboration with donors and implementing partners (e.g., USAID, *Santé Rurale* [SANRU], ASRAMES). The provincial medicine TWGs are now fully functional and have taken leadership to ensure the effective redistribution of an estimated $179,740 of commodities at risk of expiry at the ASRAMES CDR in Nord Kivu. They also took leadership to avoid wasting around 95 months of supply of oral rehydration salts; MTaPS and other partners recommended redeploying the stock in all 34 HZs in Nord Kivu instead of keeping it only in the 6 UNICEF (iCCM program)-supported HZs.

In FY2023, MTaPS provided ongoing support to 350 community members in monitoring and overseeing medicine management (including MNCH and FP/RH commodities), focusing on stock management, accountability between the HFs and the community, logistics data collection, storage conditions, transportation and distribution, and other issues. This has increased collaboration between health center managers and community health workers, improved transparency on health commodities and finances, and improved accountability through community participation in inventory management in Nord Kivu. In addition, MTaPS supported the National Essential Medicines Supply Program (*Programme National d'Approvisionnement en Médicaments Essentiels* [PNAM]) and Ituri DPS in establishing technical and logistics management units (*Unités techniques de gestion logistique* [UTGL]) to improve LMIS data reporting rates, completeness, and quality. Thanks to the efforts of these units, the LMIS data reporting rate in Ituri has improved.

YEAR 5 ACHIEVEMENTS AND RESULTS

During PY5, MTaPS continued to support ACOREP, PNAM, *Programme national de santé de reproduction* (PNSR; National Reproductive Health Program), and *Direction de santé familiale et des groupes spécifiques* (DSFGS; Directorate of Health for Families and Specific Groups) at the national level of the health

system and DPS, UTGL, and other entities at provincial level of the health system in strengthening the supply chain system and ensuring improved availability of quality medicines.

At the national level, MTaPS assisted ACOREP in strengthening its leadership role in pharmaceutical sector governance, including registration of essential medicines and production of an updated directory of registered medicines.

At the provincial level, MTaPS continued to support the DPSs and medicine TWGs and subgroups in holding regular meetings to discuss issues pertaining to the availability of health products. MTaPS assisted the DPSs of Nord Kivu and Ituri in establishing UTGL to strengthen the data collection system to improve the availability, quality, visibility, and use of logistics data for decision making. MTaPS supported UTGL in organizing one meeting in Nord Kivu and two meetings in Ituri.

At the community level, MTaPS provided support to CODESAs to hold their quarterly meeting in each of the 10 MTaPS-supported HZs to promote community engagement and increase transparency and accountability in the management of health commodities.

In addition, MTaPS worked with DSFGS, PNSR, and DPSs of Ituri and Nord Kivu to implement recommendations from the survey on the consumption of contraceptives in the private sector to fill the information gap on contraceptive CYP in these provinces.

Q4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

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

MTaPS continued supporting the medicine TWGs in Nord Kivu and Ituri in holding regular meetings to assess the implementation of previous recommendations, validate commodity distribution plans, and address challenges related to LMIS data to improve the availability of health products in HFs.

All partners involved in supply chain activities are included as members of the provincial medicine TWGs, working together to coordinate supply chain management of health commodities from donors to improve the use and availability of resources.

Activity 1.2.1: Enhance the role of CODESAs and community outreach units in health commodity management at the health center and community levels

From July 16-27, 2023, MTaPS supported the DPS of Ituri in organizing quarterly meetings for CODESAs in the five MTaPS-supported HZs (Nizi, Lita, Gety, Rwampara, and Bunia). These meetings gathered 168 participants (142 men and 26 women) to discuss issues related to the transport and distribution of medicines and all other issues related to the management of health products and to improve collaboration between the community and HFs for management of pharmaceutical products. The meetings served as a platform to empower community members to play the role of whistleblower in all issues concerning the mismanagement of health commodities.

MTaPS also supported DPSs in conducting field supportive supervision visits in 12 health areas (Nizi, Lopa, Luchay, Bahwere, Mandro, Gety, Aveba, Dhélé, Sharhi, Bigo, Bakonko, and Muzimaria) which

aimed to evaluate the involvement of the community in effective stock management and to address issues identified.

The community engagement in medicine stock management started producing good results as community members started whistleblowing about issues in medicine stock in their respective areas. In Nizi, community members alerted the HZ management team to inappropriate storage conditions in the HZ medicine store. The HZ management team took immediate corrective action by purchasing thermometers and fans to monitor the temperature in the medicine store and keep medicines from overheating.

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 strengthening the data collection system to improve the availability, quality, visibility, and use of logistics data for decision making

MTaPS continued to assist UTGL of Nord Kivu and Ituri in improving data visibility and quality for informed pharmaceutical supply chain decision making. PNAM's 2023 Q2 report congratulated the UTGL of Nord Kivu and Ituri for their performance in the previous three months, as they had achieved significant improvement since Q1 of 2023: data completeness increased to more than 90% in both provinces, a significant improvement from the completion rate of 45% reported previously. MTaPS had supported the establishment of UTGL in the two provinces and assisted the UTGL in supporting CDRs CADMEBU and ASRAMES in publishing data and sensitizing HZ management teams to respect data entry rules to improve the quality and completeness of data.

MTaPS continued to support UTGL technically and financially in holding LMIS data analysis sessions to ensure data completeness and reporting timeliness in InfoMED (to eliminate discrepancies between the figures in DHIS 2 and figures visualized in InfoMED) and analyze the consistency of inventory data.

In addition, from September 7 -17, 2023, MTaPS assisted PNAM in training members of UTGL of Ituri and Nord Kivu. The objective was to orient the members on their roles and responsibilities in collecting and analyzing data to inform the provincial medicine TWG and in managing the storage, distribution, quantification, and other matters related to management of commodities.

The UTGL in Nord Kivu and Ituri have already started supporting their respective DPSs to analyze and make decisions on data reported in the InfoMED platform, increasing the visibility and availability of reliable data and improving health managers' decision making.

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 CYP in Nord Kivu and Ituri

MTaPS worked with DSFGS and PNSR in supporting the DPSs of Ituri and Nord Kivu in holding a workshop from June 14 to July 11, 2023, to collect and analyze consumption data of FP/RH commodities in two HZs of the DPS of Ituri (Bunia and Rwampara) and four HZs of Nord Kivu (Goma, Karisimbi,

Kirotshe, and Nyiragongo) where the survey had been conducted from March 25 to April 30, 2022. The purpose of this activity was to fill the information gap on the contraceptive CYP in these provinces. Data collected during the July 2023 workshop are reflected in table 9. A total of 20 participants (4 female, 16 male) from the DPS and technical and financial partners attended the workshop in Ituri, and a total of 22 participants (3 female, 19 male) attended the workshop in Nord Kivu. As a follow-up, MTaPS supported DSFGS and PNSR at the national level in compiling data collected from Nord Kivu and Ituri in order to adjust the previous statistics that included only public-sector data in the calculation of the CYP.

Table 9. CYP from 10 MTaPS-supported HZs by contraceptive method and sector[a]

CYP	CycleBeads	Female condom	Male condom	Depo-Provera	IUD[b]	Implanon NXT	Jadelle + trocar	Emergency contraceptive pill	Sayana Press	Oral contra-ceptives
By public sector	18.8	0.4	22.5	87.9	12.6	609.2	473.7	1.2	0.6	20.1
By private sector	129	0.1	24.3	17.9	0	197.5	3.8	286.1		31.6
Total	147.8	0.5	46.8	105.8	12.6	806.7	477.5	287.3	0.6	51.7
% of private sector missed	87.3	18.5	52.0	16.9	0.0	24.5	0.8	99.6	0.0	61.1

[a] Public-sector data are from DHIS 2/SNISRDC.COM; private-sector data are from a survey conducted between January and March 2022. Data were extracted between June 14 and July 11, 2023.

[b] IUD- intrauterine device

MTaPS will continue to work with DSFGS and PNSR to advocate for the inclusion of private-sector data in the estimation of contraceptive needs for stakeholders, especially technical and financial partners of the MOH.

Activity 5.2.1: Collaborate with the MSSFPO and MIHR projects to support HZs in ensuring the availability of the reduced package of FP products at the community level in Nord Kivu and Ituri

From August 17- 26, 2023, MTaPS collaborated with other partners to support PNSR in quantifying contraceptives and some maternal health medicines covering the period from 2024 to 2026. The methodology consisted of collecting data from the DHIS 2 and InfoMED platforms and entering them into the quantification tools. Results of the quantification are reflected in tables 10 and 11 below.

Table 10. Forecast of MNCH product needs in Nord Kivu and Ituri for 2024

Province	Number of vials of:				
	Oxytocin	Carbetocin	Magnesium sulfate	Calcium gluconate	Tranexamic acid
Ituri	91,215	9,121	16,419	1,642	3,049
Nord Kivu	288,582	28,858	51,945	5,194	1,530

Table 11. Forecast of contraceptive needs in Nord Kivu and Ituri provinces

Contraceptive method[a]	Packaging	Nord Kivu province			Ituri province		
		2024	2025	2026	2024	2025	2026
Male condom	Piece	15,816,960	17,128,359	18,504,207	6,431,649	7,186,005	7,979,834
Female condom	Piece	158,170	171,284	185,042	18,682	19,429	20,207
COC	Cycle	31,187	32,123	32,765	14,939	15,537	16,159
POP	Cycle	16,295	16,783	17,119	19,389	20,164	20,971
DMPA IM	Vial	32,340	33,310	33,976	14,206	14,774	15,365
DMPA SC	Dose	59,314	64,231	69,391	19,295	21,558	23,940
Implanon NXT	Piece	34,178	35,204	35,908	8,442	9,432	1,849
Levoplant	Piece	5,931	6,423	6,939	8,442	9,432	10,474
Jadelle	Piece	18,980	20,554	21,726	7,236	8,084	8,977
Hormonal IUD	Piece	989	1,071	1,157	161	180	199
IUD T Cu 380 A	Piece	4,217	4,343	4,430	241	269	299
CycleBeads	Piece	14,200	14,626	14,918	1,416	1,473	1,532
Emergency pill	Tab	59,314	64,231	69,391	80,396	89,825	99,748

[a] COC- combined oral contraceptive; POP- progestin-only pill; DMPA- depot medroxyprogesterone acetate; IM- intramuscular; SC- subcutaneous.

On September 15, 2023, MTaPS and MIHR held a meeting to continue strengthen their collaboration to increase availability of stock and improve patient outcomes. Meeting participants discussed plans for MTaPS support for the reception of USAID-funded MNCH commodities at CDR ASRAMES. MTaPS will continue to collaborate with MIHR, DPS, and PNSR to develop distribution plans and ensure that required good distribution practices are adhered to.

BEST PRACTICES/LESSONS LEARNED

- When partners are resistant to using mobile money to pay activity participants, it is important to communicate transparently with them and explain why and how MTaPS uses mobile money payments. This helps MTaPS (and by extension USAID) maintain a good relationship with partner organizations and ensure that all activity participants receive their payment without problems.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and description	Date
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 MNCH, FP/RH, and TB medicines	October–December 2023
Activity 5.2.1: Collaborate with the MSSFPO and MIHR projects to support HZs in ensuring the availability of the reduced package of FP products at the community level in Nord Kivu and Ituri	October–December 2023

Table 12. Q2, FY23, activity progress, DRC—MNCH

Activity	MTaPS objective(s)	MNCH result(s)	Activity Progress
Activity 1.1.1: Work with the DPM to establish an autonomous pharmaceutical regulatory agency in DRC for sustainable registration of essential medicines, especially for MNCH, FP/RH, and TB medicines	1.1	N/A	MTaPS held a preparatory meeting with ACOREP to develop TOR and a budget for production of the ACOREP strategic plan and identify gaps in the budget to allow advocacy. This activity will be completed in the next quarter.
Activity 1.1.2: Support the functioning of provincial medicine TWGs in Nord Kivu and Ituri	1.1	N/A	MTaPS continued to assist DPSs of Nord Kivu and Ituri to hold regular meetings of medicine TWGs in collaboration with other stakeholders involved in the supply chain of health commodities.
Activity 1.2.1: Enhance the role of CODESAs and community outreach units in health commodity management at the health center and community levels	1.2	N/A	MTaPS continued to support CODESAs in holding quarterly meetings and DPSs to conduct supportive supervision visits to assess the collaboration between community-based organizations and HFs to improve transparency in the management of health commodities.
Activity 3.2.1: Assist the DPS and HZs in strengthening the data collection system to improve the availability, quality, visibility, and use of logistics data for decision making	3.2	N/A	In collaboration with PNAM, MTaPS assisted UTGLs in conducting quarterly data collection and analysis and making informed decisions.
Activity 5.1.1: Support the DPS in implementing recommendations from the survey on the consumption of contraceptives in the private sector to fill the information gap on contraceptive CYP in Nord Kivu and Ituri	5.1	N/A	In Ituri, MTaPS supported the DSFGS and PNSR in implementing recommendations from the survey conducted in 2022 to calculate the gap on CYP.
Activity 5.2.1: Collaborate with the MSSFPO and MIHR projects to support HZs to ensure availability of the reduced package of FP products at the community level in Nord Kivu and Ituri provinces	5.2	N/A	MTaPS continued to collaborate with MSSFPO and MIHR to hold regular meetings to develop distribution plans for health commodities and share activity progress in order harmonize activities, particularly in HZs supported by MTaPS and the MSSFPO and MIHR programs.

SUPPLY CHAIN

OVERVIEW

MTaPS' supply chain work aims to support DRC in building a stronger pharmaceutical system in the country and ensuring the achievement of USAID-supported health goals, including supporting private-sector and civil society engagement to strengthen the pharmaceutical supply chain system, expanding access to essential medical products, and progressing toward UHC.

MTaPS' technical assistance aims to build the capacity of the CSOs, including *Association des Gestionnaires de la Chaîne d'Approvisionnement* (AGCAL), to implement interventions to contribute to good supply chain governance and support resource mobilization. In PY5, MTaPS implemented activities in line with the USAID DRC Health Office Commodity and Supply Chain Roadmap and its result framework, ensuring that quality health products are available at service delivery points. The project focused on building the leadership and technical capacities of local institutions (AGCAL) through the implementation of approaches that strengthen the supply chain system.

CUMULATIVE PERFORMANCE TO DATE

In December 2022, MTaPS supported the Ministry of the Economy through the Health Economics Technical Committee, in collaboration with other financial and technical partners, in rationalizing the cost structure for health services and products. The aim of this exercise was to reduce the cost of health commodities and services to support the DRC's UHC program. In collaboration with WHO and SANRU, the office of the President of DRC, members from the Prime Minister's office, the MOH, the Ministry of the Economy, the pharmacist professional board, the physician professional board, ACOREP, and civil society members, MTaPS successfully advocated to the government to grant health products "social product status" instead of "business product status." This will reduce or eliminate tariffs and taxes on health products and services de facto, resulting in a significant cost and price reduction. MTaPS is continuing to support stakeholders and ministries to enact and promulgate the developed draft ministerial decrees to enforce the application of this status change.

In addition, MTaPS collaborated with UNFPA to support AGCAL in recruiting three key staff members, including an executive manager, a provincial representative for Ituri, and a provincial representative for Nord Kivu. In addition, MTaPS continued supporting AGCAL in obtaining the legal documents required for its establishment as a recognized NGO in DRC. To this end, MTaPS assisted AGCAL with the obtention of the MOH registration certificate, the membership certificate for NGOs operating in the health sector, and the Ministry of Justice's F-92 ID. MTaPS will continue to assist AGCAL in obtaining a favorable opinion (*avis favorable*) from the MOH, which is necessary for AGCAL to legally exist as an organization in DRC.

YEAR 5 ACHIEVEMENTS AND RESULTS

In FY23, MTaPS collaborated with UNFPA to recruit key staff members for AGCAL, including the executive manager and two provincial representatives for Ituri and Nord Kivu provinces. With these staff members' support, MTaPS has assisted AGCAL to obtain most of the registration documents

required to legally operate in DRC, including the MOH registration certificate, the membership certificate for NGOs operating in the health area, and the Ministry of Justice's F-92 ID.

Additionally, MTaPS supported AGCAL in organizing three sensitization meetings in Kinshasa (University of Kinshasa), Bukavu (Université Officielle de Bukavu), and Goma (Université Libre des Pays de Grands Lacs), which resulted in the enrollment of more than 200 volunteer members of AGCAL.

Q4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL SUPPLY CHAIN GOVERNANCE STRENGTHENED

Activity 1.3.1: Facilitate the integration and enhance the role of local private organizations and CSOs in pharmaceutical and supply chain management at the national, provincial, and facility levels

To support the integration of AGCAL into the existing pharmaceutical supply chain platforms at the national and provincial levels in DRC as well as international platforms, MTaPS worked with the AGCAL Executive Director to organize a field visit to Nord and Sud Kivu provinces to carry out a number of activities, including integrating AGCAL into each province's TWG or Groupe de Travail Médicament to enhance AGCAL's role as a key actor in supply chain governance at the provincial level. In Nord Kivu, MTaPS supported a working session with the TWG president to facilitate the integration of AGCAL into the TWG. MTaPS presented AGCAL's role, mission, vision, and importance to the TWG president, who agreed to integrate AGCAL into the TWG's list of supply chain stakeholders and invite it to a provincial medicine TWG meeting in September 2023.

AGCAL was invited to its first TWG meeting in September 2023 as a partner association of the Nord Kivu DPS. During a working session between DPS North Kivu, USAID IPS (including MTaPS and MIHR), and the USAID mission, the USAID activity manager again introduced AGCAL to the other stakeholders. AGCAL is recognized by DPS and ASRAMES as a partner association of the Nord Kivu province, and it participates in activities not only with the TWG but also with the UTGL and other partners.

Activity 2.3.1: Facilitate the establishment of AGCAL at the national and provincial levels

MTaPS supported the recruitment of AGCAL's executive manager and its two provincial representatives for Ituri and Nord Kivu as consultants to facilitate activity implementation. MTaPS continued to support AGCAL to obtain office spaces in Kinshasa, Nord Kivu, and Ituri. Given AGCAL's mission and objectives, it will need to work in proximity with supply chain organizations and institutions such as PNAM, *Fédération des Centrales d'Approvisionnement en Médicaments Essentiels*, CDRs, and the Pharmacy Council. During a meeting with MTaPS in Goma on August 25, 2023, ASRAMES agreed to provide an office space located in the Kyeshero neighborhood of Goma. As an interim measure, MTaPS welcomed AGCAL members to work at the MTaPS offices to avoid delaying activity implementation.

Most of the legal documentation AGCAL requires to operate as an NGO in DRC have already been obtained with support from MTaPS, including the MOH registration certificate, the membership certificate for NGOs operating in the health sector, and the Ministry of Justice's F-92 ID. MTaPS will

continue to assist AGCAL in obtaining a favorable opinion (*avis favorable*) from the MOH, which is necessary for AGCAL to exist as a legal entity in the DRC.

Sensitization meeting of AGCAL, Official University of Bukavu, Bukavu, DRC. September 1, 2023. Photo credit: Blaise Murhula

Additionally, to identify and enroll supply chain professionals, including students, MTaPS collaborated with AGCAL, University of Kinshasa, Official University of Bukavu, and ULPGL University in Goma to organize sensitization meetings for university students to explain the role and scope of AGCAL and encourage them to enroll as members of AGCAL. Thanks to MTaPS' support, AGCAL has enrolled 223 new members (87 female, 136 male) from diverse health fields such as pharmacy, medicine, and public health (table 13).

Table 13. Profiles of enrolled AGCAL members as of September 2023

Professional category	Number of new AGCAL members enrolled per category
Pharmacists	30
Medical doctors	9
Logisticians	6
Students (pharmacy, medicine, and public health schools)	169
Category not identified	9
Total	223

OBJECTIVE 2: INSTITUTIONAL AND HUMAN RESOURCE CAPACITY FOR PHARMACEUTICAL SUPPLY CHAIN AND SERVICES INCREASED

Activity 2.3.2: Development of AGCAL leadership and change management competencies with demonstrated application

From July 18 to August 8, 2023, MTaPS supported an online workshop of 13 representatives (12 male, 1 female) from AGCAL and MTaPS to develop their leadership, governance, and change management competencies. Workshop participants collaborated to strengthen their capacities, share useful skills for effective team management, and develop a common vision for the organization, as well as a "challenge model" to apply acquired skills in developing an AGCAL action plan for August 2023 to February 2024.

This workshop ended with the following recommendations:

- Establish a work schedule.
- Monitor achievements on a quarterly basis.
- Provide technical support to AGCAL members for the implementation of the leadership project.
- Organize a result presentation ceremony.

BEST PRACTICES/LESSONS LEARNED

- Cooperation with academic institutions can be very useful in mobilizing involvement in relevant organizations and individuals. For example, collaboration and involvement of academic authorities from the University of Kinshasa, *Université Libre de Grands Lacs à Goma*, and Official University of Bukavu in identifying supply chain professionals, including students, and encouraging them to enroll as members of AGCAL have greatly increased mobilization and enrollment of members and exceeded expectations.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and description	Date
Activity 1.3.1: Facilitate the integration and enhance the role of local private and CSOs in pharmaceutical and supply chain management at the national, provincial, and facility levels	October–December 2023
Activity 2.3.1: Facilitate the establishment of AGCAL at the national and provincial levels	October–December 2023

Table 14. Q2, FY23, activity progress, DRC—supply chain

Activity	MTaPS objective(s)	Activity progress
Activity 1.3.1: Facilitate the integration and enhance the role of local private and CSOs in pharmaceutical and supply chain management at the national, provincial, and facility levels	1.1	▪ MTaPS continued to work with ACOREP and the Nord Kivu DPS to integrate AGCAL into the existing pharmaceutical supply chain platforms (CPM at the national level and Groupe de Travail Médicament at the provincial level) to enhance their role as key actors in supply chain governance. ▪ In collaboration with AGCAL, MTaPS continued to follow up on the remaining framework agreements necessary for AGCAL to legally operate in the DRC.
Activity 2.3.1: Facilitate the establishment of AGCAL at the national and provincial levels	2.3	In collaboration with AGCAL, MTaPS continued to negotiate with ASRAMES to obtain an office space for AGCAL. In addition, MTaPS supported the effective creation of AGCAL provincial sections in Nord Kivu and Ituri. MTaPS then collaborated with AGCAL to organize sensitization meetings for university students to explain the role and scope of AGCAL and encourage them to enroll as members of AGCAL. To date, 179 new members have been enrolled.
Activity 2.3.2: Development of AGCAL leadership and change management competencies with demonstrated application	2.3	MTaPS supported the organization of a five-day workshop on leadership and change management. Six representatives from AGCAL participated and developed their leadership, governance, and change management competencies.
Activity 4.1.1: Collaborate with MOH through DPM, PNAM, and the Ministry of the Economy to assist the Health Economics Technical Committee in rationalizing the prices of health products to increase access for vulnerable populations	4.1	Completed

F. ETHIOPIA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

Ethiopia is one of the countries selected to implement AMR prevention and containment interventions through funding from the GHSA. During a 2016 assessment using the WHO JEE Tool (version 1), Ethiopia demonstrated "limited capacity" (level 2 of 5) for IPC and AMS. The goal of MTaPS GHSA portfolio in Ethiopia is to build the capacity of government stakeholders to effectively combat the development and spread of AMR. MTaPS provides targeted technical assistance to Ethiopian stakeholder institutions in 3 result areas of the AMR action package: effective MSC, IPC, and optimizing use of antimicrobial medicines through effective implementation of AMS programs. These interventions support the country on its pathway toward improving its 2016 JEE baseline scores to meet the GHSA priorities.

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 contributed to the completion of 100% of capacity level 2, 3, and 4 actions. MTaPS supported the revision of the NAP-AMR, establishment of an AMR unit within the MOH, and development and official launch of sector-specific action plans for the human health, animal health, and environment sectors. To strengthen the operational capacity of the NAMRAC, MTaPS facilitated its restructuring, including updating its membership to ensure broader stakeholder participation, revision of its TOR, and development of TORs for its IPC and AMS TWGs. MTaPS also engaged various civil society organizations, including the women's federation, youth federations, and the Ethiopian Pharmaceutical Association (EPA) for AMR awareness and sensitization forums.

MTaPS supported the practical implementation of AMS interventions at selected hospitals and the revision of the NEML, AMS practice guide, and national STG for general hospitals, based on the WHO AWaRe categorization of antibiotics for the first time in Ethiopia. MTaPS' support also contributed to improving AMS by completing 100% of capacity level 2, 67% of level 3, and 29% of level 4 and 5 benchmark actions. To strengthen AMS and IPC practices, MTaPS supported the revision of the AMS practical guide and implementation of quality improvement (QI) programs at 8 hospitals with a focus on optimizing use of antimicrobials for surgical prophylaxis and improving HH practices. MTaPS also supported the development of e-modules to improve accessibility of AMS and IPC training to health workers.

To strengthen country capacity in IPC and emergency response to COVID-19, MTaPS supported the revision of the IPC reference manual and IPC training materials. MTaPS also supported the MOH in identification of gaps in the national IPC program using the WHO's national IPCAT2, provided technical support to HFs to improve their IPC performance using the WHO IPCAF tool, and supported the design of IPC improvement plans for the central and facility levels. MTaPS contributed to the development of guidance documents for the HAI surveillance system and the establishment of IPC COEs. MTaPS also supported the MOH in validating the IPC facility-level assessment tool (IPC-FLAT),

which during Year 1, was customized based on the WHO IPCAF, with MTaPS' support. MTaPS contributed to improving Ethiopia's progress toward achieving higher JEE scores in IPC by supporting 80% of capacity level 2, 100% of level 3, 80% of level 4, and 60% of level 5 benchmark actions.

YEAR 5 ACHIEVEMENTS AND RESULTS

During Year 5, MTaPS supported the organization and lively celebration of the 2022 WAAW and 11th AMR Day. The sector-specific AMR action plan, previously developed with MTaPS' support, for the human health, animal health, and the environment sectors, was officially launched during the WAAW 2022 event. To strengthen 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, where 32 (8 female) professionals participated—the first of its kind in the sector. MTaPS also supported the organization of OH Regional AMR Advisory Committee (RAMRAC) meetings in two regions where a total of 84 (18 female) health professionals participated. To create a local pool of trainers for CPD programs, MTaPS supported the EPA to provide an accredited TOT course on AMR for 49 (all male) pharmacists in 2 rounds.

To increase effective use of the STG by prescribers, MTaPS supported the MOH to conduct an advocacy and familiarization event for representatives of general hospitals on the STG and its implementation manual, both of which were developed with support from MTaPS. At the end of the event, 123 copies of the STG and 100 copies of the STG implementation manual were distributed. MTaPS also provided TA to MOH in revising the AMS practical guide, which is critical for evidence-based selection, prescribing, and use of antimicrobials. MTaPS supported the MOH in the development of technical guidance documents for the establishment of a national HAI surveillance system, and for setting up of COE health facilities in IPC, both of which are critical to standardize HAI surveillance and COE selection practices. In addition, MTaPS provided TA to the MOH to validate the IPC-FLAT, which had been developed with support from MTaPS in 2019. The IPC-FLAT score is now incorporated into the national DHIS2 platform. The validation included the development of a scoring rate, refining the indicators for clarity, and refinement of verification criteria. This year, MTaPS collaborated with MOH to initiate a QI initiative at 8 MTaPS-supported hospitals focusing on optimizing use of antimicrobials for surgical site prophylaxis (SSP) and improving HH practices. As part of strengthening the QI programs, MTaPS utilized mixed approaches for site-level TA such as onsite training, mentoring, supportive supervision, and remote support including phone calls, virtual meetings, email communication, and social media (Telegram) groups.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

In Quarter 4, MTaPS Ethiopia accomplished the following key results:

- MTaPS supported the 40th National AMR advisory committee (NAMRAC) meeting, where total of 38 NAMRAC members and invited guests (6 female) attended.
- MTaPS supported the EPA to conduct its 43rd annual scientific conference, with a theme of "Pharmaceutical sector leadership and governance in Ethiopia: past, present and future prospects."
- During the quarter, MTaPS supported the MOH to finalize two e-modules, one on AMS and the other on IPC, both of which are currently posted on the MOH's website.

- MTaPS and the MOH jointly organized a 2-day experience-sharing workshop among hospitals implementing QI interventions to facilitate scale-up of best practices to other hospitals.
- MTaPS supported a results dissemination event for MCM Korean hospital staff on the facility's IPC- and AMS-based QI interventions, attended by 32 health professionals (19 female).

RESULT AREA 1: EFFECTIVE MSC OF AMR

Activity 1.1.1: Support the MOH and national AMR MSC stakeholders to implement and monitor progress of the national AMR prevention and containment strategic plan.

In coordination with the MOH, MTaPS supported the 40th NAMRAC meeting held on July 7, 2023. A total of 38 NAMRAC members and invited guests (6 female) attended the meeting. The meeting included progress update presentations by representatives from multisectoral stakeholders and key government institutions, including the MOH, the Ministry of Agriculture (MOA), and the EEPA, the Ethiopian Public Health Institute (EPHI), Armauer Hansen Research Institute (AHRI), the Ethiopian Agriculture Authority (EAA), and the Animal Health Institute (AHI). The revised TOR and draft annual action plan of NAMRAC was presented for review and input. After a thorough discussion on the presentations, participants provided critical inputs and recommendations to refine the action plan for further strengthening the national efforts on AMR prevention and containment.

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

MTaPS supported the EPA to conduct its 43rd annual scientific conference from July 28 to 29, 2023, with the theme of "Pharmaceutical sector leadership and governance in Ethiopia: past, present and future prospects." The 2-day event included a panel discussion, continuing education, scientific sessions, and a business meeting. More than 400 member pharmacists and invited guests attended the event both in-person (310 [82 female]) and virtually (via zoom and live Facebook). In this event, MTaPS presented one of the CPD topics entitled "the role of leadership in AMR prevention and containment," and moderated panel discussions and scientific sessions. As part of building local capacity on AMR, MTaPS also supported the EPA to organize a training course on AMR (CPD approved with a value of 15 continuing education units [CEU]) for pharmacists from September 1 to 3, 2023. A total of 25 pharmacists (8 female) from academia, hospitals, health centers, and community pharmacies attended the training course.

RESULT AREA 2: IPC

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

MTaPS conducted follow-up supportive supervisions at Tirunesh Beijing, Eka Kotebe, and MCM Korean hospitals to support implementation of IPC interventions, assess the status of the QI interventions, and provide valuable technical guidance to ensure effective implementation of the QI plan. Facilities demonstrated good practices, including the posting of HH posters around the patient care area and washing stations. At Eka Kotebe hospital, improvements were also observed in access to running water

at inpatient wards and in health care waste management. Following the successful implementation of HH in the surgical ward, the hospital's IPC team expanded these interventions to the pediatric and maternity wards. At MCM Korean hospital, the noticeable IPC improvements observed in surgical wards after the QI intervention prompted the hospital to expand QI to its ICU. In the ICU, the QI intervention aims to improve compliance with HH protocols, enhance environmental cleaning procedures, and optimize the handling and processing of textiles.

A nurse in MCM Korean hospital ICU, Ethiopia, performing HH, Sept 21, 2023. Photo credit: Tewodros Fantahun, MTaPS

Activity 2.2: Build capacity of the MOH to provide IPC training to HCWs. Supported MOH in conducting the IPC e-Learning module testing workshop.

MTaPS continued providing technical assistance in the development of an e-Learning module to improve access to IPC training for health care professionals. Following completion of the e-Learning module, MTaPS and the MOH organized an e-Learning module final validation and testing workshop from July 28 to 29, 2023. A total of 12 experts (all male) participated in the workshop, enrolled in the online IPC training, and provided technical input and feedback. After incorporation of the inputs, the IPC e-Learning module was uploaded to the MOH website and can be accessed at: https://cpd.moh.gov.et/cpd/course/index.php.

Activity 2.5.1: Support the MOH to sustain IPC improvement practice at the national, regional and facility levels.

The integrated IPC and AMS focused QI intervention, implemented at 8 hospitals with support from MTaPS, yielded encouraging results. Post-intervention aggregate data from 5 of the 8 sites indicated dramatic improvement in the pre-surgery dose of the prophylactic antibiotic and its timing, where the doses within the recommended range increased from 11.2% to 61.0% ($p < 0.001$) and the optimal timing increased from 68% to 82.6% ($p < 0.001$). The intervention also demonstrated a significant antibiotic-related average cost saving, 51.8 Ethiopian Birr (~USD 1) per patient ($p = 0.028$). Regarding improvements in IPC areas, aggregate scores at the 5 hospitals using IPC-FLAT have shown substantial progress in the application of IPC core components, compared with the baseline (56.7% to 75.2%). Moreover, all the hospitals improved their HHSAF score by an average of 20 percentage points from the baseline score.

As part of sharing best practices and experiences among hospitals, MTaPS and the MOH jointly organized a 2-day workshop during August 3–4, 2023. In this workshop, a total of 52 health professionals (11 female) drawn from the MOH, RHBs, HFs, and development partners, participated. The primary objective of the workshop was to evaluate progress and achievement following implementation of AMS/IPC-based QI interventions at the 8 hospitals and to promote expansion of those best practices and experiences to other hospitals. The agenda covered individual hospital presentations, group discussions, and plenary discussion.

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

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

As part of finalizing the e-module on AMS, MTaPS supported the MOH to organize a workshop from July 14 to 15, 2023, to validate and pilot the module to ensure accuracy of contents and completeness, and to ensure that all MOH requirements are met before release to trainees. A total of 16 experts (2 females) including physicians, pharmacists, microbiologists, and instructional designers, participated. In the event, the experts reviewed all the sessions and provided feedback. After integrating the feedback, the e-module was uploaded to the MOH website at: https://cpd.moh.gov.et/cpd/course/index.php.

Activity 3.5.1: Strengthen AMS implementation at targeted HFs.

Dissemination of QI implementation results to staff at MCM Korean Hospital, Ethiopia, Aug 30, 2023. Photo credit: MTaPS

MTaPS supported dissemination of accomplishments of MCM Korean hospital on IPC- and AMS-based QI interventions to its staff and the management team. A half-day dissemination meeting was conducted on August 30, 2023, with 32 health professionals (19 female) in attendance. The post-intervention assessment of AMS and IPC practices showed improvements in optimizing the use of antibiotics and HH compliance among health professionals. The improvements include appropriateness of prophylactic dose (2% to 88%), duration of antibiotics prophylaxis (58% to 80%), and clarity on reasons for use of antibiotics (48% to 100%). Similarly, the HHSAF score for the five components of HH increased from 395 to 430. Following the presentation and detailed discussions, hospital staff and management committed to expanding QI to other departments. The hospital has already started preparing to implement QI in its ICU.

BEST PRACTICES/LESSONS LEARNED

Bringing partners together to align their activities with each other and the national plan is a best practice in building ownership and fostering collaboration. The annual IPC plan alignment meeting organized by the MOH on August 1, 2023, enabled partners to identify areas for contribution and align their own efforts with the overarching national IPC action plan. The event signified progress made in the institutionalization and ownership of IPC-related activities by government counterparts.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5) Facilitate NAMRAC and RAMRAC meetings (progress review and approval of latest TOR).	October 2023
(PY5) Support government and AMR stakeholders in organizing the WAAW 2023 event.	November 2023
(PY5) Support the MOH to organize a workshop to launch the IPC and AMS e-Learning modules and disseminate the IPC reference manual and AMS practical guide.	October 2023
(PY5) Support transition of MTaPS-supported activities to the MOH and Quality Healthcare Activity (QHA) (new USAID project).	Oct–Nov 2023
(PY5) Participate in the national IPC and AMS TWG meetings.	October 2023
(PY5) Continue mentorship and support for the implementation of the QI initiative on AMS and IPC.	Oct–Nov 2023

Table 15. Quarter 4, FY23, activity progress, Ethiopia—GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Support the MOH and national AMR MSC stakeholders to implement and monitor progress of the national AMR prevention and containment strategic plan. **Activity description:** Support the MOH and national AMR MSC stakeholders to implement and monitor progress of the revised NAP-AMR 2021–2025.	5.4	1.1	The NAMRAC reviewed the progress of implementation of the NAP during its 40th meeting. The multinational stakeholders and key government institutions presented the status of AMR implementation at their respective organizations. After thorough discussions on the presentations, the committee members provided feedback and important inputs for further improvement in the coming period.
Activity 1.1.2: Support PMED to assume full ownership for organizing effective MSC through regular meetings of AMR stakeholders, including animal health and environmental protection. **Activity description:** Support PMED to conduct regular meetings of AMR stakeholders, including NAMRAC, IPC and AMS TWGs; and in-progress review of regional and sector-specific action plans.	5.4	1.1	MTaPS supported the MOH to organize the 40th NAMRAC meeting on July 7, 2023, at Getfam hotel, Addis Ababa. The updated TOR and draft action plan for the upcoming year was presented in this meeting for review and inputs. The committee members reviewed the contents and provided critical inputs on both documents. The MOH took the assignment to incorporate the inputs and share the TOR and action plan well before the next meeting.
Activity 1.2.1: Support the MOH and national AMR MSC stakeholders to improve awareness, education, and training on AMR. **Activity description:** Support to improve awareness on AMR among the community, health care professionals, and policymakers, through evidence-based information sharing, communication, and education.	5.4	1.2	MTaPS supported the EPA to conduct its 43rd annual scientific conference held from July 28 to 29, 2023, in Addis Ababa. MTaPS also supported the EPA to provide CPD-approved training courses on AMR for pharmacists from September 1 to 3, 2023, at Adama.
Activity 2.2.1: Support the 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. Conduct training on CQI. Support HFs to undertake annual IPC assessments as part of their regular review cycle. Support the MOH in implementing the national HAI surveillance guidance at selected hospitals.	5.4	2.2	During the quarter, MTaPS collaborated with the MOH to support targeted hospitals in sustaining IPC improvement interventions through onsite supportive supervision and TA to 3 hospitals (Eka Kotebe, MCM Korean, and Tiruneh Beijing). Two of the hospitals are currently putting efforts to expand the IPC improvement interventions into other wards.
Activity 2.2.2: Build capacity of the MOH to provide IPC training to HCWs. **Activity description:** Support the Clinical Services Directorate (CSD)/MOH and the national IPC TWG in developing an e-Learning platform for IPC training based on the IPC guideline. Support the MOH and 8 selected HFs in providing IPC-specific in-service training for HCWs, using both platforms, and ensure incorporation of IPC trainings to the approved courses for CPD.	5.4	2.2	During the previous quarters, MTaPS supported the MOH to develop a national IPC training e-Learning module. In this quarter, MTaPS, in collaboration with the MOH, organized a workshop from July 28 to 29, 2023, to test the e-Learning course, which is now complete, has been uploaded on the MOH CPD platform, and is accessible to HCWs for enrollment.

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 2.5.1: Support the MOH to sustain IPC improvement practices at the national, regional, and facility levels. **Activity description:** Support the MOH and RHBs to provide guidance and active follow-up to hospitals in implementing evidence-based action to improve IPC at the health care facility level, and advocate creating platforms to share experiences among health care facilities and RHBs. In addition, support the MOH to develop national-level IPC guidance documents and monitoring tools.	5.4	2.5	In this quarter, MTaPS collaborated with the MOH to organize an IPC-AMS QI intervention experience-sharing workshop from August 3 to 4, 2023. The agendas in the workshop covered individual hospital presentations on their AMS- and IPC-based interventions and resulting achievements.
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 capacity building of HCPs and HF management to enhance their knowledge and skills on AMS program design and implementation. Strengthen implementation of AMS programs at designated HFs. Support development of AMS e-Learning course.	5.4	3.2	MTaPS supported the MOH in finalizing the review of a self-paced AMS e-Learning module on AMS for health professionals—through a workshop organized during July 14 and 15, 2023, at Adama. The experts reviewed all the sessions and provided feedback on the contents of the final e-Learning module and its overall presentation. After accommodating the feedback, the final version of the e-module was uploaded to the MOH website.
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 the standardization of implementation approaches in selected hospitals as models to optimize antimicrobial use.	5.4	3.5	MTaPS, in collaboration with the MOH, organized an experience-sharing workshop during August 3–4, 2023, for hospitals implementing AMS- and IPC-based QI programs. The event also helped to promote the expansion of these interventions to existing and other hospitals. MTaPS also supported dissemination of accomplishments of MCM Korean hospital on IPC- and AMS-based QI programs to its staff on August 30, 2023.

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 supports 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 (PE) tracking to improve purchasing value, and strengthen pharmaceutical-sector governance.

CUMULATIVE PERFORMANCE TO DATE

HEALTH TECHNOLOGY ASSESSMENT (HTA)

- The 9th HTAsialink Conference 2021 digest: MTaPS contributed to HTA discourse at the 9th HTAsiaLink Conference, showcasing commitment to HTA advancement.
- HTA Topic Selection Manual: MTaPS co-developed the manual by infusing MCDA and enhancing transparency in HTA topic selection process.
- HTA Appraisal Manual outline: Condensing the Indonesia's HTA appraisal from three full-day-meetings into half-a-day meeting using MCDA principles.
- RWE calibration: MTaPS introduced RWE calibration for a *trastuzumab* study on early breast cancer patients, elevating HTA quality in the face of data limitation.
- HTAsiaLink recognitions: MTaPS was awarded best oral presentation consecutively at the 10th and 11th HTAsiaLink Conferences, showcasing MCDA and stakeholder engagement.

PHARMACEUTICAL EXPENDITURE

- Data source landscape: MTaPS mapped health care planning data sources for PE tracking.
- PE tracking initiatives: MTaPS pioneered Indonesia's PE tracking through hands-on learning.
- PE report in National Health Accounts (NHA): MTaPS ushered the publication of Indonesia's first PE report into the NHA.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS spearheaded the use of MCDA to redefine HTA topic selection criteria as measurable criteria and assign weights to each criteria based on stakeholder consensus. By enhancing transparency and engagement, MTaPS successfully encouraged a wider range of stakeholders to submit topics beginning in 2022. In February 2023, three crucial topics on cancer were selected for 2023 studies: *Bevagen, Abirateron Acetate,* and *Pembrolizumab*. Enhancements have subsequently been incorporated into the co-developed 'Topic Selection Operating Manual' by the Center of Policy for Health Financing and Decentralization (Pusjak PDK), InaHTAC, and MTaPS. The pilot of the new HTA process led to a surge in topic submissions, from 19 topics in 2022 to 46 HTA in 2023, and 132 HTA topics for 2024.

MTaPS pioneered Indonesia's first PE tracking that estimated the country's total PE at USD 12.2 billion in 2021. Using the PE tracking, the MOH successfully compiled its first comprehensive NHA report on PE, classified based on spending sources, providers, molecules, and diseases.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

In September 2023, a collaborative effort involving Pusjak PDK, InaHTAC, the World Bank, and MTaPS led to the development of Indonesia's HTA Guideline. This milestone marked a crucial step in advancing HTA practices in the country. Subsequently, after an intensive co-development process by InaHTAC, Pusjak PDK, and MTaPS, the 'HTA Topic Selection Manual' progressed to the external review stage in July 2023. A team organized by InaHTAC, consisting of MOH representatives, pharmacists, and academicians, is engaged in the external review.

In June and July 2023, MTaPS provided continuing support for InaHTAC's "call for HTA topics" events, engaging various stakeholders including medical associations, hospitals, academics, and industries. MTaPS provided TA throughout the quarter, from topic submission in August 2023 to preparations for priority topic dissemination (scheduled for October 2023). Notably, MTaPS promoted patient and community involvement by introducing HTA to patient associations in July 2023. In total, approximately 150 HTA topics were submitted between July and August 2023, and MTaPS led the verification meeting in August 2023 where 131 topics were found eligible, with 34 considered complete. Feedback was provided to incomplete submissions, allowing for additional information submission within a week.

In July 2023, MTaPS collaborated with Pusjak PDK and the University of Gadjah Mada trastuzumab research team to apply a completed model calibration for estimating the cost and effectiveness of adjuvant trastuzumab in early breast cancer. This research revealed that adjuvant trastuzumab, when used alongside chemotherapy, incurred an additional IDR 258 million in costs but offered 1.8 more years of quality-adjusted life for early breast cancer patients. This translated to an additional year of quality-adjusted life for an additional IDR 143 million, a figure well below 3 times the country's gross domestic product per capita, a commonly used cost-effectiveness criterion. A significant agenda item supported by MTaPS was the HTA consolidation meeting with InaHTAC, Pusjak PDK, and representatives from key stakeholders. This meeting focused on various aspects, including the trastuzumab study, the application of MCDA for HTA topic selection, and the HTA appraisal of TB diagnostics, comparing tuberculin tests (TST) with interferon gamma release assays (IGRA). In-depth discussions also revolved around the finalization of the HTA appraisal manual's outline.

MTaPS has been actively engaged in the development of a draft HTA Appraisal Manual, collaborating closely with Pusjak PDK. Together, they have revamped the appraisal meeting agenda based on the HTA manual outline and enhanced the appraisal process using an MCDA case study focused on TB diagnostics (TST vs. IGRA). To ensure meaningful engagement from participants in the appraisal meetings, MTaPS introduced a pre-appraisal survey. This online survey allowed the appraisal panel to express their opinions and make pairwise comparisons between the proposed technology and its comparator before the meeting.

Pusjak PDK successfully piloted this revamped appraisal process and survey during the evaluation of pembrolizumab and trastuzumab on September 19, 2023. The results were impressive, as the streamlined process reduced the duration of meetings from three full days to just half a day per technology.

Furthermore, on September 21, 2023, MTaPS actively participated in discussions focused on developing policy recommendations for pembrolizumab and trastuzumab. The primary aim of this meeting was to gather insights and feedback from expert panel members and appraisal participants on the draft recommendations. Additionally, discussions revolved around various policy brief drafts and performance measures. MTaPS played a pivotal role in contributing its expertise in HTA processes, particularly in enhancing capacity for RWE and MCDA. Notably, they completed two drafts focusing on refining topic selection criteria and the RWE calibration method, which were subsequently handed over to Pusjak PDK.

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

MTaPS played a pivotal role in co-developing the 'Topic Selection Operating Manual' in collaboration with Pusjak PDK and InaHTAC. This manual is currently undergoing the finalization process, ensuring comprehensive internal checks and external reviews. Moreover, MTaPS advised on policy briefs, introducing new criteria weights for topic selection, which will contribute to the HTA process. Moreover, MTaPS actively supported the call for topics events, advocating for patient involvement. Notably, two topics were submitted by patient organizations for the first time, marking a significant milestone.

Activity 1.1.2: Build capacity of key stakeholders on HTA methods

MTaPS' efforts in capacity building focused on training staff from Pusjak PDK and HTA agencies in advanced methods. This included training in MCDA for TB diagnostics and RWE calibration for trastuzumab. The outcomes of this training were presented at the HTA consolidation meeting, presenting results to experts and stakeholders in the relevant fields. Furthermore, Pusjak PDK utilized the training to make substantial contributions to the development of adaptive HTA methods and refinements of Indonesia's HTA appraisal criteria (activity 1.1.4 below).

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

In this quarter, MTaPS made significant strides in the HTA appraisal domain. It introduced a technical guideline outline to streamline the appraisal process that condenses the previous three-day meetings into a more efficient half-day process per technology, allowing for more HTA productions in the coming years. The new format was advised by the MTaPS comprehensive landscaping report that garnered acceptance from Pusjak PDK and InaHTAC. The success of this innovative approach was evidenced in the pilot HTA appraisal of pembrolizumab and trastuzumab.

Activity 1.1.6: Document Indonesia HTA experience improving national HTA capacity through thought leadership activities, and disseminate through papers, conferences, and support of the InaHEA biennial scientific meeting

MTaPS participated in the 11th HTAsiaLink Conference in Putrajaya, Malaysia, from September 4 to 8, 2023. MTaPS had submitted three abstracts, all of which were accepted for oral presentations. Notably,

one MTaPS presentation received the best oral presentation award. MTaPS won this prize for the second consecutive year, affirming its expertise and steadfast dedication in the HTA field.

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

Activity 2.1.4: Build capacity of the NHA team to compile PE data

On September 15, 2023, Pusjak PDK initiated a meeting to commence PE tracking activity in collaboration with the Directorate of Pharmaceutical Production and Distribution (Dir. Prodisfar). Both units reached an agreement that Dir. Prodisfar would handle data management, encompassing data collection and mapping, while Pusjak PDK would oversee data analysis, ultimately incorporating the findings into the NHA report. MTaPS is set to provide TA to Dir. Prodisfar. Pusjak PDK is in the process of issuing a decree from the head of Pusjak PDK to formalize the PE tracking team, comprising representatives from MOH and Dir. Prodisfar. Additionally, Pusjak PDK will send a letter to Dir. Prodisfar and the National Agency of Drug and Food Control (*Badan Pengawas Obat dan Makanan, BPOM*) to request access to data from their information system.

Furthermore, Pusjak PDK convened a meeting to address challenges related to the utilization of e-purchasing and e-catalogue systems by hospitals, represented by the Indonesian Hospitals Association (*Persatuan Rumah Sakit Seluruh Indonesia, PERSI*) and the Indonesian Private Hospitals Association (Rumah Sakit Seluruh Indonesia, ARSSI). Several issues were identified, including difficulties in negotiating medicine prices, extended lead times for orders (ranging from two weeks to six months), and instances where e-purchasing prices exceeded negotiated rates. Regular MOH evaluations are deemed essential, particularly to distinguish between e-purchasing and non-e-purchasing products.

Activity 2.1.7: Indonesia PE tracking results dissemination through the International Health Economics Association (IHEA) Conference

MTaPS facilitated the attendance of two participants, one from MTaPS Indonesia and another from the Directorate General of Pharmaceutical and Medical Devices, Indonesia to attend the 15th IHEA World Congress on Health Economics 2023 in Cape Town, South Africa, July 8-12, 2023. MTaPS gave one oral presentation on 'Pharmaceutical Expenditure during COVID-19 Pandemic in Indonesia' at the congress. The experience of implementing PE tracking in Indonesia in 2023 with results that are close to reality using data available at the MOH earned appreciation from various countries and experts at the congress and became a reference for other countries for implementing PE tracking.

BEST PRACTICES/LESSONS LEARNED

- Through structured and stakeholder-inclusive HTA processes, InaHTAC achieved more informed policy recommendations, streamlining the national health insurance program's benefits package. MTaPS played a vital role by co-developing HTA topic selection guidelines and enhancing the HTA appraisal process, equipping Pusjak PDK and HTA agencies with advanced HTA methods.
- Strong country buy-in coupled with a learning-by-doing approach facilitate implementation even in the face of difficulties. For example, MTaPS successfully implemented PE tracking in Indonesia, despite initial challenges. Collaborating with the Indonesia HA team, MTaPS compiled and

Rozar Prawiranegara/MTaPS Indonesia makes an oral presentation on 'Refining Indonesia's HTA Topic Selection Procedure' at the IHEA Conference, July 2023. Photo credit: Arie Rahadi, MTaPS

disseminated the country's first PE findings on December 6, 2022, marking a significant milestone in health financing integrated into Indonesia's HAs. MTaPS successful implementation of the PE tracking in Indonesia started with a strong buy-in and the country's strong commitment to supporting PE tracking implementation, including policy actors' involvement. Through a 'learning by doing' process, MTaPS supported capacity building and institutionalization of the PE process. These approaches complemented MTaPS' in-person training and support for development of the country's PE tracking institutionalization plan.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5) Activity 1.1.1: Strengthen the topic selection process for the HTA committee, InaHTAC ▪ HTA topic selection operational manual - including technical report during topic selection processes ▪ Implementation of topic selection manual	October 2023 November 2023
(PY5) Activity 1.1.2: Build capacity of key stakeholders on HTA methods	October 2023
(PY5) Activity 1.1.4: Strengthen the appraisal process for the HTA committee, InaHTAC ▪ Develop report on outlining findings from HTA appraisal landscaping activity, literature review, and interview ▪ Draft outline of HTA appraisal operational manual	October-November 2023 October 2023
(PY5) Activity 1.1.5: Write and submit to scientific journals a maximum of three topics from the HTAsiaLink conference for publication	October 2023
(PY5) Activity 1.1.6: Draft report on two presentations in international conference showcasing Indonesia's HTA advancement	November 2023
(PY5) Activity 2.1.2: Conduct PE tracking using 2022 fiscal year data to inform policymaking using SHA 2011 framework	December 2023
(PY5) Activity 2.1.6: Develop a draft methodology guideline on the PE tracking based on the Indonesian experience	October-December, 2023
(PY5) End-of-project closeout meeting	November 23, 2023

Table 16. Quarter 4, 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 **Activity Description:** Analyze the current topic selection process to understand the prioritization and selection criteria, key actors and institutions engaged, roles and responsibilities, and incentives; MTaPS will provide hands-on practice and implement updates/modifications to the current process based on the literature review, stakeholder engagement, and expertise of MTaPS HTA practitioners.	1.1	MTaPS played a pivotal role in co-developing the 'Topic Selection Operating Manual' in collaboration with Pusjak PDK and InaHTAC. This manual is currently undergoing the finalization process, ensuring comprehensive internal checks and external reviews. Moreover, MTaPS advised on policy briefs, introducing new criteria weights for topic selection, which will contribute to the HTA process. In addition, MTaPS actively supported call for topics events, advocating for patient involvement. Notably, two topics were submitted by patient organizations for the first time, marking a significant milestone.
Activity 1.1.2: Build capacity of key stakeholders on HTA methods **Activity Description:** MTaPS provided training on MCDA and use of RWE using hands-on and collaborative research approaches to further strengthen the capacity of researchers and stakeholders for HTA.	1.1	MTaPS' efforts in capacity building focused on training staff from Pusjak PDK and HTA agencies in advanced methods. This included training in MCDA for TB diagnostics and RWE calibration for *trastuzumab.* The outcomes of this training were presented at the HTA consolidation meeting, presenting results to experts and stakeholders in the relevant fields. Furthermore, Pusjak PDK utilized the training to make substantial contributions to the development of HTA methods and refinements of Indonesia's HTA appraisal criteria.
Activity 1.1.4: Strengthen the appraisal process for the HTA committee, InaHTAC **Activity Description:** MTaPS supported InaHTAC to streamline the appraisal process, leading to additional inputs to HTA appraisal best practices using MCDA; input can further be used by InaHTAC or future activities to develop an HTA appraisal operational manual; by September 2023, MTaPS will develop a draft outline of HTA appraisal operational manual with notes, citations, and recommendations for best practices.	1.1	MTaPS made significant strides in the HTA appraisal domain. MTaPS introduced a technical guideline outline to streamline the appraisal process that condenses the previous three-day meetings into a more efficient half-day process per technology, allowing for more HTA productions in the coming years. The new format was advised by MTaPS comprehensive landscaping report that garnered acceptance from Pusjak PDK and InaHTAC. The success of this innovative approach was evidenced in the pilot HTA appraisal of *pembrolizumab* and *trastuzumab.*
Activity 1.1.6: Draft report on two presentations in international conference showcasing Indonesia's HTA advancement	1.1	The MTaPS team actively participated in the 11th HTAsiaLink Conference held in Putrajaya, Malaysia. MTaPS submitted three abstracts, all of which were accepted for oral presentations. Notably, one presentation received the best presentation award.

Activity	MTaPS Objective(s)	Activity Progress
Activity Description: MTaPS continues to support InaHTAC and other research partners to present and publish their work and achievements internationally to bolster collaborative learning and strengthen their capacity to conduct HTA using advanced methods.		MTaPS won this prize for the second consecutive year, affirming its expertise and steadfast dedication in the HTA field.
Activity 2.1.4: Build capacity of the NHA team to compile PE data **Activity Description:** MTaPS is to facilitate a five-day hybrid training for the Indonesia HA team and consultants to ensure that they have the skills to facilitate the PE tracking process in future. In addition to the training, MTaPS is to provide mentoring and remote support for HA 2022 production to assist PE analysis. MTaPS will guide consultants recruited by Pusjak PDK to collect, organize, and map PE data.	1.1	On September 15, 2023, a significant meeting took place to initiate the PE tracking project, jointly conducted by Pusjak PDK and Prodisfar. Both units agreed on their respective roles: Prodisfar would handle data management, including data collection and mapping, while Pusjak PDK would be responsible for data analysis, with the results being integrated into the NHA report. MTaPS was expected to provide TA to Prodisfar. Additionally, Pusjak PDK planned to issue a decree from the head of Pusjak PDK to establish a PE tracking team comprising both units within MOH. They would also send formal requests to Prodisfar and BPOM to gain access to data from their information systems. In another meeting, Pusjak PDK addressed challenges related to the use of e-purchasing and e-catalogue systems by hospitals, represented by PERSI and ARSSI. Several issues were identified, including difficulties in negotiating medicine prices, long lead times for deliveries (sometimes up to six months or more), and instances where e-purchasing prices exceeded negotiated rates. Regular evaluation by the MOH was deemed necessary, particularly to differentiate between e-purchasing and non-e-purchasing products.
Activity 2.1.7: Indonesia PE tracking results dissemination through the IHEA conference **Activity Description:** MTaPS submitted a concept note to the 15th IHEA conference that got accepted. The 15th IHEA World Congress on Health Economics was held at the Cape Town International Convention Centre on July 8-12, 2023. The Health Economics Unit of the University of Cape Town, which is the health economics research center in Africa, hosted the congress. MTaPS supported two participants to attend the conference.	1.1	MTaPS facilitated the attendance of two participants, one from MTaPS Indonesia and one from the Directorate General of Pharmaceutical and Medical Device, Indonesia to attend the 15th IHEA World Congress on Health Economics 2023 in Cape Town, South Africa, July 8-12, 2023. MTaPS gave one oral presentation on 'Pharmaceutical Expenditure during COVID-19 Pandemic in Indonesia' at the congress. The experience of implementing PE tracking in Indonesia in 2023 with results that are close to reality using data available at the MOH earned appreciation from various countries and experts at the congress and became a reference for other countries in implementing PE tracking.

H. JORDAN

FIELD SUPPORT ACTIVITIES

OVERVIEW

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

CUMULATIVE PERFORMANCE TO DATE

MTaPS facilitated successful procurement reform in five priority regulatory actions, including three legislative articles in the government procurement bylaw and two institutional policies for the JFDA and the MOH. MTaPS, in close collaboration with the GPD, developed FA implementation guidelines and trained procurement personnel representing various stakeholders from the public sector. Also, in close collaboration with the GPD, MTaPS developed procurement negotiation guidelines. The reform and subsequent initiatives were designed to facilitate supplier market entry, increase competitiveness, and enhance health product availability in Jordan. The MTaPS team completed a comprehensive assessment of the pharmaceutical supply chain in collaboration with the MOH's PSD, aiming to contribute to improved procurement and supply chain practices. Based on the assessment findings, MTaPS and MOH counterparts collaboratively identified two important interventions which were then implemented in Year 5: formulation of the PSD Operational Plan 2023–2025 and development of six priority supply chain policies. With MTaPS support, both the MOH and the RMS introduced improvements in clinical practice.

Two MOH pilot hospitals developed four prophylactic antibiotic protocols and one antibiotic treatment protocol, which were approved by the MOH and disseminated to all public hospitals. The RMS AMR Central Committee developed 27 Empirical Treatment Protocols for Intensive Care Unit (ICU) Common Infections, which were approved and disseminated to all RMS hospitals. MTaPS initiated a novel approach to raising AMR awareness, in collaboration with local stakeholders, targeting middle and high school students. In collaboration with the National Advisory Committee for Infection Prevention and Control, MTaPS developed and launched a standardized, certified IPC training program for all MOH and RMS hospitals. MTaPS also provided technical assistance in developing a training module on best IPC practices for primary health care (PHC). Overall, these interventions contributed to PSS in Jordan in the key areas of governance, human resources, pharmaceutical service delivery, information management, and financing.

YEAR 5 ACHIEVEMENTS AND RESULTS

With MTaPS support, the Procurement and Supply Directorate developed six priority supply chain management policies, which were granted official approval from the Secretary General for Technical and Administrative Affairs at the MOH. With the Infection Prevention and Control Department (IPCD), MTaPS implemented a certified IPC training program to the RMS and MOH IPC focal points, and a PHC

IPC training to focal points from health centers in all governorates. The RUA protocols for four priority surgical procedures and one antibiotic management protocol for urinary tract infections, developed by the MOH with MTaPS support, received ministerial approval and were disseminated to all MOH hospitals. With MTaPS support, the SHD trained focal points, who conducted AMR awareness–raising activities in selected schools across the country. MTaPS developed a handover plan which is integrated in the Year 6 work plan to ensure proper transfer of all activities to the MOH.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: STRENGTHEN PHARMACEUTICAL-SECTOR GOVERNANCE

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

This activity was canceled since the committee is no longer being convened by its leadership and is no longer active.

Activity 1.1.2: Provide technical assistance to the GPD in institutionalizing FA procedures.

MTaPS submitted the final draft of the FA SOPs to the GPD. The document incorporated comments and feedback provided by the private sector suppliers and received approval from the FA TWG. On September 21, 2023, the GPD submitted the SOPs to the National Committee for Procurement Policies (NCPP) for their endorsement and dissemination. The effective implementation of the FA SOPs is expected to improve the efficiency, transparency, and effectiveness of government procurement processes, particularly when using FAs in procurement.

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

MTaPS submitted the final draft of the Procurement Negotiation SOPs to the GPD. The document received approval from the GPD Director General. On September 21, 2023, the GPD submitted the SOPs to the NCPP for endorsement and dissemination. The successful implementation of the Procurement Negotiation SOPs is expected to improve the efficiency and transparency of negotiation processes.

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

MTaPS conducted training sessions on FA implementation attended by 17 (10 male and 7 female) representatives of the information technology (IT) team and members of the Automating Consulting Committee at the GPD, in accordance with the GPD's request. The objective of this training was to equip them with the necessary knowledge to initiate the automation process for FA procedures. MTaPS adopted a collaborative approach in the development of the FA training materials and the delivery of all FA-related training sessions. The dedicated staff at the GPD actively participated in reviewing and providing input on the training materials. They also took an active role in delivering training sessions, such as the information session for private sector suppliers on FA, which was led entirely by the Director of the Pharmaceuticals Procurement Directorate at the GPD. This approach demonstrated a high level of commitment and ownership among GPD staff and is expected to significantly contribute to the sustainability of the FA initiative.

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.

This activity was completed in Quarter 3.

Activity 2.1.2: Develop a three-year operational plan for the PSD.

MTaPS successfully completed this activity in Quarter 4 with the development of a comprehensive operational plan for the PSD covering the years 2023–2025 in alignment with the MOH Strategic Plan 2023–2025. This plan included an M&E plan with 73 key performance indicators (KPI). The plan underwent revisions during a validation workshop held on September 10, 2023, with the participation of key department heads and leadership of the PSD Director. On September 19, 2023, an official letter was sent from the PSD to the MOH, formally approving the plan. The development of an operational plan for the MOH strategy serves as a crucial step in optimizing resource allocation, M&E processes, and coordination with stakeholders within the MOH.

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

This activity was canceled as agreed during the USAID Jordan, WHO, and MOH joint meeting.

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.

MTaPS collaborated with the Public Financial Management and Administration (PFMA) Project to deliver training on the GPB to 40 attendees (21 male, 19 female) from different public health entities on May 16 – 18, 2023. This comprehensive training encompassed key financial elements of the procurement process, including procurement needs, budget preparation, approvals, and handling of contracts. The primary objective of this training was achieved and discussions with counterparts are under way to plan for Year 6 Quarter 1 activities.

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

RMS Approval and Dissemination Ceremony "Empirical Treatment Protocols for Intensive Care Unit (ICU) Common Infections, Jordan. Photo credit: MTaPS

Activity 4.1.1: Support the Royal Medical Services in the implementation of a comprehensive AMS program

The "Empirical Treatment Protocols for Intensive Care Unit (ICU) Common Infections" were approved and disseminated during a ceremony held on September 10, 2023 organized by the RMS in collaboration with MTaPS. The 27 protocols were developed by the RMS Central AMR Committee with technical support from MTaPS. The ceremony

was held under the patronage of the Director General of RMS and attended by the administrative and technical assistants, Al Hussein Hospital heads of specialties, and directors of all 14 RMS hospitals countrywide. The DG will send an official letter to the hospital directors trained on the protocols, mandating their implementation. A technical workshop to orient AMR committees from RMS hospitals will be held in Year 6 Quarter 1.

Activity 4.1.2: Conduct an assessment of RMS information systems relative to AMS program activities.

This activity was completed in Quarter 3.

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

The Institutional Development and Quality Control Directorate (IDQCD) and the PCPD approved the institutional policy for the RUA protocols implementation, along with its audit tools and KPIs. In Year 6, MTaPS, in collaboration with the IDQCD, will orient staff from the hospital quality units on the audit tools and KPIs, which the hospitals will use to monitor and evaluate protocol implementation. The hospitals will then report the audit results and KPIs to the IDQCD. MTaPS conducted several meetings with the IDQCD and the PCPD to prioritize activities related to the implementation of the protocols developed by Al-Mafraq and Al-Salt hospital AMR committees. In Year 6, MTaPS will support the PCPD and the IDQCD to take the lead in organizing the antibiotic prophylaxis/treatment protocols orientation workshops for physicians (including medical residents), nurses, and pharmacists from both Mafraq and Salt Hospitals. In these workshops, the hospital AMS committees will inform their teams of the antibiotic prophylaxis/treatment protocols as well as their respective roles and responsibilities for implementation.

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 conducted several meetings with the Epidemics Administration, the Communicable Diseases Directorate (CDD), and the IPCD in the MOH. These meetings served to prioritize activities for Year 6 in line with ACIPC strategies to enhance the capacity of health care workers to implement the IPC best practices.

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

This activity was initially designed by MTaPS with the IPCD and the Dental Directorate to assess MOH facilities only. However, the MOH then requested to expand the assessment to the private sector, which requires significant additional funds not budgeted in Year 5. In agreement with the MOH and USAID Mission in Jordan, the expansion was planned for Year 6. Accordingly, MTaPS developed an implementation plan to support the IPCD's taking the lead in conducting the national IPC assessment in both MOH and private-sector dental settings.

Activity 4.2.3: Conduct basic IPC training for IPC focal points in MOH PHC.

This activity was completed in Quarter 2.

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

Based on a request from the HCAD, MTaPS helped develop messages tailored to diverse community segments to elevate AMR/IPC awareness and facilitate the formation of local partnerships. These messages were submitted to the HCAD for their review, finalization, and broadcasting. The HCAD has yet to complete their review due to conflicting priorities.

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

The SHD and HCAD incorporated the CASS activities into the NAP-AMR 2023–2025, with plans to extend to additional schools across the country. MTaPS will assist the SHD in assuming a leading role in broadening this activity, by supporting IEC materials, TOT workshops, and joint field visits to selected schools. MTaPS updated the CASS IEC materials with a focus on the nutrition-related messages in coordination with the USAID Community Health and Nutrition Project (USAID CHN) and highlighted the risks of smoking among school students.

BEST PRACTICES/LESSONS LEARNED

- To achieve lasting sustainability in program implementation, the active involvement of senior MOH directorates is crucial. Inadequate support from various stakeholders often leads to delays or failures. The MOH collaborated with MTaPS and the AMR committees at Al-Hussein and Al-Mafraq hospitals to develop and implement treatment protocols. They overcame implementation challenges through engagement with PCPD, IDQCD, hospitals managers, and trained staff and through joint visits for the selected hospitals.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1.1.1: Hold technical workshops with the GPD, including their information technology unit, to identify and prioritize key FA processes and procedures for automation, clarifying roles and responsibilities aligned with the procedures within their electronic procurement information system.	October–December 2023
Activity 1.1.2: Identify and hire a local procurement legal consultant and initiate technical discussions with the GPD and relevant stakeholders over the development of procurement Standard Bidding Documents.	October–December 2023
Activity 1.1.3: Identify and hire a local procurement and supply chain consultant and initiate technical discussions with the GPD over the development of a comprehensive policy for evaluating the performance of suppliers.	October–December 2023
Activity 4.1.1: Orient service providers from select MOH hospitals on the approved protocols through technical workshops in collaboration with the MOH PCPD.	October–December 2023
(PY5) Activity 4.1.2: Hold a technical workshop to orient the AMR committees from RMS hospitals on the 27 ICU protocols in coordination with the RMS central AMR committee.	October–December 2023
Activity 4.2.2: Initiate the implementation of the Healthcare Infection Preventionist training program for Hospitals IPC focal points by finalizing logistic and contractual preparation with counterparts and trainers, respectively.	October–December 2023
Activity 4.3.1: Initiate the implementation of the Healthcare Certified Safety and Infection Control Preventionist training program for PHC providers by finalizing logistic and contractual preparation with counterparts and trainers, respectively.	October–December 2023
Activity 4.3.2: Complete review and finalization of the dental IPC assessment tool with the MOH and identify and hire a local consultant to provide the technical support outlined with the MOH for the assessment implementation.	October–December 2023
Activity 4.4.1: Support the MOH to finalize AMR awareness community health messages.	October–December 2023

Activity 4.4.2: Provide additional IEC material to the MOH SHD.	October–December 2023
Finalize and submit Year 5 deliverables to USAID Mission.	October–December 2023

Table 17. Quarter 4, Year 5 activity progress, Jordan (summary of the current quarter)

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Provide technical and planning support to the multi-stakeholder NVPMC. **Activity description:** Coordinate technical and planning activities of the NVPMC.	1	The activity was canceled since the committee is no longer being convened by its leadership and is no longer active.
Activity 1.1.2: Provide technical assistance to the GPD in institutionalizing FA procedures. **Activity description:** Provide technical and logistical support to the TWG to implement the drafted action plan.	1	This activity was successfully completed during this quarter, with the GPD approving the FA SOPs and forwarding them to the NPPC for their approval.
Activity 1.1.3: Provide technical assistance to the GPD in developing procurement negotiation procedures. **Activity description:** Develop procurement negotiation procedures and tools needed for GPD staff.	1	This activity was successfully completed during this quarter, with the GPD approving the Negotiation SOPs and forwarding them to the NPPC for their approval.
Activity 1.2.1: Conduct pharmaceutical procurement training to stakeholders using the MTaPS procurement training curriculum. **Activity description:** Build stakeholders' (PSD, Vaccines Department, and Policies Department, among others) capacities in procurement best practices.	1	Conducted training sessions on FA implementation for both the IT team and members of the Automating Consulting Committee at GPD in accordance with GPD's request.
Activity 2.1.1: Update and/or develop priority PSD policies. **Activity description:** Review the developed PSD policies with the IDQCD.	2	Completed in Quarter 3.
Activity 2.1.2: Develop a three-year organizational strategic plan for the PSD. **Activity description:** Facilitate a multidisciplinary process of consultation and validation and identify strategic priorities, opportunities, and risks facing the supply chain.	2	This activity was successfully completed during this quarter, which involved the development and approval of a comprehensive operational plan for the PSD spanning the years 2023–2025. This plan also encompassed an M&E plan comprising 73 KPI reference sheets.
Activity 2.1.3: 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	Canceled
Activity 3.1.1: Develop and implement the "financial management for pharmaceutical procurement" training module. **Activity description:** MTaPS will prioritize training in financial management areas related to procurement and supply chain.	3	Collaborated with the PFMA Project to deliver training on GPB. This comprehensive training encompassed key financial elements of the procurement process, including quantifying procurement needs, budget preparation, obtaining essential financial approvals through the Procurement Committee, and effectively handling financial aspects related to contracts, such as insurance, penalties, and payments.

Activity	MTaPS Objective(s)	Activity Progress
Activity 4.1.1: Support the RMS in the implementation of the Comprehensive AMS Program. **Activity description:** Develop antimicrobial treatment guidelines for RMS Al Hussain Hospital.	4	The 27 "Empirical Treatment Protocols for ICU Common Infections were developed, approved and disseminated.
Activity 4.1.2: Conduct an assessment of RMS information systems relative to AMS program activities. **Activity description:** Assess the ability of the RMS electronic medical record (EMR) and IT systems to capture and aggregate required information.	4	Completed in Quarter 3.
Activity 4.1.3: 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	MOH antimicrobial prophylaxis protocols were approved by the Minister of Health and disseminated. The development of an institutional policy, audit tools, and KPIs for monitoring the implementation of the disseminated protocols was successfully completed.
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. **Activity description:** Provide technical and logistic support for ACIPC regarding the implementation of IPC interventions.	4	MTaPS conducted several meetings with the Epidemics Administration, the CDD, and the IPCD in the MOH to prioritize activities for Y6 in line with ACIPS strategies.
Activity 4.2.2: Support the MOH in conducting dental IPC assessments for priority clinical units in health facilities. **Activity description:** Provide technical support for the ACIPC and related stakeholders, including the Dentistry Directorate, to conduct IPC assessments for priority dental clinical units.	4	The MOH, USAID Jordan, and MTaPS reached an agreement to postpone the implementation of this initiative to Year 6. This decision aims to facilitate comprehensive pre-planning and the allocation of necessary resources for conducting an expanded assessment in both public- and private-sector dental clinical units.
Activity 4.2.3: Conduct basic IPC training for IPC focal points in MOH PHC. **Activity description:** Build the capacity of health care providers from PHC centers on IPC best practices.	4	Completed in Quarter 2.
Activity 4.3.1: Support the MOH in raising community awareness on AMR and RUA. **Activity description:** Development of tailored digital community messages to raise awareness on AMR.	4	Completed drafting of AMR-related awareness messages targeting different sets of community audiences and shared them with the MOH HCAD and other relevant MOH stakeholders.
Activity 4.3.2: Continue to support the SHD in raising awareness on AMR among school students. **Activity description:** Conduct AMR awareness sessions for school students.	4	Updated the CASS IEC materials with a focus on nutrition-related messages in coordination with the USAID CHN and highlighted the risks of smoking among school students.

I. KENYA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

In Kenya, MTaPS is supporting three result areas in the AMR action package: strengthening MSC on AMR through the NASIC and CASICs; strengthening IPC and AMS on governance and human resources capacity at the national, county, and HF levels; and supporting county- and facility-level AMS, IPC, OSH, and WASH activities for sustainable capacity. These efforts support AMR containment at the national, county, and HF levels by strengthening core governance structures and applying a structured CQI approach to promote control of HAIs, contain AMR, and improve patient safety.

CUMULATIVE PERFORMANCE TO DATE

Through the PY 1–5 work plans, MTaPS helped Kenya counterparts improve Kenya's JEE scores by supporting 58% (36/62) of the benchmark actions. On MSC, MTaPS supported 50% (2/4) of capacity level 2 actions, 50% (2/4) of capacity level 3 actions, 100% (4/4) of capacity level 4 actions, and 60% (3/5) of capacity level 5 actions. MTaPS supports MSC activities at the national level and in four focus counties. Key MTaPS activities have included strengthening the MSC structures at national (NASIC) and county (CASIC) levels; developing and disseminating a standardized AMR communique, CASIC orientation package, and bulletins to OH stakeholders; and developing and reviewing the NAP-AMR, its M&E framework, and CASIC work plans in MTaPS-supported counties.

In improving the JEE scores for IPC, MTaPS supported 80% (4/5) of capacity level 2 actions, 83% (5/6) of capacity level 3 actions, 80% (4/5) of capacity level 4 actions, and 40% (2/5) of capacity level 5 actions. MTaPS activities focused on strengthening the IPC governance structures at the national and county levels, developing and reviewing the IPC guidelines, applying IPC assessment tools, training HCWs, developing a relicensure-linked IPC CPD course, and monitoring implementation of IPC and WASH activities using a CQI approach in the focus counties and HFs. For AMS JEE scores, MTaPS supported completion of 75% (3/4) of capacity level 2 actions, 83% (5/6) of capacity level 3 actions, 29% (2/7) of capacity level 4 actions, and 0% (0/7) of capacity level 5 actions. MTaPS interventions focused on strengthening AMS governance structures at the national level and in the focus counties and HFs; developing the KNMF; reviewing the Kenya Essential Medicines List (KEML) with the AWaRe categorization of antibiotics; developing and disseminating the national AMS guidelines and regulatory guidance on optimal use of antimicrobials to HCWs and the public and AMS curricula at the preservice and in-service levels; training HCWs on AMS; and monitoring implementation of AMS activities using a CQI approach in the focus counties and HFs.

YEAR 5 ACHIEVEMENTS AND RESULTS

On MSC, MTaPS supported commemoration of WAAW 2022 at the national level and in the MTaPS focus counties of Kisumu, Nyeri, Kilifi, and Murang'a. MTaPS also provided TA to the NASIC to review and develop the next iteration of the NAP-AMR and NAP M&E framework 2023–2027, which will be

launched during WAAW 2023. Additionally, MTaPS provided technical support to develop the annual AMR bulletin 2023. At the county level, MTaPS supported end term review of the Nyeri and Kilifi CASIC work plans and development of the Nyeri CASIC work plan 2023–2025. The team also supported the launch and dissemination of the Kisumu CASIC work plan 2023–2025.

On IPC, MTaPS supported the MOH to develop and review the national IPC guideline, HCWM guideline, and HAI surveillance protocol. The team supported pilot implementation and data review of IPC M&E tools in Kisumu and Nyeri counties and provided TA to the National IPC Advisory Committee (NIPCAC) and CIPCACs to hold quarterly meetings. In collaboration with the National Nurses Association of Kenya (NNAK), MTaPS provided four relicensure-linked webinars (three on IPC and one on AMS) to HCWs. At the county level, MTaPS supported the review and development of the next iteration of the Murang'a and Kisumu county CIPCAC work plans, development of the first Kisumu County HCWM plan, and dissemination of IPC SOPs within 20 MTaPS focus facilities. MTaPS also provided TA and mentorship to 20 MTaPS focus facilities to review their IPC and AMS facility CQI plans during supportive supervision.

On AMS, MTaPS provided TA to the MOH Directorate of Health Products and Technologies (DHPT) to finalize the KEML 2023 (including AWaRe categorization) and align the KNMF to the KEML. The team also participated in regional AMS workshops to review key regional AMS guidelines. At the county level, MTaPS provided TA and mentorship to 22 MTaPS focus facilities to collect, analyze, and present AMC/AMU data, which were used to inform facility AMS program interventions. MTaPS conducted AMS supportive supervision in 22 focus facilities across four MTaPS-supported counties, providing mentorship and technical assistance to HCWs. The team also led MTC/AMS committee refresher training for newly appointed members in Kisumu County, provided TA to the Kisumu County Referral Hospital to hold its first MTC meeting, and conducted PPS data collection training and data collection in three facilities in Kilifi County and one in Kisumu County. MTaPS provided TA to county and facility counterparts to develop and present 10 IPC and 12 AMS abstracts at scientific conferences in the country.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS, in collaboration with the NASIC, held an external validation meeting for the NAP-AMR and its M&E framework to consolidate input from external experts. This marked the final in-country review of these crucial documents ahead of their launch during the WAAW 2023 celebrations.

In collaboration with the MOH, MTaPS finalized the national HAI surveillance guidelines. In addition, MTaPS supported the commemoration of World Patient Safety Day (WPSD) at the national and focus-county levels and supported the Kisumu County CIPCAC to develop its first HCWM plan. MTaPS also provided TA to two HCWs to develop and present abstracts during the Infection Control Nurses Chapter Conference (ICNCC).

In collaboration with the MOH DHPT, MTaPS provided TA to finalize the KEML 2023, including the AWaRe categorization, and align the KNMF to the reviewed KEML. MTaPS participated in the regional AMS workshop supported by the East, Central and Southern Africa Health Community (ECSA-HC) and Africa CDC to review key regional AMS priority and guideline documents.

The USAID Mission and MTaPS Kenya team visited the Kilifi County team as part of oversight activities. The teams met with county health management team (CHMT) members, representatives of the CASIC and CIPCAC, and the Kilifi and Malindi hospital management teams to review progress and lessons learned. The team held similar meetings with Gertrude's Children's Hospital, the PPB, the NASIC secretariat, and the FAO to discuss collaboration and joint implementation of AMR containment efforts.

RESULTS 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 towards sustainable capacity

MTaPS, in collaboration with Murang'a County, held a CASIC review meeting on August 9, 2023, to review implementation progress, discuss sustainability of AMR containment efforts, and set priority areas for the next iteration of the work plan. In attendance were 16 participants (3 female). Additionally, MTaPS, in collaboration with the NASIC, held an external validation meeting for the NAP-AMR and its M&E framework on August 31, 2023, engaging 43 participants (21 female).

RESULTS AREA 2: IPC

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

MTaPS provided TA to finalize the review of the national IPC and HCWM guidelines. In collaboration with the MOH, MTaPS held a workshop with 21 participants (11 female) to finalize the drafting of the HAI surveillance guidelines. MTaPS participated in the planning and commemoration of the national WPSD symposium on September 15, 2023, and participated in panel discussions highlighting MTaPS' activities that contribute to patient safety.

Tree planting at Ahero Sub-County Hospital, Kenya, during the WSPD celebration on September 15, 2023. Photo Credit: Kisumu County

MTaPS and Kisumu County held a workshop with 10 participants (2 female) from July 31–August 2, 2023, to develop its first HCWM plan. Following this, a virtual meeting was held with Kisumu CIPCAC members to finalize the document on September 12. MTaPS held an advocacy meeting with the Murang'a CHMT and supported CIPCAC meetings with 8 (2 female) and 18 (6 female) participants August 8 and 9, 2023, respectively.

Activity 2.2.1: Continue providing technical assistance to scale up a continuing professional development (CPD) - and re-licensure-linked in-service IPC training course through the relevant professional associations

MTaPS, in collaboration with the NNAK, held a virtual webinar on September 27, 2023, with 133 participants (88 female). The topic of discussion was device-associated HAIs.

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

MTaPS, in collaboration with the MOH and its four focus counties, commemorated WPSD on September 15, sensitizing 1,765 patients across 17 MTaPS-supported facilities (7 in Nyeri, 5 in Kisumu, 3 in Kilifi, and 2 in Murang'a). The MTaPS team has continued to monitor the implementation of the facility IPC CQI work plans through the county and facility IPC focal persons. MTaPS provided technical support to two HCWs (one female) from Nyeri County to develop and present abstracts at the ICNCC scientific conference from September 14–15, 2023.

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

Activity 3.1.1: Strengthening AMS governance structures at national and county levels

MTaPS participated in the AMS regional forum supported by the ECSA-HC and Africa CDC, where experiences with implementation of AMS programs at the national, county, and HF levels were shared. Forum participants reviewed regional priorities for AMS and regional AMS guidelines.

Activity 3.1.2: Strengthening institutionalization of AWaRe categorization of antibiotics

MTaPS, in collaboration with the DHPT, provided financial support and TA to finalize the KEML 2023, incorporating the AWaRe categorization, and align the KNMF to the revised KEML. The documents are in the final stages of review ahead of their launch in October 2023. Activities included internal and external validation for the KEML on July 4 and 6, 2023, respectively, and a workshop from August 21–25, 2023, that engaged 14 clinical experts (9 female) to align KNMF monographs to the revised KEML. The KEML and KNMF 2023 were validated from September 13–15, 2023, by MTaPS and the DHPT Secretariat (6 participants; 4 female).

Activity 3.2.1: Strengthening and scale up healthcare human resource capacity for AMS through pre- and in-service trainings

MTaPS facilitated virtual PPS data collectors' trainings for the MTaPS-supported facilities in Kilifi County on July 4, 2023, and for Kisumu County Referral Hospital (CRH) September 18, 2023, engaging 36 (21 female) and 15 (7 female) participants, respectively.

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

MTaPS supported the Kisumu CRH to conduct its first MTC/AMS committee meeting August 9, 2023, for 15 participants (6 female). The newly appointed members and chair reviewed the MTC's roles and priority work plan activities. In addition, MTaPS provided financial support and TA for PPS data collection for Kilifi CRH, Malindi Sub-County Hospital (SCH), and Mariakani SCH from July 12–17, 2023, and for Kisumu CRH from September 21–25, 2023. Data analysis is ongoing. Additionally, MTaPS provided TA to four HCWs (two female) from three MTaPS-supported facilities to develop and present during the Hospital Pharmacists Association of Kenya (HOPAK) annual scientific conference from August 8–9, 2023.

BEST PRACTICES/LESSONS LEARNED

- CASICs and CIPCACs entrenching their costed work plans in the county integrated development plans for funding consideration and HFs receiving facility improvement funds are some of the best practices toward sustainability of MSC, IPC, and AMS programs beyond MTaPS.
- Development of CME sessions and induction programs for HCWs, new staff, students, and interns by HFs ensures sustained human resource capacity for IPC and AMS, and using county and HF trainers is sustainable and cost effective.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 1.1.1: Continue strengthening NASIC for coordination, policy direction, review, and M&E of national AMR plan and help to move towards sustainable capacity. ▪ Support commemoration of WAAW 2023 ▪ Revise CASIC work plans in Kilifi and Murang'a counties ▪ Launch and disseminate NAP-AMR and M&E framework 2023–2027	Oct–Dec 2023
PY 5 Activity 2.1.1: Continue strengthening governance for IPC at the national, county, and facility levels for sustainable capacity ▪ Launch the national IPC and HCWM guidelines and the HAI surveillance protocol ▪ Finalize the AMR mobile application	Oct–Dec 2023
PY5 Activity 3.1.1: Strengthening AMS governance structures at national and county level ▪ Finalize the electronic AMC tool and disseminate it in selected facilities	Oct–Dec 2023
PY 5 Activity 3.1.2: Continue to strengthen institutionalization of AWaRe categorization of antibiotics ▪ Finalize the AWaRe implementation guides ▪ Finalize and launch the KEML 2023 and the KNMF 2023 in October	Oct–Dec 2023
Activity 3.2.1: Strengthening and scale up healthcare human resource capacity for AMS through pre- and in-service trainings. ▪ Finalize the development of a PPS training package	Oct–Dec 2023
Activity 3.5.1: Continue support to county, sub-county, and facility-level AMS activities for sustainable capacity. ▪ Implement the AWaRe implementation guides	Oct–Dec 2023

Table 18. Quarter 4, FY23, Activity Progress, Kenya–GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1.1.1: Continue strengthening NASIC for coordination, policy direction, review, and M&E of the national AMR plan and help to move towards sustainable capacity **Activity Description:** Support the 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	External validation for the NAP-AMR and M&E framework undertaken Murang'a CASIC review meeting held August 9, 2023
Activity 2.1.1: Continue strengthening governance bodies for IPC at the national, county, and facility levels for sustainable capacity **Activity description:** Support MOH in implementation of the national IPC M&E framework; development/review of SOPs; meetings with national IPC TWG and NIPCAC; CIPCAC meetings; monitoring of implementation of HF action and IPC CQI	5.4	2.1	Participated in panel discussions during the national WPSD symposium September 15, 2023 Supported review of the national IPC guideline and national HCWM guideline Murang'a CIPCAC meeting held August 8, 2023 Development of Kisumu HCWM plan and revision of Murang'a CIPCAC work plan Provision of TA to facility IPC committees and focal persons virtually
Activity 2.2.1: Continue providing technical assistance to scale up a continuing professional development (CPD)- and re-licensure-linked in-service IPC training course through the relevant professional associations **Activity description:** Continue to roll out the IPC CPD course in collaboration with health professional associations; collaborate with national MOH IPC team and stakeholders to introduce IPC agenda/courses for in-service training	5.4	2.2	Conducted a virtual webinar on device-associated HAIs with NNAK for 133 participants (88 female)
Activity 2.5.1: Continue support to county, sub-county, and facility-level IPC, OSH, and WASH activities for sustainable capacity **Activity description:** Support county and HF 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	Supported 17 HFs (7 in Nyeri, 5 in Kisumu, 3 in Kilifi, and 2 in Murang'a) to commemorate WPSD on September 15, 2023, sensitizing 1,765 patients Mentoring focus counties and HFs and monitoring implementation of facility IPC CQI plans
Activity 3.1.1: Strengthening AMS governance structures at national and county level **Activity Description:** Support PPB in finalizing and utilizing the AMS surveillance tool; provide TA to county AMS focal person in four MTaPS focus counties; support development/review and use of national outpatient prescription and inpatient treatment review sheets	5.4	3.1	Participated in a panel discussion during the regional AMS workshop from August 7–11, 2023 in Nairobi supported by ECSA-HC and Africa CDC
Activity 3.1.2: Continue to strengthen institutionalization of AWaRe categorization of antibiotics	5.4	3.1	KEML internal and external validation meetings held July 4 and 6, 2023, respectively Supported a workshop from August 21–25, 2023, to align the KNMF to the revised KEML 2023

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity Description: Support revision of 2019 KEML; development and implementation of SOPs, tools, and job aids; dissemination of practical guide for AWaRe in four focus counties			Meeting with DHPT secretariat from September 13–15, 2023, to validate and finalize the KEML and KNMF
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:** Support the PPB in incorporating AMR and AMS in core preservice curricula for pharmacy training programs; ongoing provision of AMS CPD curriculum in collaboration with professional bodies; support development of a PPS training package; scale up patient-focused AMS interventions	5.4	3.2	Conducted PPS data collectors training July 14, 2023, in Kilifi County focus HFs (Kilifi CRH, Malindi SCH, and Mariakani SCH), training 36 participants (21 female) and in Kisumu CRH September 18, 2023, training 15 participants (7 female)
Activity 3.5.1: Continue support to county, sub-county, and facility-level AMS activities for sustainable capacity **Activity Description:** Support implementation for patient-focused AMS interventions in the 22 MTaPS focus AMS sites; updating of facility AMS CQI action plans; development/revision and dissemination of prioritized AMR/AMS IEC materials; training of HCWs in new priority AMS areas; supportive supervision; documentation of best practices and lessons learned to support knowledge management and sharing	5.4	3.5	Supported Kisumu CRH MTC meeting to introduce its newly appointed members and chair Provided TA to Kilifi CRH, Mariakani SCH and Malindi SCH with conducting data collection for the facilities' PPS from July 12–17, 2023, and to Kisumu CRH from September 21–25, 2023 TA to four HCWs to develop and present AMS abstracts at the HOPAK scientific conference

J. MALI

GHSA ACTIVITIES

OVERVIEW

MTaPS GHSA program implementation in Mali is guided by the WHO benchmarks for IHR capacities and relies on other published best practices to collaborate with 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 GCMN-RAM. AMR activities in Mali span the national, facility, and community levels.

CUMULATIVE PERFORMANCE TO DATE

During FY19–FY23, MTaPS worked with the GCMN-RAM to develop TOR for the group, as well as for its IPC and AMS TWGs. With MTaPS' support, the GCMN-RAM has been able to organize 10 coordination meetings of the 12 initially planned to monitor progress in implementing the NAP-AMR. The eighth and last meeting was an opportunity to pause and reflect and to develop a sustainability plan for MTaPS-supported activities. Additionally, MTaPS supported the IPC TWGs in organizing seven meetings to monitor and evaluate IPC practices in Mali. IPCAT2 has been used annually since 2020 to evaluate IPC core components at the national level. In 2023, IPCAT2 results indicated that two components (IPC program and surveillance of HCAIs) have improved since 2022, and Mali had a score of at least 50% on four of the six IPC components assessed at the national level. The average score increased from 50% in 2022 to 54% in 2023. The AMS TWG also held four regular meetings to monitor and evaluate AMS practices in supported HFs. In the same year, the evaluation using the WHO checklist of essential national core elements for AMS programs indicated that all core components had a score of at least 75%, including 75% for the national plan and strategy; 75% for regulations and guidelines; 80% for awareness, training, and education; and 100% for supporting technology and data. The second evaluation conducted in HFs using the WHO AMS program tool showed an average aggregate score of 48% for the eight domains.

MTaPS supported the DGSHP and DPM in establishing DTCs and IPC committees in 16 HFs. Following their establishment, the committees developed CQI plans for IPC and AMS practices. MTaPS assisted the GCMN-RAM and DGSHP in organizing four virtual meetings to monitor the implementation of IPC activities described in the 16 facility action plans. MTaPS also supported five supervision visits to the HFs. MTaPS supported the DPM and the National Agency for the Accreditation and Evaluation of Health Facilities in organizing five virtual meetings and conducting three DTC supervision visits to each of the 16 HFs. Additionally, MTaPS supported the National Institute of Public Health, DGSHP, and DPM in developing the 2023–2027 NAP-AMR, 2021–2025 AMS action plan, 2023–2027 IPC strategic plan, IPC training toolkit, AMS training toolkit, and infectious disease treatment guidelines.

MTaPS assisted the DGSHP in printing and disseminating 500 copies of the national IPC strategic plan to the MOH, Ministry of Environment, Ministry of Animal Resources, Ministry of Agriculture, finance and technical partners, and medical professional associations.

Further, MTaPS supported the development and implementation of e-Learning platforms that are now installed and operational at both the DGSHP and the Faculty of Medicine and Odonto-Stomatology and Faculty of Pharmacy (FMOS/FAPH). MTaPS supported the DPM in printing and disseminating 1,520 toolkits that included the facilitator guide, participant manual, and infectious disease treatment guidelines to HCWs.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the MSC group in holding meetings for an effective and functioning committee that oversees implementation of a multisectoral NAP-AMR. This activity increased awareness around AMU, implementation and analysis of the NAP-AMR activities, and achievement. Further, the AMR governance committee developed a sustainability plan for MTaPS-supported activities. The overall activity contributes toward sustained capacity (levels 3 and 4) in WHO benchmark 3.1. These coordination activities have contributed to the achievement of two indicators:

1. Number of AMR-related in-country meetings or activities conducted with multisectoral participation. The country met the target. Of eight meetings planned for in the current fiscal year, eight were held.
2. Number and percentage of female participants in meetings or other events organized by the multisectoral body on AMR. A total of 103 (26.2%) out of 392 participants were female. This slightly exceeds the target of 25%.

In addition, MTaPS supported monitoring activities through supervisory visits and virtual meetings. In assessments using the IPCAF, HHSAF, and COVID-19 scorecard tools for IPC and the WHO tool for AMS program implementation at the facility level, the antibiotic use monitoring tool, the CQI implementation plan, and a DTC supervision tool for AMS, the 16 MTaPS-supported HCFs demonstrated improvements in IPC and AMS practices. Using the assessment results, MTaPS supported the DGSHP and the DPM in working with each HF to update its improvement plan toward improved IPC and AMS practices. In PY4, 12 out of 16 MTaPS-supported facilities demonstrated improved HH compliance; by PY5, this number had increased to 14 out of 16. The number of facilities demonstrating improved performance in core IPC components increased from 13 out of 16 (PY4) to 14 out of 16 (PY5). These activities contribute to sustained capacity levels 2, 3, and 4 of WHO benchmarks 3.3 and 3.4.

MTaPS supported two local training institutions in strengthening capacity to manage e-Learning on IPC and AMS for pre- and in-service HCWs. In March 2023, MTaPS supported the FMOS in organizing an orientation on MTaPS-developed e-Learning courses including IPC, IPC/COVID-19, and AMS. A total of 131 health workers (54 female) from 7 hospitals attended these workshops. To ensure the continued use of the e-Learning platform in Mali after the end of project, MTaPS helped the DGSHP and FMOS/FAPH to develop a user guide. This activity improved the use and sustainability of the e-Learning platform in Mali for pre- and in-service learners. It has supported progress toward level 3 of WHO benchmark 3.3.

MTaPS supported the DPM in disseminating 1,520 DTC toolkits and infectious disease STGs to HCWs. MTaPS also supported the DGSHP in disseminating 500 copies of the national IPC strategic plan to the MOH, Ministry of Environment, Ministry of Animal Resources, Ministry of Agriculture, finance and technical partners, and medical professional associations. These activities have supported progress toward levels 3 and 4 of WHO benchmarks 3.3 and 3.4.

While significant improvements in IPC and AMS are being demonstrated as described in this report, several barriers hinder implementation of IPC and AMS activities in the country:

- Delay in political endorsement of the NAP-AMR. The political endorsement of the NAP-AMR will contribute to the mobilization of resources from partners.
- Lack of application of WHO AWaRe categories by health workers. To address this challenge, DPM is working to revise the NEML and include WHO AWaRe categorization.

Q4 ACHIEVEMENTS AND RESULTS

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 DPM in organizing a coordination meeting of the AMS TWG. Forty-seven people (7 female) from the four key sectors (human health, animal health, environment, and agriculture) attended the meeting. The WHO tool has been used to monitor AMS program implementation at the national level. The evaluation indicated national scores of 60% for AMS program implementation and 85% for monitoring/surveillance and evaluation. The lowest score was 31% for education awareness and training.

RESULT AREA 2: IPC

Activity 2.5.2: Strengthen the capacity of three local training institutions to manage e-Learning on IPC and AMS for pre- and in-service HCWs

MTaPS Mali continues to support selected training institutions in managing their e-Learning platforms. The MTaPS project has helped the DGSHP and FMOS/FAPH to develop a guide for the e-Learning platform, with the aim of making it easier for all users to use. This guide will help to ensure the continued use of the e-Learning platform in Mali after the end of the MTaPS project.

Among the 368 people registered on the platform, 66 have obtained their course completion certificates in IPC and six people have completed their courses in AMS. The low course completion numbers can be explained by two factors. First, some health workers are interested in only certain modules and complete only those modules. Second, significant Internet issues discourage learners from completing courses. To mitigate connectivity issues, MTaPS supported the DGSHP in creating a WhatsApp group which can be accessed using cellular data on their own individual smart phones without the need to access Wi-Fi. The group is also used to assist and encourage people to complete courses.

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

Activity 3.5.1: Development of IEC materials, including communication tools such as posters and flyers

To continue to inform and raise awareness about AMS and in collaboration with USAID/Breakthrough Action and Centre Nationale d'Information, d'Education et de Communication pour la Santé, MTaPS worked with the GCMN-RAM and DPM to develop IEC materials, including communication tools such as posters and flyers. MTaPS supported a three-day workshop for the development of these IEC materials. Twelve participants (3 female) from key sectors (human health, animal health, and agriculture) attended the workshop. After validation, these IEC materials (posters and flyers) will be printed and distributed to HFs and added to the e-Learning platform's resources to make them accessible to all. This activity led to progress toward level 3 of WHO benchmark 3.4.

The activity contributes to achieving the following target indicator: number of policies, legislation, regulations, or operational documents related to AMS developed or updated with MTaPS support, which is 1 for the current fiscal year.

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and description	Date
(PY5) Activity 3.5.1: Support the DPM in developing and disseminating IEC materials on AMS	October–November

Table 19. Q4, FY23, activity progress, Mali—GHSA activities

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 supported the DPM in preparing for and organizing a coordination meeting of the AMS TWG.
Activity 3.5.2: Development of IEC materials, including communication tools such as posters and flyers	5	5.4	MTaPS supported the DPM in developing IEC materials.
Activity 2.5.2: Strengthen capacity of three local training institutions to manage e-Learning on IPC and AMS for pre- and in-service HCWs	5	5.4	MTaPS has helped DGSHP and FMOS/FAPH to develop a guide to make it easier to use the platform.

MNCH ACTIVITIES

OVERVIEW

MTaPS' MNCH goal in Mali includes strengthening pharmaceutical regulatory systems, focusing on registration or marketing authorization for all products generally and specifically for MNCH products. This is 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: improvement in the transparency and accountability of the country's pharmaceutical systems and effective implementation of pharmaceutical management systems that are interoperable and link patients and products. These areas are directly aligned with MTaPS' global objectives 1 and 3.

CUMULATIVE PERFORMANCE TO DATE

From December 2021 to April 2022, MTaPS supported the DPM in conducting a three-day training session focused on building data entry teams' capacity to use the DPM's electronic platform, named PRO-E-MED, for medicine registration. A total of 5,518 medicine registration dossiers were recorded in the tool, representing a completion rate of 110% of the previously noted backlog of an estimated 5,000 unrecorded medicine registration dossiers. Of these, 1,162 were for registration renewals.

MTaPS supported two meetings of the CNAMM in FY22. In May and September 2022, MTaPS helped the DPM organize two sessions of the National Market Authorization Commission in Mali, during which 786 dossiers (including 103 for MNCH products) were examined. After the update of the May 2022 edition of the Directory of Registered Medicines and Medical Products in Mali, 3,606 medicines, listed by form, dosage, and presentation, had valid registrations in the country.

From October to December 2022, MTaPS supported the DPM in setting up and operationalizing an official website. MTaPS supported the DPM in launching the website in June 2023. The Secretary General of the MOH chaired the launch ceremony. The USAID/Mali Health Office Director was in attendance and highlighted the importance of this site for the safe use of pharmaceutical products and for improving the quality of health services in facilities.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the DPM in setting up and operationalizing 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.

In February 2023, MTaPS supported the DPM in evaluating the use of medicines in the NEML in 68 HFs, including 4 warehouses of the Central Medical Store, 2 university hospital centers, 2 regional hospitals, 3 regional health offices, 20 district hospitals, and 37 community-level health centers. Highlighted results include 49% of HFs having the latest edition of NEML and 50% of drug managers using the latest edition.

Only 6% (21/380) of prescribers have the latest edition; however, of those who have the latest edition, 52% use it to prescribe drugs.

Q4 ACHIEVEMENTS AND RESULTS

SUBOBJECTIVE 5.4: AMR CONTAINMENT SUPPORTED

Activity 5.4.6: Support the DPM in building the capacity of health practitioners on infectious disease treatment and appropriate prescribing

MTaPS, in collaboration with the Global Fund project (Unité de mise en Œuvre du Renforcement du Système de Santé [UMRSS]), supported the DPM in developing training tools on rational prescription. The different tools developed include the rational prescription guide, the trainer manual, and the participant manual. After the development phase, MTaPS and the UMRSS supported the DPM in organizing a workshop to train 25 trainers (22 males and 3 females) on rational prescription of antimicrobials. MTaPS will support a three-day training session for health care workers on this topic in October 2023.

Working session during rational prescription tool development workshop, Mali, September 20, 2023.
Photo credit: Brehima Simpara, MTaPS

BEST PRACTICES/LESSONS LEARNED

- Well-planned, deliberate collaboration between partners increases government ownership and activity participation. In this spirit, MTaPS in Mali has taken deliberate steps to further collaborate with partners. An example of this is the rational prescription tools development workshop to which MTaPS invited participants from several different health regions throughout the country.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and description	Date
(PY5) **Activity 5.4.6:** Support the DPM in building the capacity of health practitioners on infectious disease treatment guidelines and appropriate prescribing	October–December 2023

FY24 work plan activities are still under review and pending approval.

Table 20. Q4, FY23, activity progress, Mali—MNCH activities

Activity	MTaPS objective(s)	MNCH result(s)	Activity progress
Activity 5.4.6: Support the DPM in building the capacity of health practitioners on infectious disease treatment guidelines and appropriate prescribing	5	5.4	MTaPS supported the DPM in organizing the development of training tools on rational prescription and training of trainers.

K. MOZAMBIQUE

FIELD SUPPORT ACTIVITIES

OVERVIEW

MTaPS' goal in Mozambique is to help the country strengthen its pharmaceutical regulatory system to ensure equitable, sustainable access to safe, effective, quality-assured, and affordable essential medicines and pharmaceutical services. This includes establishing an effective medical products vigilance system at ANARME, IP that supports the detection, assessment, understanding, and prevention of AEs and other medical product-related safety problems to ensure that intended health outcomes are achieved 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 has worked with ANARME, IP and other stakeholders to strengthen the regulatory system to provide safe and effective antiretroviral and other medicines, promote the appropriate use of antimicrobials, and increase accountability and transparency. This includes strengthening the active surveillance system for monitoring AEs and updating the PV management information system by implementing the electronic PViMS tool. MTaPS is supporting ANARME, IP, the national HIV program, and the national tuberculosis program (NTP) to implement ongoing active safety surveillance for patients on TPT and enable systematic monitoring of AEs for TPT regimens.

CUMULATIVE PERFORMANCE TO DATE

To strengthen the pharmaceutical regulatory system, MTaPS provided support to transform the regulatory function under the National Directorate of Pharmacy (DNF) into the autonomous ANARME, IP, establish a robust regulatory framework, enhance capacity and skills, and contribute to the DNF strategic plan. This transformation helped empower ANARME, IP to make independent regulatory decisions, strengthen investigation standards, and safeguard the public from substandard and falsified health products. Over the life of the project, MTaPS trained ANARME, IP in several areas, including good review practices, QMS, and the assessment of bioequivalence studies to create a solid regulatory workforce. MTaPS also supported the development of a new price control regulation that enables ANARME, IP to curb excessive pricing in the pharmaceutical sector, promoting wider access to medicines and health products across the supply chain. To help regulators gain a better understanding of the bottlenecks experienced by applicants when submitting their products for MA, MTaPS supported ANARME, IP in holding a workshop with manufacturers and other stakeholders to discuss and clarify the MA process.

In PY2, the National Bioethics Committee on Health approved the protocol for implementing active safety monitoring of the TLD antiretroviral therapy regimen. ANARME, IP and the national HIV program, with support from MTaPS, trained 292 health care workers from the implementing sites (204 male, 88 female), along with 18 participants from the central level (PV focal persons from ANARME, IP, focal persons from HIV care and treatment, focal person from the TB program, and focal persons from

the hospital pharmacy department) on the protocol, SOP, and proper data collection. Following the training, nine selected HFs in April 2020 began enrolling into the study cohort both treatment-naïve HIV/TB co-infected patients and patients who transitioned from nevirapine-based regimens to TLD. In PY3, further support included patient enrollment and follow-up as well as quarterly on-site and virtual supervision by ANARME, IP and the HIV program to the nine 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, generated quarterly progress updates on the number of enrolled patients, number of follow-up visits, AEs reported, findings of supervision visits, strengths and challenges in the implementation of the program, and recommendations for alleviating those challenges. By the time the study ended on February 28, 2022, enrollment exceeded the targeted sample size of 3,000 people living with HIV. MTaPS supported ANARME, IP in data cleaning to improve the quality of the data collected during the patient follow-up visits. The unique patient records were entered into PViMS. During Q2 of PY4, MTaPS supported ANARME, IP to physically visit the study sites and offer guidance on closing the active surveillance activity and submitting all study materials (tablets; filled 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, including on the practical use of PViMS, which enabled the nine (five female, four male) trained ANARME, IP staff to conduct the causality assessment.

In Mozambique, the use of a once-weekly dose of isoniazid-rifapentine for 12 weeks (3HP) for TPT is being implemented in addition to the continued use of a once-a-day dose of INH for 6 months' preventive treatment. In PY3, MTaPS built upon its 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 3HP and the once-a-day dose of INH for 6 months as tuberculosis preventive treatment regimens. ANARME, IP and the national HIV and TB programs, with support from MTaPS, developed a protocol for TPT active surveillance, data collection forms, standard operating procedures, 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 health facilities (four health centers and one hospital) in two provinces (Gaza and Maputo City) were selected as study sites. During PY4, MTaPS also periodically engaged with certain stakeholders, including ANARME, IP, the NTP, USAID, the CDC, and its implementing partners—Centro de Colaboração em Saúde (CCS), the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), and the Aurum Institute—to plan for implementation. MTaPS procured the tablets required for facility-level data collection and management.

In PY4, MTaPS conducted a training-of-trainers course for 10 central-level focal persons (4 female, 6 male) from ANARME, IP and staff from CCS and EGPAF. In July 2022, MTaPS supported ANARME, IP to train provincial and district focal persons on the TPT protocol, SOP, and data collection forms, followed by cascade training to the health facility HIV, PV, and TB focal persons from the five study sites. The PViMS tool was updated with TPT data collection forms. ANARME, IP focal persons and the focal health care workers at the sites were oriented on the use of PViMS for data collection. Patient enrollment was initiated in August 2022 and the facilities began data entry. Due to low numbers, enrollment was extended by ANARME, IP through March 31, 2023. With the different patient enrollment dates and the protocol requirement that follow-up should be for 6 months, along with the delay in some patients

coming for the last follow-up visits, the last patients enrolled will be followed until the end of October 2023. Four coordination meetings have been conducted with ANARME, IP, the national HIV/TB program, CCS, and EGPAF focal persons to plan and undertake three rounds of onsite supervisory visits to the five sites, i.e., Xilembene HF and Mandlakazi HF in Gaza and 1 de Junho HF, Albasine HF, and Xipamanine HF in Maputo City.

In previous quarters, it was noted that a MISAU circular providing guidance to selected provinces, including those where the five study sites are located, specified the exclusive use of the 3HP regimen, as it is a shorter regimen for TPT, and noted that the INH regimen should be used in health facilities in the other provinces until they are notified to start 3HP. ANARME, IP began considering the implication of this guidance on the TPT study and how to align the protocol with this circular, which would mean no longer including patients on INH in the study. The exclusion of INH from the study would mean reducing the patient enrollment target, which in turn also would allow the target to be reached more easily and quickly, as well as converting to a cohort event monitoring study.

YEAR 5 ACHIEVEMENTS AND RESULTS

ANARME, IP and the HIV national program developed and validated the final report on TLD active safety monitoring in August 2023. Analysis of the study data showed that 3.17% (105/3,317) of patients had at least one AE recorded since their initiation on TLD regimen. A total of 149 AEs were reported by 105 patients, with the most-recorded AEs being headache, insomnia, nausea, and skin rash. Of 60 pregnant women on TLD enrolled in the study, all had live births, with 90% (54/60) being full term deliveries and 87% (54/62) having normal birthweight. No suspected congenital anomalies were reported at birth. ANARME, IP achieved the study objectives, including characterizing the AE profile among patients using TLD and estimating the incidence of AEs such as adverse pregnancy outcomes. These results can be used to guide the Ministry of Health and other stakeholders in regulatory and clinical decision-making or actions. Patient education and clinician awareness on the recognition of signs and symptoms of AEs is crucial to prevent and promptly manage drug toxicities.

Regarding the active safety monitoring of TPT regimens, 45 AEs were reported by September 2023 during the 2,274 follow-up visits conducted with the 458 patients enrolled in TPT active surveillance across the 5 implementing facilities.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

With guidance on preparing a study deviation from MTaPS, ANARME, IP met with the HIV and TB programs to agree on revisions to the study protocol and a request to extend the study to July 2024 to allow more time to complete patient follow-up through September 2023 and analyze study data. ANARME, IP submitted the revised study protocol and study extension and protocol deviation request to the National Bioethics Committee on Health on July 10, 2023; the documents were approved on July 24, 2023.

Two coordination meetings were held to plan technical assistance and supervision visits to the sites that are implementing active TPT monitoring. The meetings also generated the agenda for the visits and planned for remote support to the site teams via phone calls from ANARME, IP and MTaPS.

In September, ANARME, IP led a fourth supportive supervision exercise, in collaboration with the provincial focal persons and MTaPS. This exercise assessed the progress of implementation at the two study sites in Gaza (Xilembene HF and Mandlakazi HF) and two sites in Maputo City (Albasine HF and 1 de Junho HF). The visiting teams gave guidance to the site teams on completion of patient follow-up visits and data entry, while MTaPS also provided refresher sessions on data capture in PViMS to make sure that the PV focal persons were able to complete the task.

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

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)

A total of 458 patients have been enrolled, with 2,274 follow-up visits completed by the end of September, which represents an increase of 673 follow-up visits over the previous quarter. A total of 45 AEs were reported across the 5 study sites, an increase of 31 from the previous quarter. All AEs were confirmed as mild and managed at the facility level (table 21).

Table 21. Patients enrolled since the start of the TPT active surveillance system and follow-up visits as of September 2023

Health Facility	Location (district, province)	Month patient enrollment commenced	No. of enrolled patients as of March 31, 2023 (Form A)	No. of patient follow-up visits as of September 2023 (Form B)	No. of reported AEs as of September 2023
Xipamanine	Nlhamankulu, Maputo City	August 2022	63	336	3
Albasine	KaMavota, Maputo City	August 2022	111	445	6
1 de Junho	KaMavota, Maputo City	August 2022	91	463	36
Xilembene	Chokwe, Gaza	August 2022	78	308	1
Mandlakazi Rural Hospital	Chokwe, Gaza	August 2022	115	722	2
Total			458	2,274	48

In September, ANARME, IP initiated a fourth supportive supervision exercise, working with the provincial focal persons and MTaPS. The objective was to monitor the progress of the sites in finalizing enrolled patient follow-up and to verify alignment with the data on the patient master card with respect to elements such as TPT completion, reported AEs, and concomitant clinical conditions. The national team led by ANARME, IP started the visits in the Maputo City area and moved to Gaza province. The supervision visits assessed implementation progress at four of the five sites, with the physical counting of forms, synchronization of patient data in PViMS, and verification of patients' clinical information relevant to the study in Form B against the patient master records. It was found that some patients had not yet come in for their final follow-up visit; therefore, ANARME, IP extended the follow-up period through the end of October. MTaPS continued to support intensive guidance to the sites via phone calls to check on progress in and address challenges related to data entry at the five sites.

BEST PRACTICES/LESSONS LEARNED

- None this quarter

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5/6) Activity 3.1.1: Continue to provide technical assistance to implement an active PV program for safety monitoring of TPT scale-up in Mozambique ▪ Work with the study sites to complete patient follow-up visits ▪ Complete data entry and data cleaning; collect all study materials ▪ Undertake causality assessment using PViMS ▪ Conduct data analysis and start study report writing	Oct.–Dec. 2023

Table 22. Quarter 4, FY23, Activity Progress, Mozambique – FIELD SUPPORT

Activity	MTaPS Objective (s)	Activity Progress
Y4 Activity 3.1.2/Y5 Activity 3.1.1/Y6 Activity 3.1.1: Continue to provide technical assistance to implement an active PV program for safety monitoring of TPT scale-up in Mozambique **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; conduct periodic data cleaning and quality checks; generate progress update reports along with lessons learned and recommendations.	5.3	The fourth supervision visits were undertaken at four study sites. During the visits, physical forms were counted. The master records of enrolled patients were checked to identify any information not yet captured in the forms but relevant to the study, such as adverse events, other clinical conditions, and completion of TPT. On-the-job refresher training was provided to the site teams on PViMS data entry and uploading data into the online database.

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 to slow the emergence of resistant microbes and prevent the spread of resistant infections and is also a priority area for the National Action Plan for Health Security (PASS, formerly PNASS). Controlling the global hazard of AMR relies on robust pharmaceutical systems worldwide that address the appropriate use of, and access to, medicines and health technologies, as reflected in 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-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). Version 3 of the JEE tool was released in June 2022, and MTaPS has aligned activities to this version of the tool as much as possible without disrupting the measurement of progress to date.

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. Mozambique received no baseline score on MSC-AMR because that indicator was not included in the WHO JEE 1.0 tool used at the time, although it was included in the JEE 2.0 released in 2018. By September 2023, MTaPS helped country stakeholders achieve progress in MSC-AMR by supporting 2 of 4 (50%) of capacity level 2 benchmark actions (with 1 action completed outside MTaPS support in this level), 2 out of 4 (50%) of capacity level 3 benchmark actions, 2 out of 4 (50%) of capacity level 4 benchmark actions, and 1 out of 5 (20%) of capacity level 5 benchmark actions. On IPC, MTaPS supported the IPC team from the DNAM-Department of Nursing (DNAM-DE) to complete 4 out of 5 (80%) benchmark actions for capacity level 2, 5 out of 6 (83%) benchmark actions for capacity level 3, and 1 out of 5 (20%) benchmark actions for capacity level 4. For AMS, MTaPS supported 3 out of 4 (75%) benchmark actions for capacity level 2; 3 out of 6 (50%) benchmark actions for capacity level 3; and 1 out of 7 (14%) benchmark actions for capacity level 4.

Since PY3, MTaPS has been collaborating with the MISAU, ANARME, IP, and the National Institute of Health (INS), among other stakeholders, to establish a multisectoral coordinating structure for AMR in the country. MTaPS supported the drafting of the TORs for the MCC and its secretariat and for the AMS and IPC TWGs. The AMR MCC now has four TWGs—IPC; AMS; surveillance and research; and communication, education, and awareness—all with TORs. The health ministry appointed a focal point for AMR MCC and for each TWG to lead the secretariat and TWGs, respectively. To date, with MTaPS support, four AMR MCC meetings, two IPC TWG meetings, and two AMS TWG meetings have been held. The MCC secretariat and AMS TWG have held meetings that focused on planning and organizing the 2021 and 2022 WAAW as well as advance planning for the 2023 WAAW. The PY4 IPC TWG meeting discussed the TWG's performance against its plan of action and adapted guidance on implementing a CQI approach for use in the local context. This guidance was 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 PHs—Inhambane PH, Tete PH, Xai-Xai (Gaza) PH, Lichinga PH, Pemba PH, Chimoio PH, and Matola PH— were targeted for focused support on 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 tool, develop an action plan to address those gaps, and conduct an IPC situation analysis that informed the development of a national IPC plan with WHO support in PY5. MTaPS also assisted the seven PHs in improving their IPC performance using WHO's IPCAF tool. In PY4, 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 MTaPS support, a team from DNAM-DE and the provincial focal AMR person conducted a repeat IPC facility-level assessment for three selected provincial hospitals (Inhambane PH, Tete PH, and Xai-Xai PH) in PY4 and again in PY5. Based on the IPCAT2 and IPCAF results, MTaPS provided technical support to develop an HAI surveillance manual to address the low performance in the IPC component of HAI surveillance and to develop IPC protocols to guide health care workers in implementing IPC practices in the health facilities. As of the end of the quarter, both documents were awaiting final ministerial approval after which they can be printed and disseminated.

MTaPS, in collaboration with the DNAM-Department of Hospital Therapeutics (DNAM-DTH), ANARME, IP, and INS, trained seven targeted provincial hospitals on AMS in February 2020 using field support funds. In PY4, MTaPS, in collaboration with ANARME, IP and INS, supported DNAM-DTH in conducting a baseline facility-level AMS assessment in three of the seven HFs (Inhambane PH, Tete PH, and Xai-Xai PH). In consultation with HF staff, the results were used to develop facility AMS action plans to guide implementation of relevant AMS interventions. In PY5, MTaPS and DNAM-DTH conducted a repeat AMS assessment at the three HFs that showed improvement to an acceptable rating in AMS program implementation. MTaPS also supported ANARME, IP to initiate the process of categorizing antibiotics into the WHO AWaRe classification system, which was included in the update of the national EML. In addition, MTaPS, in collaboration with ANARME, IP, undertook an assessment via desk review of the country's AMS policies and regulatory framework for the human health sector. MTaPS supported ANARME, IP in developing a draft regulation for prescription-only sales of key antibiotics, which is pending stakeholder validation, and will help establish a firm foundation for AMS in the country by creating a solid regulatory framework to control the use of antimicrobials. This effort complements the MTaPS field support work plan, which from PY1 to PY3 supported the revision of laws and regulations pertaining to the role of ANARME, IP as the national regulatory authority.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported DNAM-DE and DNAM-DTH in undertaking joint supportive supervision site visits, with assessment of progress in IPC and AMS program implementation, to the three provincial hospital (Xai-Xai, Inhambane, and Tete provincial hospitals). All three MTaPS-supported HFs showed improved performance in AMS core elements and IPC core components, with Inhambane achieving the best results.

With targeted coaching and supportive supervision provided by MTaPS, the IPCAF score (out of 800) for Xai-Xai PH increased from 660 in 2021 to 702.5 in 2023, while the IPCAF score for Inhambane PH increased from 752.5 in 2021 to 773 in 2023 (figure 3). The high scores on the repeat assessments show that HCWs at the sites are now better equipped with the knowledge and skills they need to maintain a

safe health care environment. The two HFs are sustainably achieving advanced IPC levels using the WHO scoring system, which instills trust in patients regarding the safety of the health care they receive.

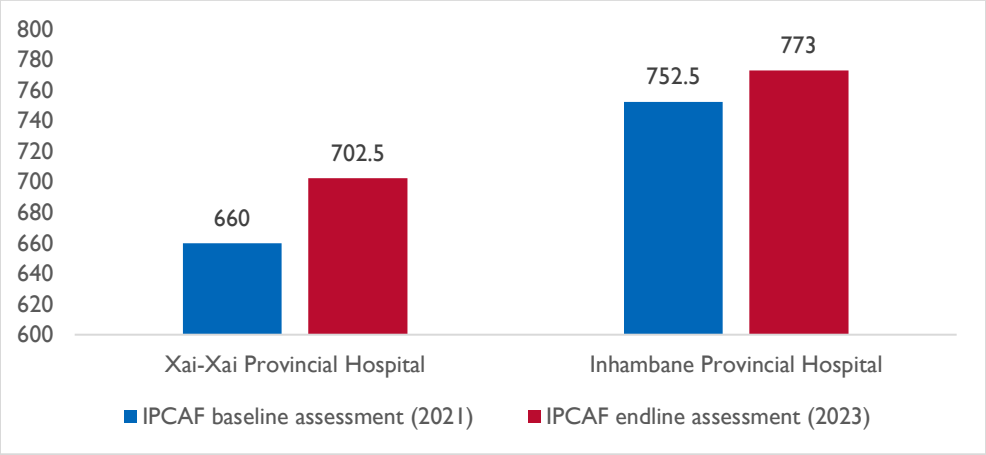


Figure 4. Increase in IPCAF scores (out of 800) in two MTaPS-supported hospitals

AMS practices have improved in all three facilities, as evidenced by the AMS assessment results. Xai-Xai PH moved from 65% at baseline to 85% at its first repeat assessment, while Inhambane progressed from 55% to 78% and Tete from 68% to 83%. The visiting teams also mentored the health facilities' AMS subcommittees to increase their ability to conduct independent periodic (monthly) AMS self-assessments, the results of which will be reported to the central level.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported ANARME, IP in the organization of an AMR MCC meeting at which an analysis was conducted of performance on the main activities within the National Action Plan for Antimicrobial Resistance (NAP-AMR) 2019–2023 by key stakeholders. Participants at the meeting also discussed the main challenges that arose during implementation as well as next steps and revised the mapping of the main stakeholders in the NAP, all of which will inform the preparation of the annual NAP-AMR performance report.

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

MTaPS supported the organization of the AMR MCC meeting on July 24–28, 2023, at Macaneta-Marracuene District in Maputo Province. Twenty-five (25) participants (12 female) attended, coming from various institutions across the human health, animal health, agriculture, and environment sectors, including ANARME IP, MTaPS, FAO, WHO, INS, DNAM-DTH, DNAM-DE, *Ministério da Terra e Ambiente*, and *Ministério da Agricultura e Desenvolvimento Rural*. The meeting reviewed the status of NAP-AMR activities to inform the development of the annual performance report.

It was noted that among the 115 activities in the NAP-AMR, 76 (62%) were carried out (32 in the prevention pillar, 32 in the access pillar, and 12 in the use pillar), while 39 planned activities (38%) were

not implemented (14 in the prevention pillar, 13 in the access pillar, and 12 in the use pillar). The non-compliance with the planned activities in the NAP-AMR was due to the limited availability of human and financial resources for AMR containment activities and the implementation of planned interventions due to changes imposed on the institutions to respond to the COVID-19 pandemic. To conclude the implementation of the remaining activities, the relevant ministries requested an extension of the implementation period of the NAP-AMR, which was initially to end in 2023.

RESULT AREA 2: IPC

Activity 2.2.1: Enhance and sustain governance for IPC

MTaPS supported the IPC TWG and DNAM-DE to review and update the TWG's TOR and action plan on July 4, 2023. Analysis of the status of the action plan showed that 67% of the planned activities had been performed (all from the human health sector) and 33% had not (all from the animal health sector). It was recommended that the TWG strengthen the animal sector's engagement with and involvement in IPC activities. The revised IPC TWG TOR was submitted to the health ministry for approval.

MTaPS supported the DNAM-DE to conduct the second repeat assessment using the WHO IPCAT2 and use the results to update the action plan to address the gaps. The repeat IPCAT2 assessment showed minimal progress in the IPC core components over the last two years; this can be attributed to the lack of budget allocated to IPC interventions.

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

Activity 3.1.1: Continue to strengthen the governance of the AMS program at the national level

An AMS baseline assessment for the central level was undertaken during the AMR MCC meeting on July 24–28, 2023. The results showed that implementation of AMS core elements was deficient and additional effort is required for significant improvement. Based on the findings of the AMS baseline assessment, an action plan was developed to address the gaps for implementation by the AMS TWG, ANARME, IP, and DNAM-DTH.

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

No further activities planned.

Table 23. Quarter 4, 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 and support ANARME, IP and stakeholders in preliminary planning for 2023 WAAW; working jointly with ANARME, IP, FAO, and other animal health stakeholders, support the validation of the AMR communications strategy; procure computers, laptops, and color printers to support the operations of the MCC Secretariat housed at ANARME, IP.	5.4	1.1	MTaPS supported the organization of the AMR MCC meeting on July 24–28, 2023, attended by 25 participants (12 female) that reviewed the status of NAP-AMR activities to inform the development of the annual performance report.
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 strengthening of the core components of the IPC program using the WHO tools; working with DNAM-DE and stakeholders, develop an HAI surveillance manual; validate the draft IPC guidelines/protocols/procedures document developed in PY4.	5.4	2.2	MTaPS supported the IPC TWG and DNAM-DE to review and update the TWG's TOR and action plan, conduct the second repeat assessment using the WHO IPCAT2, and use the results to update the action plan to address the gaps. The repeat IPCAT2 assessment showed minimal progress in the IPC core components over the last two years due to the lack of budget allocated to IPC interventions.
Activity 3.1.1: Continue to strengthen the governance of the AMS program at the national level. **Activity Description:** Undertake central level AMS assessment and develop an action plan to address identified gaps. Procure computers, laptops, and color printers to support the operations of focal AMS TWG members of DNAM-DTH.	5.4	3.1	The AMS baseline assessment for the central level was initiated during the AMR MCC meeting on July 24–28, 2023. Based on the findings of the AMS baseline assessment, an action plan was developed to address the gaps for implementation by the AMS TWG, ANARME, IP, and DNAM-DTH.

L. NEPAL

FIELD SUPPORT ACTIVITIES

OVERVIEW

In Nepal, MTaPS collaborates with the MOHP, the Department of Health Services, and the DDA to strengthen pharmaceutical systems. Over the life of the project, MTaPS has provided technical assistance in the revisions of policy and legal framework, implemented pharmaceutical best practices, and engaged stakeholders from public and private sectors to enhance the regulatory system, medicines management, and overall effectiveness of the pharmaceutical sector at the central, district, and municipal levels. The program's evidence-based strategies have targeted prioritized gaps, used WHO best practices and multipronged interventions for sustainable improvements, and addressed interconnected challenges in the pharmaceutical sector of Nepal.

CUMULATIVE PERFORMANCE TO DATE

MOHP and the DDA have collaborated with MTaPS to support building DDA institutional capacity and updating the policies, regulations, procedures, and systems toward developing the foundation for a more up-to-date, effective, and efficient DDA, capable of overseeing the growing pharmaceutical sector and regulated in line with WHO best practices. In collaboration with the DDA, MTaPS developed the two-year MALAP to increase DDA regulatory maturity level. The DDA and MTaPS also collaborated to hold a reorganization workshop where they proposed new staffing norms, followed by a competency assessment and implementation of a capacity-building plan to upgrade the knowledge and skills of DDA staff. With MTaPS support, the DDA established and implemented a QMS, developed QMS SOPs, trained staff and leadership on QMS policy, and developed the mission and manual which received DDA approval. The DDA developed a new information system with MTaPS' support, based on the open source OpenRIMS regulatory information system. The system was customized to the Nepal context, and registration modules are ready to go live. MTaPS and the DDA developed new tools and procedures to strengthen DDA oversight of clinical trial regulation and PV. MTaPS successfully collaborated with the DDA and stakeholders to develop a capacity-building strategy to implement GPP, GSDP, GHPP, electronic inspection and reporting tools, IEC materials for public awareness, and trainer and trainee materials. To improve medicines management at the health facility level, MTaPS, in collaboration with Curative Service Division, started piloting a Supervision, Performance Assessment, and Recognition Strategy (SPARS) in 12 districts of 3 provinces. AMR poses a serious global and multidimensional threat, and MTaPS collaborated with the MOHP to implement an AMR partner mapping and to prepare capacity-building workshops for media personnel on AMR containment.

YEAR 5 ACHIEVEMENTS AND RESULTS

In Year 5, the Drug and Health Products Bill was submitted to the Nepal Law Commission for review, after which it will be presented to the Parliament of Nepal for approval, accompanied by comprehensive updates to related key regulations. Major achievements include the endorsement of Codes on Sales and Distribution of drugs, as well as GPP and GSDP guidelines, which are in the final stages of approval by the Drug Advisory Committee. MTaPS drafted six regulations and three codes for implementing the new Drug

Bill, which strengthens regulation and registering of medicines and health technology products (HTP), and submitted them to DDA for further processing toward approval. In collaboration with DDA, MTaPS prepared to roll out GPP and GSDP training and DDA inspections. To support the implementation of the drafted NMP, MTaPS assisted in developing indicator-based monitoring plan for submission to the MOHP for final policy approval. MTaPS assisted the DDA to implement the MALAP, which has enabled the authority to adequately address WHO GBT indicators to increase its regulatory ML, with all ML 1 and ML 2 indicators and 60% (94/158) of the ML 3 indicators now finalized or awaiting approval. The DDA is aiming to reach ML 3 by 2027, as outlined in the Nepal Health Sector Strategic Plan 2022–2030. In preparation for its ISO 9001:2015 certification by the end of 2023, the DDA, with support from MTaPS, launched a QMS, which included a new document repository system and implemented the first internal quality audit to assess compliance with ISO certification standards.

With technical assistance from MTaPS, the DDA expanded its role and responsibilities in medicines regulation; clinical trial oversight; PV; and registration of medicines, HTP, pharmacy, wholesalers, and manufacturers. These areas are being digitized through a new MTaPS-developed MIS known as Drug Administration Management System 2 (DAMS-2), set to be launched shortly. MTaPS and the DDA collaborated with a local vendor to ensure data migration to and customization of DAMS-2, including the introduction of online payment. To improve quality and quantity in ADE reporting and strengthening PV, MTaPS trained staff from the DDA, regional PV centers, and public health programs in PV reporting and finalized posters for ADE. Implementation of the SPARS pilot study was completed, documenting significant improvement in medicines management in 12 pilot districts. Implementing SPARS helps to promote best practices in medicines management toward optimal use of limited resources and health care provision. MTaPS conducted assessments of SPARS cost-effectiveness and interrater reliability (IRR) and a validity study, and they will inform on the potential nationwide expansion of the SPARS intervention. MTaPS raised awareness about AMR by training 405 journalists in collaboration with the MOHP. This effort resulted in the publication of over 200 evidence-based news articles across various media platforms. With MTaPS' assistance, DDA implemented the first-ever regulatory inspection of clinical trial sites based on the now-approved guidelines that ensure ethical standards, patient safety, and data integrity in clinical trials.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Activity 1.2.1: Update the regulations, rules, and guidelines

MTaPS, in collaboration with the DDA, drafted six regulations and three codes necessary for the implementation of the updated Drug and Health Product Bill, which is awaiting approval from the Parliament of Nepal. The regulations submitted to the DDA include the Drug and Health Products Registration Regulation, the Inspection and Investigation Regulation, the Drug and Health Product Consultative Council and Advisory Committee Regulation, the Drug and Health Product Standard Regulation, the Pricing Regulation, and the Regulation on Cosmetics Registration. Three codes submitted to DDA include Codes on Sales and Distribution of Cosmetics Products, Codes on Health Technology Products, and Codes on Chemical Reagents. These regulations will enhance the regulatory framework of the DDA and contribute to ensuring access to and availability of safe, effective and quality-assured health care products.

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 supported the DDA to increase its regulatory ML toward ML 3. Indicators from all MLs are contingent upon approval of the Drug and Health Product Bill and related regulations, implementation of a QMS, reorganization, and taking on new roles and responsibilities.

Activity 2.2.2: Strengthen regulatory systems for medical products registration

Using a multipronged approach, MTaPS continued to strengthen marketing authorization and registration of medical products and addressed all ML 1, all ML 2, and 48% of ML 3 indicators in marketing authorization and registration. MTaPS drafted job descriptions for DDA key positions and submitted them to the DDA.

Activity 2.2.3: Strengthen regulatory system for medical devices registration

MTaPS, in collaboration with the MOHP and the DDA, finalized a list of priority HTPs, guidelines, and SOPs for assessing HTP technical files. This list lays the foundation to initiate the HTP notification in DAMS-2. These documents will enable the DDA to institute a structured approach to the evaluation and regulation of HTPs, enhancing health care quality and safety.

Activity 2.2.4: Strengthen PV at the national and provincial levels

MTaPS, along with the DDA, finalized the PV IEC materials (posters) in the Nepali language. A PV e-Learning script has since been drafted. However, with MTaPS' closing out there is not sufficient time left to produce the e-Learning video, so the scripts will be handed over to the DDA for implementation. PV plays a crucial role in ensuring the safe and effective use of medicines by monitoring, detecting, managing, and preventing ADEs.

Activities 2.2.5 and 2.2.6: Strengthen GPP and GSDP

On July 13, 2023, the DDA endorsed the Codes on Sale and Distribution of Drugs, including the GPP and GSDP guidelines developed by the DDA with MTaPS support,to be approved by the Drug Advisory Committee next quarter. The GPP IEC posters and four short GPP IEC videos developed by MTaPS in collaboration with DDA were published on the MTaPS website and YouTube and were broadcast on public and private television channels.[10]

Minister of Health and Population Mr. Mohan Bahadur Basnet at the GPP and GSDP training workshop on August 22, 2023, in Kathmandu, Nepal. Photo credit: MTaPS

In addition, the GPP and GSDP e-Learning modules developed by MTaPS in collaboration with the DDA received DDA approval and were uploaded to the DDA website. From August 22 to 24, 2023, with MTaPS support, the DDA organized training for 27 (17 male and 10 female) pharmacists as tutors in GPP and GSDP, using the developed GPP and GSDP manual and trainer and trainee guides. The training was inaugurated by the honorable Minister of Health and senior officials from MOHP.

[10] https://www.youtube.com/playlist?list=PLWSylSPtEE1Z73fB-iFUwbrrYiR9aOdVG.

Activity 2.2.7: Strengthen GHPP

On July 14, 2023, MTaPS supported the fourth meeting of the MOHP TWG held to update the hospital pharmacy directives and good hospital pharmacy practice guidelines. To sensitize hospital pharmacy personnel, MTaPS held the first of 3 trainings on Sept 25–26, 2023, in the Bagmati province, where 43 personnel (26 male and 17 female) from government health facilities were trained based on the orientation package developed earlier in Year 5 by Curative Service Division in collaboration with MTaPS. Adherence to the GHPP is expected to strengthen service quality, including appropriate prescribing and dispensing at the hospital level.

Activity 2.2.8: Assist the DDA in developing a quality management system

MTaPS is assisting the DDA to expand the quality management system to three DDA branch offices. In addition, MTaPS shared a report from the internal audit implemented in June 2023, and the audit comments are being addressed. MTaPS employed 4 short-term consultants to assist the DDA in scanning, indexing, and transitioning over 50,000 old files into the new repositories, starting with the pharmacy and industry registration section. USAID and MTaPS finalized a spotlight of the document management system for publication on their websites. An article entitled "Implementing QMS at DDA to become WHO listed regulatory authority" using the Collaborating, Learning, and Adapting Framework was published in the USAID learning lab platform on September 22, 2023.[11] Implementation of the QMS will ensure quality, transparency, and accountability in the services provided by the DDA to the population.

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

MTaPS finalized the dashboard report for key performance indicators in DAMS-2 using Google data studio. A local vendor was contracted to migrate data from DAMS to the new DAMS-2 and started supporting customization and introduction of new features. Exploration of potential interoperability among the Risk-Based Inspection, Medicines Risk-Based Surveillance Tool, and DAMS-2 is currently under way. To facilitate this interoperability, the local vendor is actively engaged in the investigation and development of the application programming interface mechanisms within OpenRIMS. MTaPS consultants contracted to work in a help desk function initiated training in DAMS-2 to support applicants to perform registration applications and renewals. A load test is currently under way across various server environments and capacities to determine the hardware requirements before the go-live date. Once the final load tests are completed on infrastructure of NITC (the hosting location), the go-live date will be scheduled.

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

The SPARS pilot study was well implemented, including over 800 supervisory visits to 284 government health facilities of 12 districts in 3 provinces and resulting in an impressive 111% (8.5 to 17.9) increase in medicines management based on the overall SPARS score, following 3 visits per site. MTaPS is in the

[11] https://usaidlearninglab.org/resources/implementing-qms-dda-become-who-listed-regulatory-authority.

process of writing planned publications on SPARS cost-effectiveness and assessment of IRR. The findings from these studies will inform the MOHP's decision on the potential nationwide expansion of SPARS intervention. USAID, the Clinical Services Division (CSD), and MTaPS conducted visits to health facilities in Makwanpur and Parsa districts to assess changes in medicine management highlighted by SPARS, gather stakeholder feedback, and promote local government takeover of SPARS implementation in municipalities. To support the expansion of SPARS implementation within the pilot districts, MTaPS procured essential materials and distributed them to the new facilities. Additionally, MTaPS implemented a 1-day central-level training session on use of SPARS tool for 13 participants (5 male, 8 female) from CSD and the Management Division on September 4, 2023. Strengthening medicines management helps in the promotion of best practices with effective capacity building and informed decision making from the health facilities.

Activity 5.3.1: Improve AMR containment

MTaPS conducted the eighth AMR sensitization workshop for journalists in Kathmandu on July 9, 2023. After journalists' training, one notable publication in this quarter was on gender equity's impact on AMR in Nepal, published by Gavi, the Vaccine Alliance websites.[12] A technical report on AMR Situation Analysis and Partners' Mapping was shared with the MOHP and USAID. This kind of news coverage will raise awareness, educating communities about the risks of AMR, promoting rational antibiotic use, and ultimately combating the growing public health threat.

BEST PRACTICES/LESSONS LEARNED

- Using an integrated approach contributes to effective system strengthening. This was demonstrated by the multifaceted approach of MTaPS interventions, encompassing GPP/GSDP, SPARS, and medicines registration, effectively addresses intricate interconnections within the pharmaceutical system, ultimately contributing to its strengthening.
- Jointly implementing activities with local partners and taking steps during implementation to foster local ownership contributes to sustainability. For example, documenting the impact and cost-effectiveness of SPARS implementation and involving local-level municipalities responsible for medicines budgeting and procurement from the early stages of SPARS pilot study fostered a sense of ownership and localization of leadership. This approach is paving the way for sustainability in the long term.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Activity 2.2.1: Strengthening regulatory capacity and maturity ▪ Finalize GBT/MALAP assessment report.	October 2023
Activity 2.2.2: Strengthen regulatory systems for medical product registration ▪ Finalize product and manufacturer registration module for go-live.	Oct–Dec 2023
Activity 2.2.4: Strengthen PV at national and provincial levels ▪ Print the IEC materials (posters) on PV and hand over e-Learning scripts to the DDA.	Oct–Dec 2023

[12] https://www.gavi.org/vaccineswork/how-gender-inequality-drives-drug-resistance-nepal?fbclid=IwAR3hEc3y7S-KzQLolPtfcI6_iCmBGsLAGHjKzv2wCvIo_LBsz1qOgHL-jus.

Activity & Description	Date
Activity 2.2.5 and 2.2.6: Strengthen GPP and GSDP ▪ Continue training of stakeholders on GPP and GSDP guidelines. ▪ Upload the e-Learning course to the DDA website and link to registration. ▪ Finalize inspection summary reports documenting number of inspection adherent to GPP/GSDP guidelines.	Oct–Nov 2023 October 2023 November 2023
Activity 2.2.8: Assist DDA in developing a QMS ▪ Implement QMS in branch offices and address recommendations from internal audit. ▪ Finalize report on QMS document management system.	Oct–Dec 2023
Activity 3.1.1: Implement pharmaceutical MIS/ DAMS-2 at DDA. ▪ Make final decision to go live and implement DAMS-2. ▪ Finalize the inspection modules and necessary e-Learning modules on DAMS-2. ▪ Finalize reporting and inspection module in DAMS-2. ▪ Technical report on localization and implementation of DAMS-2 in DDA	Oct–Dec 2023
Activity 5.1.1: Strengthen medicine management in government-sector health facilities ▪ Support MMS in the implementation of SPARS visits in expanded health facilities within 12 districts. ▪ Finalize SPARS impact assessment, IRR, and cost-effectiveness studies.	Oct–Nov 2023 Oct–Dec 2023
Activity 5.3.1: Improve antimicrobial resistance containment ▪ Implement remaining two journalist sensitization workshops and finalize the technical report on sensitization workshop package for journalists.	Oct–Nov 2023

This table reflects FY24 work plan activities; the PY6 work plan was approved on September 29, 2023.

Table 24. Quarter 4, FY23, activity progress, Nepal—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.2.1: Update Drug Act, regulations, rules, and guidelines. **Activity description**: Finalize the Drug Act, Code on Sales and Distribution, and selected and prioritized regulations and guidelines.	1.2	MTaPS, in partnership with the DDA, drafted five critical regulations and codes necessary for implementing the revised Drug and Health Product Bill, which is awaiting approval from the Parliament of Nepal. These regulations encompass Drug and Health Products Registration, Inspection and Investigation, Consultative Council and Advisory Committee, Standard Regulations, and Cosmetics Registration. Additionally, MTaPS collaborated with the DDA to update pricing regulations.
Activity 1.2.2: Revise and update the NMP. **Activity description:** Finalize the draft NMP.	1.2	No progress was made this quarter on the approval process for the revised NMP and the implementation and monitoring plan. MTaPS completed a technical report on the NMP and submitted it to USAID.
Activity 2.2.1: Strengthen regulatory capacity and maturity. **Activity description:** Implement regular ML action plan updates toward increasing the ML.	2.2	MTaPS has undertaken 70% (148 out of 212) of all ML 1, ML 2, and ML 3 indicators. Some of these indicators are contingent on the approval of the revised Drug and Health Product Bill and associated regulations. The DDA aims to achieve ML 3 by 2027, according to the Nepal Health Sector Strategic Plan for 2022–2030.
Activity 2.2.2: Strengthen regulatory systems for medical products. **Activity description:** Finalize the strategy for product registration, update SOP, and implement revised practices.	2.2	MTaPS finalized a technical report on the assessment of the GBT and the strategy to enhance the maturity of the DDA's registration and marketing authorization functions, including the updated SOP for product registration and marketing authorization.
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 the DAMS-2.	2.2	The technical report on a priority HTPs list and the establishment of SOP for assessing technical files related to HTPs was completed.
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 the ML.	2.2	MTaPS, in collaboration with the DDA, finalized PV IEC materials in the Nepali language, which will soon be printed. Although PV e-Learning scripts are prepared, time constraints due to MTaPS closeout prevented the development of an e-Learning video. Consequently, these e-Learning scripts will be transferred to the DDA.

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 endorsed the Codes on Sale and Distribution of Drugs, along with GPP and GSDP guidelines, which are now awaiting the Drug Advisory Committee approval. GPP IEC posters were drafted, and four videos were broadcasted nationally and shared on MTaPS platforms. GPP and GSDP e-Learning modules were uploaded to the DDA website. The Health Minister inaugurated the GPP and GSDP TOT sessions. The GPP and GSDP manual and the trainer and trainee guides were completed and are ready for the upcoming training.
Activity 2.2.7: Strengthen GHPP. **Activity description:** Update the GHPP directive and guidelines and develop the GHPP capacity-building strategy.	2.2	MTaPS supported the CSD in finalizing the hospital pharmacy directive and capacity-building package for hospital pharmacists on GHPP. With MTaPS support, the CSD trained 43 personnel (26 male and 17 female) on hospital pharmacy service and practice. A fourth CSD TWG meeting was held on July 14, 2023, to update the hospital pharmacy directives. The updated GHPP directives are set for finalization in the next TWG meeting to be implemented in connection with the good hospital pharmacy guidelines.
Activity 2.2.8: Assist the DDA in developing a QMS. **Activity description:** Finalize the QMS manual and SOP toward ISO 9001:2015 certification.	2.2	MTaPS shared the internal audit report with the DDA. MTaPS consultants completed 90% of document scanning and indexing and transitioned over 50,000 old files into new repositories. An article on implementing QMS at DDA was published on the USAID learning lab platform on September 22, 2023. Spotlight on the document management system was finalized for publication in the USAID and MTaPS websites.
Activity 3.1.1: Implement pharmaceutical management information system Pharmadex for registration, inspection, importation and exportation, and PV. **Activity description:** Finalize and implement the DAMS-2.	3.1	The DAMS-2 key performance indicator dashboard report is finalized via Google Data Studio. Ongoing efforts explore interoperability between Risk-Based Inspection, Medicines Risk-Based Surveillance Tool, and DAMS-2, led by a local vendor examining active pharmaceutical ingredient (API) mechanisms. Help desk consultants are trained for application and renewal support in DAMS-2 for its upcoming launch. Load testing across server environments is in progress, with NITC infrastructure evaluation setting the stage for the go-live date.
Activity 5.1.1: Strengthen medicine management in government-sector health facilities. **Activity description:** Implement SPARS pilot study in selected districts.	5.1	The SPARS pilot study involved more than 800 supervisory visits to 284 government health facilities across 12 districts in 3 provinces, resulting in an impressive 111% (8.5 to 17.9) increase in medicines management after 3 visits. USAID, CSD, and MTaPS conducted visits to Makwanpur and Parsa districts to gather stakeholder feedback and advocate for expansion of SPARS within the pilot districts. Medicines management materials were distributed to support SPARS expansion, accompanied by 1-day training for transition and takeover of the activity and use of the SPARS tool. MTaPS held handover and transitioning meetings at the provincial, district, and municipal levels.
Activity 5.3.1: Improve antimicrobial resistance containment.	5.3	On July 9, 2023, MTaPS conducted the eighth AMR sensitization workshop for journalists in Kathmandu. Nationwide AMR journalist training significantly enhanced AMR knowledge in the One Health approach for more than 400 journalists and generated over 200 evidence-based articles, including a notable one published in the Gavi, the Vaccine Alliance website, addressing gender equity's influence on AMR in Nepal.

M. NIGERIA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

MTaPS' goal in Nigeria is to support AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. MTaPS supports three result areas—effective MSC on AMR, IPC program, and use of antimicrobial medicines optimized—that align with the 2015 WHO global action plan on AMR and Nigeria's NAP-AMR that include IPC and AMS as two key strategic objectives and MSC as a key approach.

CUMULATIVE PERFORMANCE TO DATE

MTaPS' GHSA work in Nigeria is guided by the WHO IHR benchmark actions. MTaPS' interventions support the country in moving to the next JEE level across the three result areas. As of September 2023, MTaPS has supported the achievement of 29 (47%) of the 62 WHO benchmark actions—7 contributing to MSC/AMR, 13 to IPC, and 9 to AMS.

In MSC, the country completed all four benchmark actions in capacity level 2 (with support from other partners). MTaPS supported the achievement of two of the four actions in capacity level 3 and two of the four in capacity level 4. With MTaPS' support, the country is on track to completing 100% of level 4 and 80% of level 5 benchmark actions by the end of FY24 (PY6). Following the review of the performance of the 2017–2022 NAP-AMR, MTaPS is working with the AMR Coordinating Committee and other partners, including WHO, FAO, OIE, and UNEP, to coordinate the development of the new 2023–2028 NAP-AMR for the country. At the subnational level, MTaPS supports the state-level AMR TWGs in Kebbi and Enugu States and the corresponding facility programs.

In IPC, MTaPS' support helped move the country closer to JEE level 3 (JEE v2.0), with MTaPS contributing to three (50%) of the six benchmark actions in level 2 and six (100%) of the six actions in level 3. MTaPS supported the AMR TWG secretariat to develop the national IPC strategic plan in FY22– capacity level 3 benchmark action. This was followed up by the IPC for viral hemorrhagic fever (VHF) manual in FY23, the systematic review and meta-analysis of HCAI in Nigeria, and the development of the national protocol for bloodstream infections (BSI) surveillance to support HCAI surveillance in the country. 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 the movement of facilities from 'inadequate' during the FY22 baseline assessments conducted using the WHO IPCAT2 to 'intermediate' after the reassessment in FY23. Through an in-person, competency-based training approach, the capacity of 59 members (21 male, 38 female) of the 7 facility teams improved 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 to self-assess and develop improvement plans. As a result, step-down trainings were conducted by the facility teams for 1,218 staff (427 male, 791 female). 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 four benchmark actions in capacity level 2 and three in capacity level 3 with the goal of moving the country's AMS program baseline JEE score of 2 to the next JEE level. With MTaPS' support, the country is on track to achieving 100% completion of level 3 benchmark actions by the end of FY24 and positioning itself for JEE level 4 AMS capacity.

At the state level, AMS programs were established across three health care facilities in Enugu State and four facilities in Kebbi State. After the AMS programs were established in the supported facilities, AMS/IPC hybrid committees were established in Enugu and Kebbi States to enhance the functionality of the facility AMS and IPC teams. The laboratories at the facilities in Enugu State and Federal Medical Center Birnin-Kebbi have begun developing hospital antibiograms to help streamline antibiotics prescription in the facility and guide empirical prescribing of antibiotics at the health care facility level. MTaPS supported the AMU-PPS in six supported facilities. All facilities surveyed reported Access groups of antibiotics in the range of 18%–53%, which is under the WHO-recommended 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. This feedback guided facility AMS teams to provide targeted and more effective engagement with prescribers and other health care providers across supported facilities.

MTaPS supported the country's AMR TWG to develop a national One Health AMS policy and strategy. This document will provide strategic direction for AMS activity design and implementation across health care levels in both the human and animal health sectors in Nigeria. A critical step in strengthening the AMS program in a country is the development of the WHO AWaRe categorization of antibiotics used in the country to help control the misuse of lifesaving antibiotics. MTaPS supported a meta-analysis of published data on resistance and sensitivity patterns of common microbes to commonly used antibiotics in Nigeria. The outcome of the meta-analysis was used for input during the categorization of antibiotics based on WHO AWaRe groupings in April 2023.

YEAR 5 ACHIEVEMENTS AND RESULTS

The NAP 2.0 development committee was constituted by the AMR coordinating committee and the national AMR TWG secretariat and charged with developing the 2023-2028 NAP AMR. MTaPS supported both the constitution and activities of the NAP 2.0 development committee by providing leadership and coordination for the development of the new plan through active participation in the biweekly meetings of the committee. MTaPS, in conjunction with the national secretariat, strengthened facility AMS and IPC programs across the seven supported facilities in Enugu and Kebbi States and supported the conduct of follow-up assessments for both IPC and AMS core elements and AMU-PPS to measure the impact of AMS interventions in the facilities. MTaPS, in collaboration with the FMOH, supported the development of WHO AWaRe list of antibiotics for the country from the meta-analysis of published data on resistance and sensitivity patterns of common microbes to commonly used antibiotics in Nigeria. MTaPS also developed the national IPC for VHF manual to enhance safety of health workers and developed the BSI surveillance protocol to expand HCAI surveillance actions in the country. These achievements are linked to IP1 on the MEL plan.

QUARTER 4/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—in conjunction with the quadripartite ministries of the national AMR TWG secretariat and other development partners such as WHO and FAO—led the development of a roadmap for NAP 2.0 development committee. Following the adoption of the roadmap, MTaPS supported the review of the situation analysis report by OH Trust and SWOT analysis conducted as follow-up activities for the development of the 2023-2028 NAP AMR. The output from the review and the SWOT analysis will serve as input for the development of priority activities in the new plan. MTaPS supported and participated in the WHO JEE of IHR benchmarks on August 14-18, 2023. MTaPS' contribution helped the country to move from 39% in 2017 to 54% following the August 2023 JEE assessment. Specifically, in the AMR technical area, the country attained level 4 capacity in the MSC result area (no baseline assessment in 2017 assessment) and moved from level 2 to 3 in the AMS result area.

Activity 1.2.1: Continue to build managerial capacity within the AMR-TWG and its sub-committees

MTaPS supported the national AMR TWG secretariat to develop three manuscripts. These include two IPC draft manuscripts and one AMS draft manuscript, which are currently under review by the secretariat. These manuscripts would provide relevant information necessary for the development of other AMR tools such as AMS mentorship toolkits and training packages.

RESULT AREA 2: IPC

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

On August 16, 2023, during the weeklong external assessment, MTaPS supported the country with the review of their IPC status based on the IHR JEE external assessment, using the JEE version 3.0. The country's IPC status was assessed as capacity level 3 (developed capacity) for IPC programs, 2 (limited capacity) for HCAI surveillance, and 1 (no capacity) for health worker safety. MTaPS-supported activities and documents developed for the country, including the national IPC strategic plan, the IPC for VHF manual, and the HCAI assessment results all contributed to the evidence used by the external assessors to assign scores to the country.

Activity 2.1.2: Support the development of national IPC VHF guidelines for safety of health workers in health facilities

Following the review workshop with stakeholders, MTaPS—in collaboration with the national AMR-TWG secretariat—completed the review and development of the IPC for VHF management guidelines. Printing of the finalized version of the IPC for VHF guidelines document is in progress. Afterwards, the Government of Nigeria partners will disseminate the document to facilities through the NCDC's channels.

Activity 2.1.3: Strengthen HCAI surveillance in human health sector

On August 18, 2023, MTaPS—in collaboration with the NCDC—completed a systematic review and assessment of HCAI types and surveillance capacities in the country. The review detailed an overall

pooled national prevalence of HCAIs of 15.84%, and revealed catheter-associated urinary tract infections, SSI, skin infections, and BSI as the most common types of HCAIs in the country. The review provides evidence to guide the development and scaling of HCAI protocols and surveillance.

Activity 2.2.1: Strengthen capacity of health care providers to implement IPC guidelines

In Q4 FY23, MTaPS—in collaboration with the national AMR-TWG secretariat—supported the step-down training of health workers in MTaPS-supported facilities in Enugu and Kebbi States. Through the training, 749 health care workers (409 male, 340 female) strengthened their capacity in using standard precautions and the national IPC guidelines for implementing sustainable improvement of IPC at the facilities.

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 two visits to provide IPC teams with mentoring across seven supported facilities in Enugu and Kebbi States from July to September 2023. The mentoring visits provided on-the-job support to facility IPC teams on core IPC components. Key outcomes of the visits included enhanced capacity of IPC teams to intervene on core components of IPC and commitment from all three facilities' management to provide budgetary support for procurement of IPC consumables and related materials for use in the facilities.

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

Following the categorization of antibiotics for the country based on WHO AWaRe groupings, MTaPS provided evidence required for the integration of the AWaRe list into the NEML in August 2023. The AWaRe-integrated NEML will be used to develop the national standard treatment guidelines in the country.

Activity 3.5.1: Strengthen the implementation of AMS programs in all MTaPS-supported facilities

MTaPS, in collaboration with the national AMS TWG, strengthened facility AMS programs in Enugu and Kebbi States through the engagement of one consultant in each state. Through mentoring, coaching, seminars, monitoring, and supportive supervision, MTaPS and the AMS TWG contributed to strengthening the capacity of facility AMS team members on AMS, antibiotics sensitivity testing for laboratory staff, and the development of facility antibiograms. Through these interventions, members of the facility AMS teams were guided towards focused implementation of facility AMS plans based on the result of follow-up AMU-PPS and follow-up assessment of AMS core elements.

BEST PRACTICES/LESSONS LEARNED

- Active engagement and early participation of members of the STG committee during the AWaRe categorization process and the ongoing integration of AWaRe into the NEML has helped expedite these processes.
- Ensuring inclusive engagement of all relevant sectors and their stakeholders has been key to the successful NAP-AMR development process. By recognizing each participating sector as an equal

partner in the NAP-AMR process, their active participation was reinforced. This highlighted the importance of each sector's contribution to the conceptualization, design, methodology, and development of NAP AMR 2.0.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5) Strategic and Operational Plan/M&E Plan	October 2023
(PY5) Budgeting and Costing for NAP-AMR 2023-2028	November 2023
(PY5) Validation/Ministerial Presentation of NAP 2.0	November 2023
(PY5) Launch of NAP 2.0	December 2023

Table 25. Quarter 4, FY23, Activity Progress, Nigeria – GHSA

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 1: Development of the new 2023–2028 NAP-AMR, including monitoring framework and cost of new plan **Activity Description:** MTaPS is working with the AMR coordinating committee and other bilateral and multilateral partners to coordinate the process.	5.4	1.1	The development of the 2023–2028 NAP is still ongoing, with MTaPS providing the necessary leadership and coordination for the process. The situation analysis and SWOT analysis were completed. The strategic plan, operational plan, and M&E framework are next.
Activity 2: Continue to strengthen MSC and functionality of AMR TWG and its sub-committees **Activity Description:** MTaPS supported the AMR TWG secretariat to develop knowledge management products from MTaPS interventions and build the capacity of its members.	5.4	1.2	MTaPS supported the development of one AMS and two IPC draft manuscripts which are currently under review by the national AMR TWG secretariat.
Activity 3: Capacity strengthening for M&E officers in the AMR TWG **Activity Description:** The capacity of M&E officers in the quadripartite sectors will be built for effective monitoring of work plan activities in their various sectors.	5.4	1.2	The training of the M&E officers will be based on the roadmap developed for NAP 2.0 and this will come up in Q1 FY24.
Activity 4: Development of AWaRe categorization of antibiotics **Activity Description:** Following the completion of categorization of essential antibiotics in Nigeria into the AWaRe categories based on local evidence of sensitivity and resistance profile of the antibiotics, this list is expected to be integrated into the NEML.	5.4	3.1	MTaPS participated in the review of the NEML in August 2023 to facilitate the integration of WHO AWaRe classification into the NEML.
Activity 5: AMS mentor and resource persons **Activity Description:** Mentoring and supportive supervision in Enugu and Kebbi States for facility AMS teams	5.4	3.5	MTaPS completed this activity in Enugu and Kebbi States for FY23 and the deliverables submitted for editorial review. The reports will guide the development of AMS resources, such as mentorship toolkit, in FY24.
Activity 6: Support IPC governance at national and state levels	5.4	2.1	MTaPS completed this activity in Enugu and Kebbi States for FY23 and the results will guide the development of IPC plans and actions for continuous improvement of IPC.
Activity 7: Support the development of national IPC for VHF guidelines for safety of health workers	5.4	2.1	MTaPS completed this activity, and the finalized draft is in print and will guide the actions of mentors in strengthening areas earmarked for continuous improvement of IPC at the facility level in FY24.

Activity	MTaPS Objective(s)	GHSA Result(s)	Activity Progress
Activity 8: Strengthen HCAI surveillance in human health	5.4	2.1	This activity, now completed, produced evidence on HCAIs and HCAI surveillance in the country through a systematic review and meta-analysis. The outcomes led to MTaPS/NCDC's development of a protocol for BSI surveillance, which has been completed. The activities will be inputs for knowledge management products that will be developed in FY24.
Activity 9: Strengthening capacity of health care providers to implement guidelines using multimodal strategies	5.4	2.2	This activity has been completed in our supported states for FY23 and involved all facilities and teams receiving MTaPS support.
Activity 10: Strengthening IPC core components and functioning of committees	5.4	2.5	This activity has been completed in Enugu and Kebbi States for FY23.

N. PHILIPPINES

FIELD SUPPORT (TB AND FP)

OVERVIEW

In the Philippines, MTaPS provides TA and capacity-building support to the DOH to institutionalize integrated and effective procurement and supply chain systems for HIV, 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.

CUMULATIVE PERFORMANCE TO DATE

MTaPS supported development of a 3-year supply chain strategy and supply chain road map, facilitated the inclusion of eLMIS into UHC regulation to ensure policy support, and designed the inventory strategy at all levels. MTaPS developed supply chain workforce needs currently used by the DOH to select and hire skilled staff. MTaPS delivered several supply chain and PV courses, and the contents are currently being uploaded to the DOH e-Learning Academy. MTaPS supported the DOH in introducing and rolling out an end-to-end eLMIS to enhance supply chain visibility and efficiency, including for COVID-19 vaccines. To date, a total of 105 warehouses in central (7), regional (28), LGUs (21), and SDPs (45) have a functioning eLMIS. MTaPS is continuously collaborating with other agencies, such as The Global Fund (GF) recipient, Philippines Business for Social Progress (PBSP), and WHO to leverage resources for eLMIS implementation. In total, MTaPS has leveraged USD 949,405.45 in resources in support of the eLMIS implementation. MTaPS also enhanced the patient safety monitoring system, the PViMS, including interoperability with VigiFlow, and supported the DOH and the Philippine FDA in rolling it out at targeted TB facilities.

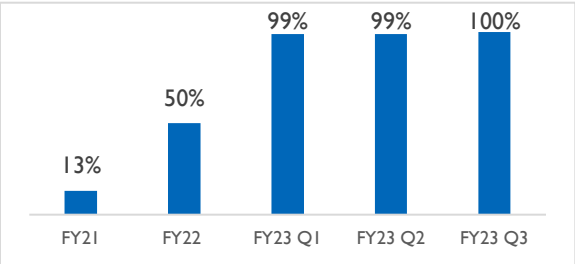


Figure 5. Percentage of sentinel facilities (n=199) trained and using PViMS for TB medicines safety monitoring

Since the start of the PViMS rollout in PY3, MTaPS has been able to reach 100% of 199 TB facilities (figure 4). To date, 597 adverse events (AEs) have been reported through PViMS and causality assessments conducted for them. MTaPS supported DOH in analyzing stock information for key tracer TB, FP, and HIV commodities, starting in PY3 (FY21) to make informed decisions to ensure uninterrupted availability of key program commodities. MTaPS support for stock analysis has enabled DOH to become independent in processing stock data.

With MTaPS support, the DOH and the Commission on Population and Development (CPD) finalized the warehouse operation manual (WOM) and trained staff from different levels to roll out its use. MTaPS supported the long-term estimations of quantity and budget requirements for TB, HIV, and FP commodities. MTaPS also supported the FDA in updating the national PV policy and developed the PV method guideline for implementation. MTaPS facilitated the registration of selected HIV and TB

medicines. MTaPS developed the HTA method guide, which provides evidence-based information for use, coverage, and reimbursement decision making.

YEAR 5 ACHIEVEMENTS AND RESULTS

In PY5, MTaPS supported the DOH in expanding eLMIS to 123 central, regional, LGU, and facility warehouses; designing the inventory control and planning system which dictates how commodities will flow across the entire supply chain; remodeled the local technical assistance providers scheme (LTAPS) and advocated to various organizations to facilitate their engagement. MTaPS analyzed the country's CYP for the public and private sectors for the year July 2022 to June 2023. MTaPS finalized the PV and gender e-Learning contents, which are ready to be uploaded to the DOH Academy and continued to support PViMS implementation countrywide.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.1: Support the DOH to develop the five-year supply chain strategy

MTaPS is currently engaging with a local supply chain organization to facilitate the development of a five-year supply chain strategy. MTaPS developed TOR to guide the development of the strategy and agreed on it with the DOH SCMS. It includes rapid analysis of the previous strategy; data gathering and analysis to identify gaps, opportunities, and trends; government-led consultative workshops; and dissemination and validation of the new strategy. Anchored on the Health Sector Strategy 2023–2028, the supply chain strategy is expected to identify key interventions to ensure continuous availability of life-saving health products.

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

Activity 1.2.1: Capacitate a pool of LTAPs to support institutional leadership and capacity building of LGUs for PSCM functions

LTAPS is a private-sector engagement strategy to leverage local capabilities to support and sustain supply chain systems–strengthening initiatives. Following an earlier MTaPS advocacy and information sharing session on LTAPS for 19 participants from 11 institutions, 6 institutions expressed interest in providing support services for eLMIS, which is one of the modeled tracks of LTAPS. To identify more LTAPs, MTaPS reached out to more than 200 individuals from the national convention of the Philippine Pharmacists Association; this facilitated the identification of potential LTAPs and helped in modeling it into three tracks: Track A—support provision to quantification, warehouse operations, and inventory management standards; Track B—support provision to eLMIS implementation; and Track C—training provision on SCM-related topics. MTaPS conducted a follow-up consultation visit to Central Visayas CHD, Cebu Normal University (CNU), and Consolacion LGU to understand the operational components of the CHD's partnership with CNU in conducting capacity-building activities focused on leadership and governance to LGUs through the Municipal Leadership and Governance Program. To date, MTaPS has identified 4 potential LTAPs for Track A; 7 for Track B; and 6 for Track C. These potential TA providers could deliver specified direct PSCM services and/or onsite TA.

Activity 1.2.2: Outsourcing logistics services to private sector 4PL or best practice 3PL providers

MTaPS facilitated a virtual learning session on best practice 3PL/4PL providers engagement and outsourcing in supporting public health supply chain system strengthening to address the knowledge gap identified during the political economy analysis. A total of 61 participants (21 male, 40 female) from 25 organizations took part. MTaPS also facilitated a workshop to co-develop and validate a draft operational guide for supply chain outsourcing using best practice 3PL or 4PL, attended by 11 participants (6 male, 5 female) from the DOH (SCMS, PS, bureau of local health system development [BLHSD]) and CPD. The operational guidance document is expected to contribute to an enabling environment for supply chain stakeholders to engage 4PL or best practice 3PL in supporting their supply chain. Through this activity, the DOH recognized its critical role in guiding the CHDs, LGUs, and rural health units (RHU) in outsourcing supply chain functions.

Activity 2.1.1: PV and regulatory services:

MTaPS finalized and shared two versions of the PV e-Learning course with the FDA: Principles and Concepts of Pharmacovigilance and Reporting in Pharmacovigilance. MTaPS also helped the FDA prepare the required forms to seek continuing professional development accreditation from the Professional Regulatory Commission for the PV course. Earning credits will encourage HCWs to enroll and complete the course. By building HCW capacity, the course will help ensure safe and quality health service delivery.

Activity 2.2.1: IPC and HCWM

The DOH's Health Facility Development Bureau (HFDB) facilitated the training of 75 participants (40 male, 35 female) from DOH-retained hospitals in one region on HCWM and IPC using MTaPS-developed materials and trained IPC and HCWM qualified trainers to improve IPC and HCWM practices for climate risk mitigation in HCFs. In PY5, a total of 198 HCWs (113 male, 85 female) took part in the IPC training and 251 (140 male, 111 female) in HCWM. Additional regions are scheduled to conduct this training without MTaPS' support.

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

Activity 1.3.1: Electronic Logistics Management Information System (eLMIS)

MTaPS supported the DOH in expanding the rollout of eLMIS to more LGUs and SDPs. Currently, eLMIS is deployed to a total of 123 sites, comprising 7 central warehouses, 28 regional warehouses, 28 LGU warehouses, and 60 SDPs. MTaPS also supported the DOH by drafting TOR and advocating for more resources to increase the size of the workforce providing support services, to ensure smooth scale-up of eLMIS to more sites during phase 3 implementation. This effort significantly improved troubleshooting lead time on issues encountered by the users. MTaPS facilitated collaboration with multiple stakeholders by costing and analyzing resource gaps to mobilize support for eLMIS rollout. This quarter, MTaPS leveraged a total of USD 626,580.48 through the GF for support services, system maintenance, hosting, and training. To date, a total of USD 949,405.45 has been mobilized through MTaPS efforts. To ensure a seamless transition and sustain the gains achieved to date, MTaPS collaborated with the DOH to develop an eLMIS Transition and Sustainability Plan, which outlines key interventions with resource requirements. MTaPS collaborated with USAID's ReachHealth project to

ensure sustainability of eLMIS implementation at the local level. ReachHealth will facilitate the inclusion of eLMIS in the LGU's Annual Operations Plan, Local Investment Plan for Health, and Annual ICT Development Plan, ensuring financing in those LGUs where ReachHealth is working. MTaPS and ReachHealth identified LGUs: Batangas, Negros Occidental, Cebu, Cagayan De Oro, Davao City, and South Cotabato. MTaPS identified prerequisites that need to be standardized for eLMIS and procurement operation management information system (POMIS) to be interoperable.

Activity 1.3.2: Stocks Data Analysis

With the DOH, MTaPS standardized the commodities descriptions and number of facilities for TB, HIV, and FP to improve future data analysis using data sources from both eLMIS and Pharmaceutical Management Information System (PMIS). In addition, MTaPS co-developed the April – June 2023 stock data analysis for the DOH Executive Committee.

Activity 1.3.2: CYP

MTaPS presented the result of CYP analysis for July 2022 to June 2023 to private and public FP stakeholders. Total CYP decreased by 1.7% from the previous year, attributed to a decrease in the public sector.

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

Activity 1.4.1: Conduct pilot testing on using a digital platform for PIES

To test the configuration and gather user feedback, MTaPS collaborated with MyCure and ReachHealth conducted UAT for web-based PIES in Mabini, Batangas City, Bauan, San Pascual, Sta Rosa City, Binan City and, Cabuyao City LGUs.

Activity 2.2.2: Strengthen capacity to conduct and use HTAs to support institutionalizing transparent and evidence-based decision making

MTaPS drafted the HTA Method Guide for Clinical Equipment and Devices (CED) for review. The methodological guideline aims to provide evidence to the HTA Division and HTA Council to inform decision making on the use, coverage, and reimbursement of health technologies, including CEDs. MTaPS supported the DOH-PD by sharing best practices and experiences from Nepal on the creation of Technical Specifications Banak to facilitate the Philippines' development of its own Essential Medical Devices List; 153 representatives (85 female, 68 male) from CHDs, the DOH, and DOH hospitals across the country attended the presentation.

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

Activity 1.5.1: Support the DOH to institutionalize the practice of evidence-based quantification

MTaPS facilitated a learning session on quantification of health commodities for 295 participants (76 male, 219 female). MTaPS also facilitated advanced training on quantification systems, processes, and tools for 10 DOH staff (2 male, 8 female) who are trained to train other officers from CHDs and LGUs. Participants prepared post-training action plans, which include establishing a quantification core group, enhancing data validation processes, and analyzing and revising current quantification outputs. MTaPS

developed an alpha version of quantification e-Learning course, which is expected to be uploaded to the DOH Academy when completed.

Activity 1.5.2: Supply chain system design considering UHC

MTaPS developed the technical design document for the health commodity supply chain system focused on inventory control strategy (ICS). To standardize ICS at each level of the supply chain, the document defines the flow of commodities from central to SDPs and the optimal inventory levels for each level of the supply chain. It also provides technical guidance on how inventories should be planned, maintained, and controlled. The ICS will be incorporated into the eLMIS.

Activity 1.5.3: Build the capacity of CPD to support supply chain management of FP commodities

MTaPS facilitated a roundtable discussion in collaboration with the CPD, DOH, NEDA, DBM, DILG, and USAID, with the objective of mobilizing resources for FP commodity supply chain. A total of 34 participants (9 male, 24 female) took part. As part of its support to CPD in building its capacity on the WOM for FP commodity warehouses, MTaPS trained CPD staff on eLMIS.

Activity 2.3.1: Support the DOH to implement standardized aDSM reporting and practice of causality assessment

With MTaPS support, the DOH conducted causality assessment for 28 AE reports received from PViMS for patients on second-line TB treatment between July and September 2023. Out of the 28 reports, 8 were probable, 8 were possible, and 12 could not be assessed due to lack of follow-up, baseline laboratory results, and encoded suspected medicine.

Activity 3.2: Support gender equality and women's empowerment in PSS

MTaPS, in coordination with the DOH's Health Policy Development and Planning Bureau (HPDPB), finalized the Gender and Development (GAD) eLearning module. MTaPS also helped the DOH facilitate the completion of requirements to seek continuing professional development accreditation from the Professional Regulatory Commission. This will enable HCWs to earn credits for the course and is expected to incentivize HCWs to enroll.

BEST PRACTICES/LESSONS LEARNED

- By collaborating closely with DOH, CHDs, LGUs, and stakeholders, MTaPS was able to mobilize resources for sustainable eLMIS implementation.
- Nontraditional in-service training through e-Learning is more attractive to participants than other nontraditional training methods (such as distance learning webinars). This is demonstrated by the percentage of participants enrolled through MTaPS-developed training initiatives: in Y5 most participants taking part in non-traditional training chose the DOH Academy e-Learning (Q1: 74%; Q2: 72%; Q3: 93%; Q4: 55%).

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5) Activity 1.1.1: Facilitate supply chain strategy development.	November 2023
(PY5) Activity 1.4.1: Deployment of PIES	October–December 2023

Activity & Description	Date
*Activity 1.1.1: Support the DOH in establishing a working PSCM governance and coordination mechanism.	October–December 2023
*Activity 1.2.1: Support the DOH in supplementing the WOM, considering recent system design.	October–December 2023
*Activity 1.2.2: Facilitate capacity development at central and CHD level on the updated WOM (using DOH resources).	October–December 2023
*Activity 1.2.3: Facilitate the engagement of local technical assistance in supporting supply chain initiatives.	October–December 2023
*Activity 1.3.1: Support the rollout of the eLMIS at selected LGUs and SDPs.	October–December 2023
*Activity 1.4.1: Support the DOH to identify factors that affect health commodity procurement (bid) failures.	October–December 2023
*Activity 3.1: Collaborate with other USAID implementing partners to sustain key initiatives.	October–December 2023
*Activity 3.2: Support gender equality and women's empowerment in PSS.	October–December 2023
*Activity 3.3: Support the DOH to improve practices on IPC, HCWM and supply chain supporting climate risk management through MTaPS-developed training materials.	October–December 2023

***** PY6 work plan activity approved on October 3, 2023.

Table 26. Quarter 4, FY23, activity progress, Philippines—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Support the DOH in reviewing results of the implementation of the three-year PSCM strategy (2019–2022) and developing the next three-year PSCM strategy (2023–2026).	1.2; 5.1	MTaPS discussed the high-level timeline of implementation for this activity with the leadership of the DOH Procurement and Supply Management team. MTaPS discussed and identified a potential consultant who will be facilitating the workshop. Next quarter, MTaPS will start with the desk review of existing documents to determine the results of the implementation of 2019–2022 PSCM strategy.
Activity 1.2.1: Capacitate a pool of LTAPs to support institutional capacity building of LGUs for PSCM functions.	2.1, 2.2, 2.3	MTaPS revised the concept note after visiting three UHC implementation sites. MTaPS reached out to potential LTAPs to attend the DOH Suppliers' Expo and demonstrate their service offerings. MTaPS conducted orientation activities for potential LTAPS providers.
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	*Operational policy in engaging best practice 3PLs.* MTaPS also invited potential 4PLs/3PLs who were part of the study to the DOH Suppliers' Expo and started to map potential 4PL/3PLs partners. Development of the draft operational policy in engaging 4PLs/best practice 3PLs is under way.
Activity 1.3.1: Build capacity of the DOH to operationalize and sustain the implementation of eLMIS in the country.	3.1, 3.2	The eLMIS transition and sustainability plan was drafted and presented to government and nongovernment stakeholders. Three more warehouses implemented the eLMIS this quarter, including 2 LGUs, bringing the total number of warehouses which have gone live to 37. Interoperability requirements gathering with the DOH's Procurement Online Management Information System is under way.
Activity 1.3.2: Support the DOH and selected CHDs 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 cascaded the data analysis orientations and tool to the CHDs. The DOH-PD started building the capacity of selected regions on stock data analysis. MTaPS disseminated the July 2021–June 2022 CYP analysis report to the DOH and other stakeholders.
Activity 1.4.1: Conduct pilot testing 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 facilitated an engagement workshop with LGUs and service providers on the MyCure tool to gather requirements. User testing and training of the tool is planned for the next quarter.
Activity 1.5.1: Support the DOH to institutionalize the practice of evidence-based quantification of TB and FP commodities to inform procurement, supply planning, and distribution.	5.1	MTaPS completed the draft of the quantification guidelines to harmonize and standardize the process of quantification of health commodities at the DOH. MTaPS is currently discussing capacity building on quantification for DOH and CHD with the DOH-DPCB.

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.5.2: Support PSCM system design, considering UHC reform for individual and population-based commodities at different levels.	5.1	MTaPS facilitated a supply chain system design consultative and learning workshop in coordination with SCMS and DPCB. Data was collected as part of the system design exercise. A consultative workshop was organized to determine the inventory controls and strategies at different levels of the system.
Activity 1.5.3: Build capacity of CPD to support supply chain management of FP commodities.	5.1	MTaPS drafted CPD WOM training materials and organized training on WOM and WOM handover in May 2023. The CPD participated and observed the eLMIS rollout in different regional warehouses with the plan to introduce its own central and five regional FP commodity warehouses. MTaPS trained the CPD from their regional hubs on eLMIS.
Activity 2.1.1: Build capacity of health workers to support PV and regulatory services at national and HCF levels.	5.2	The FDA provided clearance on the PV e-Learning contents, which will be uploaded to the DOH Academy. MTaPS is transforming the PV e-Learning contents to a self-paced e-Learning format for uploading to the DOH Academy.
Activity 2.2.1: Support HCFs to improve practices on IPC and HCWM for CRM.	5.3	MTaPS is working with the DOH to monitor the training rollout action plan for the regions. The training uses the materials on the new standards on IPC and HCWM jointly developed by MTaPS and HFDB in PY4. HFDB funded 12 regions to cascade the training within their region, engaging MTaPS-trained IPC and HCWM qualified trainers. MTaPS shared the list of qualified IPC and HCWM trainers whom other implementing partners can engage in implementing IPC and HCWM initiatives with the USAID Office of Health.
Activity 2.2.2 Strengthen capacity to conduct and use HTAs to support institutionalizing transparent and evidence-based decision making.	4.2, 4.3	MTaPS and Department of Science and Technology HTA Unit, the DOH Medical Device Unit, and HTA Council agreed on the scope and next steps of developing the HTA methods guide, essential medical device price reference index (EMDPRI), and essential medical device price list (EMDPL). MTaPS supported the development of HTA methods guide, while MTaPS shared the other country's experience and best practices in developing EMDPRI and EMDPL. MTaPS shared the final draft of HTA Methods Guide for CED with the HTA Unit and HTA Council and supported the consultation workshops of the DOH on EMDPRI and EMDPL development as one of the resource speakers.
Activity 2.3.1: Support the DOH in implementing standardized aDSM reporting and practice of causality assessment	5.3	MTaPS is supporting the DOH-PD in implementing standardized aDSM reporting and the practice of causality assessment through PViMS as needed. The PD received 10 ADR reports through the MTaPS-supported PViMS.
Activity 3.1. Collaborate with other USAID IPs to build the capacity of UHC implementation site/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, PIES, LTAPS, and eLMIS.
Activity 3.2: Support gender equality and women's empowerment in PSS.	1.3, 2.1, 5.2	The alpha version of the gender e-Learning module was submitted to the DOH and gender experts for review. MTaPS presented a poster on gender during a US Embassy event on sex and gender equity.

PEPFAR (HIV/AIDS)

OVERVIEW

In line with its global objectives, MTaPS aims to establish and institutionalize an integrated health supply chain and pharmaceutical management system in the Philippines 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 provides appropriate TA 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.

In the Philippines, MTaPS aims to accelerate progress to control 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 facilitated inclusion of two ARVs, namely, tenofovir 300 mg + lamivudine 300 mg + dolutegravir 50 mg (TLD) fixed-dose combination and pre-exposure prophylaxis (PrEP) emtricitabine 200 mg + tenofovir 300 mg fixed-dose combination in the Philippines National Formulary (PNF), after supporting successful completion of HTA requirements. As a result, the DOH is now able to procure TLD and PrEP. MTaPS facilitated the completion of a USAID donation of ARVs for PrEP and viral load cartridges to the Government of the Philippines. MTaPS 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. MTaPS supported the DPCB; the Epidemiology Bureau (EB), which is responsible for collecting, analyzing, and disseminating HIV-related data; and other stakeholders to complete the 3-year (2022–2025) quantification of ARVs for adult first-line and PrEP, HIV test kits, and viral load cartridges. The results of the quantification activity are guiding 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 the TLD transition. MTaPS organized alignment meetings among different bureaus in the DOH to ensure that HIV facilities, whether community-based organizations or social hygiene clinics, are or will be part of the mentoring and inventory monitoring activities of the DOH-deployed public pharmacist, which is a critical step to help sustain the supply chain supportive supervision visits in HIV facilities and ensure that data from these sites are captured in the eLMIS.

YEAR 5 ACHIEVEMENTS AND RESULTS
QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the DOH in facilitating the suppliers' conference to bridge the gap between end users and health commodity suppliers. MTaPS also capacitated DOH officers on the government procurement

law to fill the knowledge gap in executing procurement activities, including framework contracting. MTaPS facilitated the clearance, storage, and distribution of HIV/AIDS commodities donated by USAID to ensure continuous availability at SDPs.

STRATEGIC OBJECTIVE 1: STRENGTHEN PSCM OF HIV/AIDS COMMODITIES

Activity 1.1: Support the DOH in using appropriate procurement mechanisms for addressing procurement-related bottlenecks for HIV/AIDS commodities

MTaPS facilitated a training of 14 (11 female, 3 male) DOH staff and 5 USAID-OH (2 female, 3 male) staff on Public Procurement Law in collaboration with the Government Procurement Policy Board (GPPB). This training will address the knowledge gap on public procurement law and help the DOH identify, adopt, and implement the most efficient procurement mechanisms for HIV commodities. The training also serves as an opportunity for the DOH to consult with GPPB on how to address the recent failed procurements of viral load cartridges by the DOH due to the lack of interest of the sole source supplier because of pricing concerns. The GPPB is the principal body responsible for procurement policy formulation and the implementation and monitoring of effective public procurement reforms. MTaPS also shared information with USAID and USAID Sustaining Technical and Analytic Resources, including the 2022 price comparisons methods, required data, and processes used for the procurement of viral load cartridges through a direct negotiation. Moreover, the DPCB staff assigned to the quantification of HIV commodities participated in the advanced quantification training delivered by MTaPS. In this training, the 2-year (2023–2024) quantification exercise conducted by MTaPS was reviewed but was not updated, as the data are not available.

MTaPS facilitated and coordinated with different government offices and implementing partners to secure the required clearances for the successful arrival and distribution of the USAID-donated viral load cartridges to augment the stocks of these cartridges in the country.

MTaPS also conducted ARV medicines landscape analysis in the country by collecting data on ARVs, including their registration status, source (local distributors and international sources), and price comparisons from different sources. The analysis is expected to help the DOH to advocate for more importers, manufacturers, and distributors in the country to meet the demand while scaling up the ART program.

Activity 1.2: Support the DOH in strengthening the distribution and inventory management system for HIV/AIDS commodities

MTaPS is supporting the DOH to streamline and standardize the distribution and inventory management system of HIV commodities. As a follow-on to the meeting facilitated by MTaPS with the DOH and IPs that are distributing donated HIV commodities in the country, MTaPS assisted the 3PL hired by USAID EpiC in adhering to the standard documentations and processes of the DOH in distributing viral load cartridges and ensuring that they are encoded and can be tracked through the eLMIS. Previously, the donations to the HIV program were distributed without proper documentation, making it difficult for the DOH and regions to track and monitor these commodities across the country.

MTaPS has also been regularly working with the DOH to analyze HIV stock data. As a result, the availability of data for decision making has improved and helped alert the DOH to share a call to action

to mitigate potential stockouts of TLD. Further, MTaPS, the PD, KMITS, and the DPCB mapped which HIV facilities (social hygiene clinics and community-based organizations) and HIV commodities need to be added into the PMIS and monitored by public health pharmacists. As a result, 50 dispensing US President's Emergency Plan for AIDS Relief (PEPFAR) sites are or will be monitored by deployed public health pharmacists. Having the essential HIV commodities and PEPFAR sites included in the PMIS is critical, as the public health pharmacists will soon transition to the use of eLMIS from PMIS and help sustain the supply chain supportive supervision visits in HIV facilities.

BEST PRACTICES/LESSONS LEARNED

- Harmonizing the efforts of different DOH bureaus and regions helps accelerate the improvement of the supply chain practices in managing and tracking HIV commodities and availability of accurate and timely information for decision making to mitigate stockouts of essential HIV commodities.
- Conducting regular stock data analysis at the local level results in quicker response in addressing stockouts and overstocks issues in regions. One best practice was observed in CHD Calabarzon, where the regional HIV program coordinators maintain a list of HCFs and their respective average monthly consumption and monthly stock on hand and use the information as a basis for allocation decisions.
- As more HIV/AIDS service delivery facilities adhere to the DOH supply chain standards, the DOH is more able to fulfill its role in tracking all available commodities for HIV service delivery and in making decisions critical to further optimize the health commodity supply chain.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

PEPFAR activities were completed in Year 5 Quarter 4.

Table 27. Quarter 4, FY23, activity progress, Philippines—PEPFAR

Activity	MTaPS Objective(s)	PEPFAR Objective(s)	Activity Progress
Activity 1.1: Support the DOH in using appropriate procurement mechanisms for addressing procurement bottlenecks for HIV/AIDS commodities.	5.1	Strengthen PSCM of HIV/AIDS commodities	MTaPS partnered with GPPB and facilitated training on the government public procurement law for DOH officers.
Activity 1.2: Support the DOH in strengthening the distribution and inventory management system for HIV/AIDS commodities.	5.1		MTaPS facilitated the distribution of USAID-donated HIV/AIDS commodities to SDPs.

CN220

OVERVIEW

In line with its global objectives, MTaPS aims to establish and institutionalize an integrated health supply chain and pharmaceutical management system in the Philippines 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 provides TA and capacity building support to the Philippines 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.

Through the CN220-funded HIV/AIDS activities, MTaPS Philippines aims to accelerate progress to control 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 supported the DOH to develop the IPC assessment checklist applicable for HCFs such as HIV/AIDS outpatient care facilities. Using this IPC checklist, MTaPS conducted baseline assessments of the IPC practices in 30 HIV outpatient care facilities. MTaPS presented the IPC baseline assessment results to key stakeholders at the national and regional levels to help close the identified gaps in IPC and to demonstrate the usefulness of such an assessment for program management to develop targeted strategies, allocate resources more efficiently, and implement evidence-based interventions to enhance IPC practices across HCFs.

In collaboration with the DOH, MTaPS mapped and standardized the flow of HIV commodities from the DOH Central Office to CHDs to LGUs and finally to HCFs. MTaPS also mapped the differentiated service delivery (DSD) focused on the multi-month drug dispensing practices in selected HIV care sites with emphasis on supply chain analysis. MTaPS trained the PSCM focal persons in all 52 PEPFAR sites on these HIV/AIDS SCM standards. MTaPS also developed a supply chain supportive supervision and monitoring tool, which is being used during PEPFAR site visits to improve PSCM practices.

MTaPS assessed the practices of PEPFAR HIV/AIDS outpatient care facilities on PV recording and reporting. MTaPS worked with the FDA and the DOH to develop an AE reporting standard operating procedure for HCFs and train them on AE reporting. MTaPS continuously conducts supportive supervision to the trained PEPFAR facilities on PV and supply chain to increase the availability, quality, and safety of HIV/AIDS treatment.

MTaPS clarified the process to the market authorization holder (MAH) and key stakeholders for successfully registering medical devices in the national regulatory authority, including the USAID-donated mechanical ventilator, which was one of the recipients of special approvals during the COVID-

19 pandemic. Through this clarification, the MAH and key stakeholders were able to identify a bottleneck in their application that has not progressed for several months.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS facilitated medical devices regulation dialogue bringing private sector industry, the FDA, service delivery facilities, and patient representatives in one roof. The goal was to identify regulatory bottlenecks and mitigate challenges to enhance access to innovative medical devices to the public. MTaPS also coordinated with the DOH, using an existing system called Inventory and Gap Analysis (IGA) to encode mechanical ventilators donated by USAID and the GF to track their usability. In this PY5, MTaPS introduced supply chain standards to HIV/AIDS service delivery facilities to support implementation of differential service delivery and facilitate the provision of multi-month dispensing of ARVs for stable HIV patients.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

***Medical device registration*:**

MTaPS provided technical advice and connected the US Commercial Service, and the US Trade and Development Agency (USTDA) with the FDA and DOH in the organization of a Medical Device Regulation Capacity Building Workshop. The USTDA is building upon on the results of the April 2023 Dialogue on Strengthening the Medical Device Regulation in the Philippines, which was organized by MTaPS, the FDA, and the DOH for the public and private sectors. Moreover, as the previous application of the MAH applicant for the USAID-donated mechanical ventilator was not approved by the FDA, due to incomplete requirements, the applicant is now consolidating the required documents and restarting the application using the knowledge they have gained from the dialogue on how to be more compliant with FDA requirements. MTaPS has been coordinating with the MAH applicant to understand the status and if there are bottlenecks in completing the required documentation. If all the documentation submitted by the MAH is completed correctly and is cleared, the FDA will issue the certificate of medical device registration 110 working days from the submission date of all application documents, bringing transparency and predictability to the process.

Medical device inventory:

MTaPS is working with the SCMS to track and complete the encoding of 300 mechanical ventilator units donated by USAID and Global Fund into the IGA system. SCMS issued a memo to the Field Implementation and Coordination Team (FICT) of the DOH to encourage hospitals to coordinate with CHDs to encode the mechanical ventilators into the IGA until September 15, 2023. As the MTaPS TA was coming to an end in Year 5 Quarter 4, MTaPS met with SCMS to discuss how to sustain the tracking and monitoring of mechanical ventilators, a critical equipment for treating patients with severe respiratory issues, such as those caused by COVID-19. SCMS will be monitoring the equipment and devices annually, and reports will be submitted to the Bureau of International Health Cooperation (BIHC). BIHC, as the focal point and overall coordinator for all donations intended for the DOH, will coordinate with the donors on the status of the donated mechanical ventilators as needed. SCMS, as the lead office in monitoring the donated equipment and devices, will ensure that updates to the system are disseminated timely and end users are properly capacitated on the use of the system. Having a functional mechanism to monitor the status and use of medical devices, such as those related to COVID-19, is

important to ensure that life-saving devices like mechanical ventilators are functional and available when needed.

Further, MTaPS and Central Visayas CHD visited Cebu City Medical Center to check the functionality status of the donated mechanical ventilators and to identify any issues that could prevent access to these mechanical ventilators. They coordinated the identified issues with DOH, USAID, and USAID IPs accordingly for appropriate action.

Service delivery of HIV/AIDS commodities:

An efficient supply chain is essential to help ensure the availability of HIV commodities that are needed for HCFs to successfully implement practices of DSD models, such as multi-month dispensing. To facilitate this, MTaPS developed the comprehensive supply chain management guideline for HIV commodities and shared it with the DOH. This document is based on the agreed standards in managing the HIV health commodity and is grounded in industry best practices in SCM. It will aid the DOH, CHDs, and HCFs in optimizing the distribution and proper receiving and dispensing of HIV commodities. Having a systematic and standardized SCM guideline will help establish and sustain the successful implementation of DSD initiatives for ARV distribution and viral load testing.

PV of HIV/AIDS commodities:

MTaPS has been providing support to the DOH and the FDA in monitoring the drug safety of TLD and PrEP through the implementation of targeted spontaneous reporting (TSR) mechanism; a total of 42 reports were submitted to FDA by 10 facilities. The most frequently reported ADRs were increased alanine aminotransferase enzyme with 47.61%, followed by increased blood creatinine 23.80%; increased blood triglycerides and increased aspartate aminotransferase 21.42%; depression 4.67%; and insomnia, anxiety, and suicidal ideation 2.41%. The ADR reports and associated proportions will inform decisions on enhancing the safety of those patients taking TLD and PrEP and will support adherence to treatment as applicable.

BEST PRACTICES/LESSONS LEARNED

- Clear guidelines are needed to monitor donated medical devices. This was highlighted by the results of the mapping of the relevant DOH issuances and through coordinating with CHDs and LGUs.
- Leveraging existing systems, tools, and human resources has helped accelerate the identification of how mechanical ventilators can be monitored systematically along with other medical devices across the country. Streamlining the monitoring of mechanical ventilators and not creating a separate siloed approach is expected to contribute to a more efficient and sustainable system.
- Adopting new systems takes time, and building the capacity of end users and producing user guides is important to help facilitate adoption.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date (Month YEAR)
None. Activity completed	

Table 28. Quarter 4, PY23, activity progress, Philippines—CN220

Activity	MTaPS Objective(s)	CN220 Objective(s)	Activity Progress
Support the DOH and HIV community-based organizations in developing and implementing a PSCM action plan for DSD, including community dispensing of 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 drafted the standards on HIV/AIDS product flow. Priority PEPFAR sites are being trained and mentored to these standards. MTaPS visited PEPFAR sites to mentor them on PSCM best practices.
Develop and implement a functional system for monitoring COVID-19-related medical equipment in priority sites.	1.2, 5.1	Reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including to prevent, detect, and respond to pandemic threats.	MTaPS mapped the existing process of monitoring the medical devices in the country. MTaPS worked with SCMS in configuring and tracking the USAID- and GF-donated mechanical ventilator tracking into IGA. MTaPS co-developed the IGA user encoding guide for mechanical ventilators with SCMS, which SCMS disseminated along with a policy memo on the use of IGA to track the donated mechanical ventilators. MTaPS, CHDs, and SCMS visited selected hospitals to check the functionality status of the mechanical ventilators. MTaPS relayed issues identified during the visits and raised by CHDs in tracking the locations of the donated mechanical ventilators to concerned offices by MTaPS for appropriate actions. MTaPS and SCMS discussed and agreed with SCMS on the way forward to continuously monitor the functionality status of the donated mechanical ventilators through IGA after MTaPS' support ends.

Activity	MTaPS Objective(s)	CN220 Objective(s)	Activity Progress
Support the DOH in the drug safety monitoring of TLD and PrEP through the implementation of TSR mechanism.	2.4	Bolster economies and other critical systems under stress due to COVID-19 to prevent backsliding and enable recovery.	MTaPS continued to support the finalization and operationalization of TSR for TLD and PrEP in the country. MTaPS made mentoring visits and phone calls to HCFs to guide and remind the facilities to reportAEs. MTaPS secured the list and total number of AEs submitted by PEPFAR sites to the FDA. MTaPS will share the results of the TSR and identify how to sustain or build the culture of patient safety monitoring in outpatient HIV facilities. MTaPS and the FDA will award certificates to recognize the HCFs that were diligent in monitoring the safety of clients and complying with the PV requirements of the FDA.

O. RWANDA

FIELD SUPPORT ACTIVITIES

OVERVIEW

The goal of MTaPS in Rwanda is to provide support 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 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 which in turn strengthens both the public and private pharmaceutical sectors. MTaPS' strategic approach to strengthening the Rwanda FDA is to strengthen its institutional capacity to address key areas of weakness and gaps identified in successive WHO GBT assessments.

CUMULATIVE PERFORMANCE TO DATE

Over the past five years, MTaPS has continued to provide pharmaceutical systems strengthening support to the MOH and its institutions, including the Rwanda FDA and the RBC (including its MCCH division).

With MTaPS' support, Rwanda FDA developed a 4-year strategic plan (2021–2024), a costed 5-year business plan (2021–2026), 12 regulations, and other pharmaceutical-sector regulatory documents (e.g., guidelines, manuals, and SOPs). In PY4 and PY5 up to Quarter 3, MTaPS supported two dossier assessment retreats, which reduced the backlog of pending medicine registration applications at the Authority. As part of implementation of a QMS at the Rwanda FDA in accordance with ISO 9001:2015 requirements, MTaPS supported the development of a quality manual and corresponding SOPs, as well as an internal audit training of 27 Rwanda FDA staff (10 female). MTaPS has contributed to strengthening 5 pharmaceutical regulatory functions: the national regulatory system, product registration and marketing authorization, licensing establishments, regulatory inspections, and vigilance.

To increase efficiency of the Rwanda FDA's regulatory functions, MTaPS provided technical support in implementation of a regulatory management information system, i.e., IRIMS, which was customized to the Authority's requirements and deployed with training of internal and external users. MTaPS worked with Rwanda FDA and Rwanda Information Society Authority (RISA) to facilitate final hosting of IRIMS in the country's National Data Center, leveraging COVID-19 funds from USAID. IRIMS has since gone live, enhancing the efficiency and accountability in regulatory service provision and access to information for decision making at the Authority.

In addressing the human resources capacity gap, MTaPS supported training of health care providers in different areas of pharmaceutical management, including 815 Rwanda FDA regulatory personnel trained in medicines evaluation and registration, good manufacturing practices, good review practices, good reliance practices, PV, and QMS. As part of long-term sustainability of capacity building, MTaPS provided technical support to develop e-Learning courses in MER and PV, which are hosted on the Rwanda FDA servers. MTaPS supported the MOH and the Rwanda FDA in disseminating information on

pharmaceutical service accreditation standards and medicines safety to health workers in various forums. To improve pharmaceutical management in HFs via MTCs, MTaPS supported the development of an MTC operational manual, tools, and SOPs, and oriented 313 health care providers (113 female) on these products. MTaPS provided technical support to the MOH to assign antibiotics into AWaRe categories, as per WHO recommendations, and include them in the NEML to help prescribers use antibiotics more effectively to contain AMR. To improve quality of care for MNCH, MTaPS supported the development of guidelines on regulating medical gases to ensure the availability of quality medical oxygen for the management of hypoxic newborns and children as well as COVID-19 cases. MTaPS also supported the MOH in a rapid assessment of the use of medicines for postpartum hemorrhage and eclampsia, and subsequent development of an implementation manual to guide health workers on procedures for correct cold storage and management of oxytocin.

To strengthen PV, MTaPS supported the development of a costed multi-year national PV plan to guide the implementation of medicine safety monitoring activities. MTaPS also supported the training of 19 participants from the National Pharmacovigilance Advisory Committee (NPAC) and Rwanda FDA on PV. In strengthening the information management system for both active and spontaneous PV, MTaPS supported the Rwanda FDA to adapt the electronic *Pharmacovigilance Monitoring System (PViMS)* for spontaneous reporting of AEs, including AEFIs for Ebola and COVID-19 vaccines, and for active safety monitoring of DTG-based antiretroviral therapy regimens. From June 2021 to September 2023, 1,708 AEFIs (776 of which were serious AEs) were reported to the Rwanda FDA, which subsequently reported them to WHO. The use of PViMS ensures that medicine safety monitoring reports are quickly received and analyzed by the Authority, which can then provide regulatory feedback to clients, patients, and HFs in a timely manner.

To conduct active surveillance of DTG-based antiretroviral therapy (ART) regimens to determine their safety, MTaPS—working with the MOH, the RBC, and Rwanda FDA—developed a study protocol that was approved by the Rwanda National Ethics Committee and implemented in 20 HFs with 1,440 enrolled patients. The 1-year patient follow-up period ended in May 2023. Over that period, each patient had up to 9 follow-up visits, 3 patients were lost to follow-up, and 9 mild AEs (such as skin rashes and dry cough) were identified.

MTaPS supported the RBC in conducting a situational analysis of ARV MMD and pack size, which facilitated the rollout of 6 MMD using a recommended pack size of 90 units. Furthermore, MTaPS supported the RBC to conduct a feasibility study on shifting adherent breastfeeding mothers and new clients on ARVs from monthly dispensing to bimonthly dispensing, which found that MMD is feasible and satisfies different categories of people living with HIV/AIDS. Implementing MMD is expected to reduce workloads at the HF level and improve the quality of HIV care.

YEAR 5 ACHIEVEMENTS AND RESULTS

On May 22, 2023, with MTaPS' support, Rwanda FDA held a go-live event that involved a live demonstration of IRIMS to sensitize stakeholders and the launch of its online service portal. In addition, with MTaPS' support, the integration of IRIMS to the Rwanda Government *iRembo* national payment gateway was fully completed. This has improved intergovernmental efficiency in revenue collection. Since IRIMS' go-live until September 2023, there has been increased efficiency and transparency in processing

applications at Rwanda FDA (over 3,819 import permit applications and significant increase in revenue collection through the government's *iRembo* payment gateway). 2,126,618,526 Rwandan Francs (RWF) (USD 1,728,781) of the total revenue collection of RWF 2,304,400,075 (USD 1,873,304) at Rwanda FDA was online collection via *iRembo*. Furthermore, MTaPS supported the development of a data protection and privacy policy that is under final review by Rwanda FDA to support the use of information management systems, including IRIMS.

In drug and food import and export control, MTaPS supported the development of 3 regulations, 2 guidelines, and 4 process flows, and review of 1 regulation, 2 guidelines, and 4 SOPs. Import and export control is one of the areas under the market surveillance and control function in the GBT. It serves as a gatekeeper to ensure that medical products placed on the market meet certain standards and specifications for quality, safety, and efficacy. A third medicines dossier assessment retreat held in August 2023 (in addition to the earlier one in March 2023) helped reduce the backlog of pending medicine dossier applications at the Authority. This enabled the Authority's assessors to utilize the reliance approach to expedite processing, as some applications were for products already registered by the Tanzania Medicines and Medical Devices Authority and Ghana FDA. The reliance approach is an act whereby an NRA in one jurisdiction may partially or totally consider and rely upon evaluations performed by another NRA or trusted institution, such as WHO, in reaching its own decision. This improvement in efficiency helped address the gap for indicator MA04.01 noted in the December 2022 WHO GBT assessment. MTaPS also supported the orientation of 12 Rwanda FDA personnel (4 female) on processed food regulations and guidelines and a risk-based inspection plan of food premises, all previously developed or reviewed with MTaPS' technical assistance. The trained food regulators are now able to undertake monitoring of processed food quality and safety through inspections of processed food premises.

As part of strengthening the national PV system, MTaPS supported enhancement of PViMS to include interoperability with VigiFlow, the WHO-recommended online platform for managing AE reports, through generation of E2B files that can directly be uploaded into VigiBase, WHO's global individual case safety report (ICSR) database. This will help the Authority submit PV data on a timely basis, which is essential to monitor safety of medicines and helps the Authority to progress in addressing the GBT indicator VL06.03 (vigilance data and findings are shared with relevant regional and international partners). In addition, MTaPS supported the review and printing of patient alert cards (10,000 pieces) and IEC materials (1,200 pieces). The Rwanda FDA used these materials to increase public awareness of the importance of monitoring and reporting AEs to enhance patient safety. MTaPS conducted an in-depth review of the draft institutional communication strategy. The strategy will guide the Authority in internal communications to staff and external communications to stakeholders and the public.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

OBJECTIVE 1: GOVERNMENT AND HEALTH WORKER CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS STRENGTHENED

Activity 1.1.2: Improve capacity for registration of medical products (essential medicines, vaccines, and medical devices), including those used in HIV/AIDS, MNCH, and FP programs.

In August 2023, MTaPS supported a third dossier evaluation retreat for Rwanda FDA to bring together the Authority's qualified and trained assessors to evaluate 316 applications and build the skills of new assessors using a variety of methods (full assessment, reliance, and abridged). This also enabled the assessors to continue practicing the knowledge and skills acquired during previous MTaPS-supported capacity-building sessions on the use in dossier evaluation of the reliance approach and established abridged procedures for medicines that are WHO-prequalified or that have been approved by stringent national regulatory authorities.

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.

MTaPS continued to work with Rwanda FDA and the software development consultant to support IRIMS operationalization and implementation of critical system integrations with other Rwandan national-level electronic systems. They completed integration with the e-signature platform through RISA digital certificate, making the licenses issued by Rwanda FDA more secure and authentic. MTaPS also supported Rwanda FDA preparations for the WHO GBT assessment in which IRIMS is a critical component.

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

Activity 3.2.2: Continue to strengthen pharmacovigilance and safety monitoring for medicines, including ARVs, through enhancing the existing spontaneous reporting system.

MTaPS supported PViMS enhancement to include interoperability with VigiFlow through generation of E2B files that can directly be uploaded into VigiBase. MTaPS trained 4 Rwanda FDA staff (1 female) on the updated version of PViMS in a 3-day training session. In addition, leveraging COVID-19 funding, MTaPS trained 23 people (9 female), including Rwanda FDA PV staff as well as NPAC and AEFI committee members, on carrying out signal detection, validation, prioritization, assessment, and management of safety signals of both medicinal products and vaccines.

BEST PRACTICES/LESSONS LEARNED

- In the dossier assessment retreat, using separate groups called "streams," organized by the different assessment methods used (full assessment, reliance, and abridged), considerably increased the number of dossiers assessed and thus the number of those that reached the peer review stage.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
(PY5) **Activity 1.1.1:** Strengthen the medical products regulatory framework capacity of the Rwanda FDA in regulating pharmaceuticals, including medicines used in HIV/AIDS, MNCH, and FP/RH programs. ▪ Support Rwanda FDA to conduct a medicines dossier evaluation retreat and registration-related retreats to reduce dossier backlog and apply reliance principles for safety and efficacy of dossier evaluations. ▪ (FY3) Support Rwanda FDA to conduct an external QMS audit towards ISO 9001:2015 certification, including additional implementation of CAPAs arising out of the assessment	October–December 2023
(PY5) **Activity 2.1.1:** Build capacity on the use and management of IRIMS in automation of medical product regulation processes. ▪ Develop a transition plan and initiate the transition process. Finalize system documentations. Continue operationalization of the system and finalize integrations with NPC and LIMS.	October–December 2023
(PY5) **Activity 3.2.2**: Continue to strengthen PV and safety monitoring for regulated medicines, including ARVs and vaccines, through enhancing the existing spontaneous reporting system. ▪ 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.	October–December 2023

Table 29. Quarter 4, FY23, activity progress, Rwanda—FIELD SUPPORT

Activity	MTaPS Objective(s)	Activity Progress
Activity 1.1.1: Strengthen the medical products regulatory framework capacity of the Rwanda FDA in regulating pharmaceuticals, including medicines used in HIV/AIDS, MNCH, and FP/RH programs. **Activity description:** Provide technical assistance to undertake the mid-term evaluation of Rwanda FDA's 4-year strategic plan.	1.2	No activity conducted during Quarter 4.
Activity 1.1.2: Improve capacity registration of medical products (essential medicines, vaccines, and medical devices), including those used in HIV/AIDS, MNCH, and FP programs. **Activity description:** Provide technical assistance to Rwanda FDA to conduct an assessment workshop aiming at covering 100 dossier applications in 1 2-week session using abridged and reliance methods.	1.2	On August 7, 2023, MTaPS supported a third Rwanda FDA product registration dossier assessment session to reduce the backlog of medicines dossier applications. This session assessed 316 applications using abridged, reliance, and full assessment methods, of which 214 passed the first assessment, 190 passed the second assessment, 79 were referred for applicants to address queries, and 125 were recommended for a peer review meeting.
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. Undertake capacity strengthening of Rwanda FDA staff, including the Authority's Information and Communications Technology (ICT) staff, as well as external users, on effective application usage and implementation support of IRIMS. Support implementation of IRIMS Application Programming Interfaces (API), documentation, and plug-ins to interface with other national systems. Develop a memorandum of understanding with RISA and the National Data Center for a reliable hosting environment for IRIMS. Provide system and operational manuals.	3.1	Through feedback received from internal and external users, MTaPS made enhancements that have made IRIMS more efficient, demonstrated by increased revenue collection and import permit applications. MTaPS continued to support IRIMS operationalization by providing training to internal and external users, addressing feedback on system enhancements, and implementing integration with critical systems such as e-signature. In addition, the program provided support to Rwanda FDA in response to WHO assessors in preparation for the upcoming WHO GBT assessment.
Activity 3.1.4: Support management of medicines at the community level. **Activity description:** Working with the MOH MCCH division, develop "mini lessons" for health center staff to give to the community health workers (CHW) in their regular meetings. Support the MOH community health desk to develop training materials of the mini lessons and make them available to targeted health centers for use on a rotating basis, as a refresher training for CHWs on key aspects of the resupply, management of medicines and rational use in their regular meetings.	5.2	MTaPS and MCCH division developed a set of "mini lessons" on management and use of medicines for key RMNCH conditions. These will be used as refresher training for CHWs in the monthly meetings at the health centers. The lessons, while developed as slide decks, can be used without a projector in the absence of electricity. MCCH is planning a workshop to finalize and validate the lessons in Quarter 1 Year 6 and to engage partners in their rollout and use.

Activity	MTaPS Objective(s)	Activity Progress
Activity 3.1.3: Improve access to and administration of oxygen to hypoxic newborns and children with pneumonia. **Activity description:** Worked with RBC and stakeholders to review existing resources for oxygen management and to use and support the development of guidelines and SOPs on oxygen therapy and oxygen equipment utilization for use at facility levels. Given the oxygen standard treatment guidelines had already been developed, the consensus was to develop job aids (posters and desktop sheets) to support the application of the treatment guidelines by health care providers.	5.2	MTaPS worked closely with the MOH and other stakeholders to develop job aids for oxygen administration based on the content of the Rwanda Standard Treatment Guidelines for oxygen therapy. A set of eight job aids were drafted for the key processes of initiating and administering oxygen and are under internal review before sharing with RBC for finalization.
Activity 3.2.2: Continue to strengthen PV and safety monitoring for medicines, including ARVs, through enhancing the existing spontaneous reporting system. **Activity description:** Work with the Rwanda FDA to update the ADR reporting form for spontaneous safety monitoring and the active surveillance forms in line with emerging Rwanda FDA requirements. Enhance PViMS to address identified gaps in reporting of AEs, improve ease of data entry, update the user manual, and enhance user-friendliness. Support Rwanda FDA in developing an interface between the PViMS and IRIMS datasets on a dashboard. Support review and printing of IEC materials developed in PY2 and patient alert cards to increase awareness of medicines and support Rwanda FDA in finalizing the Authority's draft Communication Strategy.	5.3	MTaPS supported PViMS enhancement to include interoperability with VigiFlow through generation of E2B files that can directly be uploaded into VigiBase. Data collection forms and the setting of Medical Dictionary for Regulatory Activities (MedDRA) terms were updated in the tool to improve spontaneous reporting of AEs by health workers. MTaPS trained four Rwanda FDA staff (one female) on the updated version of PViMS.

P. SENEGAL

GHSA ACTIVITIES

OVERVIEW

The GHSA-related goal of MTaPS in Senegal is to support AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. MTaPS aims to achieve this goal by enhancing the capacity of in-country stakeholders through a system-strengthening approach. In Senegal, MTaPS 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 path 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. In FY22 and FY23, program implementation has focused on solving immediate problems and demonstrating results at an additional five hospitals.

CUMULATIVE PERFORMANCE TO DATE

During previous years, MTaPS supported the revitalization of the AMR TWG in the OHP and its functionality under the aegis of the OH secretariat. MTaPS supported the development of annual and quarterly action plans of the OHP based on the national health security plan and the evaluation of MSC activity implementation through multisectoral workshops and meetings. MTaPS also supported the implementation of selected activities for WAAW and the development of Senegal's Multisectoral Health Security Action Plan informed by an assessment using the e-SPAR. This plan is currently awaiting submission for approval by the OH High Council Steering Committee.

MTaPS supported the AMR, IPC, and laboratory subgroups in collecting data in preparation for the JEE self-assessment workshop organized by the MOH's General Directorate of Public Health.

MTaPS, in collaboration with the World Organisation for Animal Health and FAO Emergency Centre for Transboundary Animal Diseases, provided technical and financial support for a workshop to develop the NAP-AMR for 2023–2027.

MTaPS collaborated with the DQSHH to review and update Senegal's national IPC supervision checklist. The revised national IPC supervision checklist now includes the WHO's multimodal strategy, as well as the WASH component in health care settings. DQSHH then used the newly updated national IPC supervision checklist to measure the IPC capacity level of health facilities. This supervision checklist includes guidance to help supervisors standardize its use in the 14 health regions in Senegal.

MTaPS supported the DQSHH in conducting a first assessment of the national IPC program using the WHO IPCAT2. Information from this assessment was later used to revise the national IPC policy

document, to develop an IPC national strategic plan (IPC-NSP), and to revitalize 13 hospitals' ICCs by helping them implement action plans they had developed during a participatory initial baseline assessment conducted using the WHO IPCAF. MTaPS worked with the General Directorate of Public Health and the DQSHH to organize the technical validation of the IPC-NSP and to develop a national IPC work plan with all IPC stakeholders.

To strengthen governance for AMS, MTaPS provided support to the NCAT to update Senegal's antibiotic policy and national STGs that had been developed in 2010 but never implemented. MTaPS used this opportunity to provide technical orientation to NCAT's four TWGs (for antibiotic therapy policy, antibiotic therapy for community infections of adults and children, antibiotic therapy of HCAIs, and antibiotic prophylaxis) on WHO's AWaRe categorization of antibiotics. NCAT has since adopted this categorization. MTaPS supported the NCAT in conducting a training of 19 trainers (10 female, 9 male) on Senegal's approved antibiotic treatment guidelines.

Finally, MTaPS supported Senegal's Ebola IMS in conducting a workshop to finalize 32 SOPs: six on case management, eight on IPC, nine on surveillance, four on behavior change communication, three on logistics, and two on vaccination. The IMS also requested support for the integration of SOPs for psychosocial care, so MTaPS supported the development of three additional SOPs on the psychosocial care of patients, families, and HCWs affected by Ebola. An SOP manual for EVD and other hemorrhagic fever diseases, including all the previously mentioned SOPs, was finalized, and it was validated by the National Committee for Pandemic Management. All of MTaPS' Ebola-related activities were completed by December 31, 2022, and MTaPS handed over printed copies of the validated SOP manual to the EVD IMS on April 11, 2023.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS supported the AMR TWG in organizing a workshop on April 7, 2023, to provide training on the JEE 3.0 tool in preparation for the planned development of Senegal's NAP-AMR for 2023–2027. MTaPS also provided technical support for the development and finalization of Senegal's proposal for the World Bank-managed Pandemic Fund.

From May 30 to June 2, MTaPS, in collaboration with the World Organisation for Animal Health and FAO USAID Emergency Centre for Transboundary Animal Diseases, provided technical and financial support for a workshop to develop the NAP-AMR for 2023–2027. Senegal's national AMS plan, which was previously developed with support from MTaPS, is now integrated into the new NAP-AMR. During the workshop, MTaPS also provided orientation on resources, including the GBT, the newly updated JEE 3.0 tool, and the IPC-NSP. MTaPS participated in a workshop to update Senegal's national IPC guidelines.

From May 23 to 27, 2023, MTaPS supported the NCAT in conducting a training of 19 trainers (10 female, 9 male) on Senegal's approved antibiotic treatment guidelines. The newly trained personnel, as well as the NCAT master trainers, will be used to roll out AMS-related training to HFs nationwide once the NCAT completes its training plan.

QUARTER 4/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

In July 2023, MTaPS provided technical support to the organizational committee of the national IHR focal point in charge of preparing for Senegal's next JEE, which took place from July 17-21. MTaPS supported data collection for indicators pertaining to the following technical areas: AMR, IPC, laboratories, emergency management, and biosecurity and biosafety.

With technical and financial support from MTaPS, the multisectoral AMR TWG organized a workshop in July 2023 to complete the development of Senegal's NAP-AMR. MTaPS then collaborated with other GHSA partners, including FAO and IDDS, to support multiple follow-on meetings of the select committee in charge of finalizing the plan. Senegal's NAP-AMR was developed based on the recommendations of WHO JEE experts and is informed by the provisional results of the JEE related to the indicator for multisectoral coordination on AMR.

MTaPS participated in two workshops organized by the AMR TWG to provide technical assistance for the following activities:

- Workshop to develop communication materials for the prevention of AMR organized by the AMR TWG and the USAID Breakthrough action.
- Workshop on cross-monitoring of AMC in humans and animals in Senegal organized by the WHO and the World Organisation for Animal Health to train the AMR TWG on cross monitoring tools for AMC and set up a surveillance system for AMC.

RESULT AREA 2: IPC

Activity 2.5.3: Support the revitalization of ICCs at five selected district and regional hospitals

MTaPS provided technical and financial support to the newly established regional health directorates (RHDs) of Kédougou and Sédhiou to perform IPCAF self-assessment of IPC activities and to conduct IPC training of their respective regional hospitals' ICCs as follows:

- MTaPS supported the IPCAF self-assessment for the Amath Dansokho Kédougou regional hospital's ICC on August 22–25, 2023. The ICC improved upon its April 12, 2022, baseline score, increasing from 217.5 to 324.5 (/800), and trained 28 (15 female, 13 male) members.
- MTaPS supported the IPCAF self-assessment for Cheikh Ahmed Tidjane Ba Sédhiou regional Hospital's ICC on September 19–22. The ICC improved upon its June 1, 2022, baseline score, increasing from 262.5 to 382, and trained 34 (11 female, 23 male) members.

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

MTaPS provided technical and financial support for the hospital medical committee at the General Hospital of Idrissa Pouye (HOGIP) in Dakar to train 20 prescribers (10 female, 10 male) from September 6-8, 2023, and 22 prescribers (9 female, 13 male) from September 18- 20 from different departments at the hospital. A total of 42 prescribers from different health departments were trained out of the total of 120 prescribers at the hospital. The training was facilitated by three trainers from the level 3 principal Hospital of Dakar, the level 3 Dalal Jam Hospital, and the Cheikh Anta Diop University of Dakar.

Training workshop on antibiotic STGs at level 3 General Idrissa Pouye Hospital, Dakar, September 2023.
Photo credit: MTaPS

BEST PRACTICES/LESSONS LEARNED

- Flexible approaches can enable implementation to continue. IPC activities in Kédougou and Sédhiou have been suspended since 2022 because of an HCW strike. Following the strike, the DQSHH had competing priorities that conflicted with IPC activity implementation. Therefore, MTaPS engaged with Senegal's newly created RHDs to move forward with IPC activities. MTaPS worked with the Kédougou and Sédhiou RHDs to support IPC training sessions for HCWs followed by the IPCAF self-assessment in the two regional hospitals.
- Agile implementation approaches can allow valuable programming to move forward even as the program works with stakeholders to address hurdles which might have otherwise delayed implementation. For example, the MOH's decision to train regional health prescribers before training prescribers at hospitals would have led to additional delays in the implementation of AMS activities in MTaPS' work plan. Consequently, MTaPS pivoted to work directly with the health medical committee at the supported level 3 hospitals in Dakar (HOGIP and Abass Ndao) to organize the training of prescribers at the facility level in collaboration with the Directorate of Public Health Facilities. This has allowed MTaPS' AMS implementation to move forward even as the MOH changed its planned sequence of activities.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

FY24 work plan activities are still under review and pending approval.

Table 30. Q4, 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 for effective coordination through regular meetings under the aegis of the OH secretariat. In collaboration with Breakthrough Action, FAO, WHO, PATH, FAO, and Fleming Fund, MTaPS contributed to the development and validation of the following national documents: ▪ Senegal's annual AMR action plan: this plan will be based on the 2023-2027 NAP-AMR, which will be finalized and approved in the fourth quarter of FY23. ▪ e-SPAR report: the WHO shared the finalized updated e-SPAR report on July 11, 2023.
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 for updating Senegal's national IPC guidelines. These guidelines will be disseminated during the planned supportive supervision.
Activity 2.5.3: Support the revitalization of ICCs at two selected district and regional hospitals	5.4	2.5	MTaPS provided technical and financial support to the newly established RHDs of Kédougou and Sédhiou to perform IPCAF self-evaluation of IPC activities and trained 62 of their ICC members.
Activity 2.5.4: Support the development, dissemination, and implementation of the IPC-NSP	5.4	2.5	MTaPS supported the development and the technical validation of the IPC-NSP. Following this, MTaPS also supported the development of an operational plan for the IPC-NSP. The dissemination of the IPC-NSP is pending the plan's official approval by Senegal's Minister of Health.
Activity 3.1.1: Support the implementation of capacity-building interventions to increase compliance with antibiotic STGs	5.4	3.1	While waiting for NCAT to complete its national training plan for HFs, MTaPS supported the hospital medical commission of the HOGIP level 3 hospital of Dakar to organize the training of 42 prescribers on antibiotic STGs. MTaPS will work with the hospital medical commissions of other targeted hospitals to conduct the same training.

Q. TANZANIA

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

MTaPS' GHSA goal in Tanzania is to support AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. To achieve this, MTaPS is improving quality of care for AMR containment in the country by building the capacity of in-country stakeholders through a systems strengthening approach in three result areas: effective MSC on AMR, IPC, and optimization of antimicrobial medicines use through AMS. The PY5 implementation plan for GHSA builds on the work done in PY1–PY4. MTaPS continues to focus on strengthening the governance of the 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 is therefore a key concern with respect to AMR. MTaPS is building the capacity of HCPs to implement the IPC-related reporting system (as part of the DHIS2) to provide the MOH with data for decision-making about IPC and for the active implementation of CQI methodologies and AMS interventions in supported HFs.

CUMULATIVE PERFORMANCE TO DATE

From PY1 through PY5, MTaPS supported 43 of 62 (69%) WHO IHR benchmark actions: 10 contributing to MSC/AMR, 20 contributing to IPC, and 13 contributing to AMS. MTaPS helped the MOH improve Tanzania's JEE score for MSC by supporting 25% (1/4) of capacity level 2, 100% (4/4) of capacity level 3, 75% (3/4) of capacity level 4, and 40% (2/5) of capacity level 5 WHO benchmark actions, resulting in an overall achievement rate of 59% (10/17). In MSC, MTaPS supported the coordination of AMR activities under the AMR MCC, working under the OH approach, and the MCC held meetings to oversee and give guidance on implementing the NAP-AMR 2017–2022 and the current NAP-AMR 2023–2028 across the human health, animal health, plant, livestock, and fisheries sectors. MTaPS supported the setup and operation of TWGs which helped improve the implementation of IPC, AMS, and M&E in Tanzania. MTaPS supported the development and the operationalization of the Multisectoral AMR Communication Strategy: Moving from Awareness to Action 2020–2025, which helped improve OH communications, practices, and implementation among the MOH; Ministry of Agriculture (MOA); Ministry of Livestock and Fisheries (MLF); President's Office Regional Administration and Local Government; and the five TWGs that feed into the MCC (AMR awareness, AMR surveillance, IPC, AMS, and M&E).

In IPC, MTaPS supported 80% (4/5) of capacity level 2, 100% (6/6) of capacity level 3, 100% (5/5) of capacity level 4, and 100% (5/5) of capacity level 5 WHO benchmark actions, resulting in an overall achievement rate of 95% (20/21), which contributed to improving the country's performance from the 2016 JEE score of 3. MTaPS supported the revision of the national IPC guidelines for health care services in Tanzania (2018 edition) and their distribution across mainland Tanzania. MTaPS also conducted IPC training for 519 (296 female) HCPs. To improve IPC implementation and sustainability, MTaPS Tanzania

established and strengthened IPC committees in 10 MTaPS Tanzania-supported hospitals and conducted clinical mentorship and CQI, which brought about improved WASH and handwashing practices and reduced SSIs and other nosocomial infections. MTaPS Tanzania developed an IPC e-Learning course that equipped the Center for Distance Education in Morogoro to offer online IPC training to HCPs. Furthermore, MTaPS Tanzania supported the MOH to review the IPC training curriculum for HCPs and oriented 61 (41 female) tutors on its use. MTaPS supported the MOH to develop a national IPC M&E system. This included training RHMTs, facility IPC focal persons, and facility health management information system focal persons on the use of IPC M&E tools and reporting IPC indicators via DHIS2. MTaPS Tanzania also supported the MOH to develop an HAI surveillance system with reporting through DHIS2. All 10 MTaPS Tanzania-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 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, 67% (4/6) of capacity level 3, 43% (3/7) of capacity level 4, and 29% (2/7) of capacity level 5 WHO benchmark actions, resulting in an overall achievement rate of 54% (13/24). MTaPS Tanzania supported the MOH, MOA, and MLF in developing the AMS policy guidelines per the OH approach. MTaPS Tanzania supported the MOH in developing and disseminating the MTC guidelines as well as the STGs and the NEML for Tanzania, which included AWaRe classification of antibiotics. MTaPS trained 110 (43 female, 67 male) HCPs from 10 supported facilities on AMS—specifically on ethical prescribing and dispensing of antimicrobials. 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 national AMC in Tanzania for 2017–2022 and PPS on AMU across six referral hospitals in 2020 and two hospitals in 2023. In addition, a national hospital formulary template was developed and provided to hospitals in Tanzania to be used in developing/revising their own hospital formularies. MTaPS supported the assessment of regulations, policies, and supply chain governance related to antimicrobials in both human and animal health, which informed the development of the new NAP-AMR 2023–2028.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS provided technical support in the development of the next edition of the NAP-AMR for 2023–2028. MTaPS supported preparations for the commemoration of the WAAW on November 21-24, 2022, during which the revised NAP 2023-2028 was launched on November 22, 2022. MTaPS technically supported the AMR symposium held on November 21-22, 2022, that provided the opportunity for MTaPS and its supported sites to share experiences and best practices on implementing IPC and AMS at the national and facility level. MTaPS worked with the AMR MCC to conduct the first country self-evaluation of progress on WHO IHR capacities benchmark actions in the areas of MSC, IPC, and AMS in preparation for the second JEE that was conducted in August 2023.

MTaPS contributed to raising awareness of IPC countrywide through training of 108 journalists (43 female) to strengthen their capacity to advocate and sensitize both the community and facilities on good IPC practices. Following this training, the media began to invite IPC specialists to discuss and educate the community on all IPC/AMR-related issues. MTaPS supported MOH to develop the draft National Communication Strategy for IPC (2023-2028) that will help the MOH to disseminate harmonized IPC information for the implementation of a socially efficient and effective behavior change communication

related to IPC in Tanzania. MTaPS provided technical support through onsite mentorship of IPC and AMS via use of the Extension for Community Healthcare Outcomes platform and experience sharing meetings to 10 supported facilities on how to conduct HAI surveillance—specifically for SSIs—using the HAI Surveillance Protocol developed in Y4 with MTaPS' support, and reported to MOH at central level using the national IPC M&E reporting system on DHIS2. The mentorship contributed to increased reporting of HAI by the facilities; for example, the mean average of HAI reporting of five MTaPS-supported facilities increased from 10% in 2019 to 60% in 2023.

Dr Joseph Hokororo, the National IPC Coordinator (right), appears on the Channel Ten morning live show in Tanzania to educate the community on prevention of infectious diseases to reduce AMR. Photo credit: Johannes Msigwa, MOH

MTaPS supported the collection and analysis of AMC data for 2020, 2021, and 2022. The data were submitted to the AMS TWG and MCC in June 2023 for approval before being uploaded to the WHO Global Antimicrobial Resistance and Use Surveillance System platform. The data analysis results will be used to inform policy-level discussions and identification of possible interventions at the national level to address AMU concerns.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

In quarter 4, MTaPS Tanzania accomplished the following:

- Final review of the draft National Communication Strategy for IPC (2023–2028) that will help to guide communication on IPC and its status in the country
- Development of a training package comprising a manual and curriculum guide for training in-service HCPs on AMS. HCPs from three MTaPS-supported HFs used the materials to build their capacity to implement AMS in the work place

RESULT AREA 1: EFFECTIVE MSC OF AMR

No activities conducted this quarter.

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 Tanzania supported MOH to conduct the final review of the draft IPC communication strategy (2023–2028). Different IPC stakeholders, such as Tanzania Health Promotion Support and Afya Bora, participated in the workshop. The strategy will help the MOH to ensure that everyone has adequate information to communicate about the IPC program and status of IPC in the country, promote adherence to IPC standards at all levels, and maintain consistency in practicing IPC measures countrywide.

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

Activity 3.2.1: Support the development of AMS in-service training curriculum and training materials to enhance HR competence in AMS

In collaboration with MOH and Muhimbili University of Health and Allied Sciences (MUHAS), MTaPS developed an AMS in-service training curriculum guide and manual. The training materials were used to train 24 HCPs (10 female) from 3 MTaPS-supported HFs. This was an initial pilot training which also provided feedback that will be used to refine the training materials and methodology. This curriculum will be accredited by MUHAS and thus provide ongoing training to in-service HCPs as part of CPD.

Facilitator Samir Saitoti assists participants during a practical session as part of the AMS training in Temeke Regional Referral Hospital, Tanzania. Photo credit: Joram Adam, Maweni Regional Referral Hospital

BEST PRACTICES/LESSONS LEARNED

- When developing a training package, collaboration with an academic institution can pave the way for institutionalization. For example, after working in collaboration with MUHAS to develop the AMS learning package, the course is expected to receive accreditation and will be able to be used by HCWs to earn CPD points. CPD points motivate HCPs to enroll in the course and promote sustainable in-service learning.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

PY5 activities are completed. FY24 work plan activities are still under review and pending approval.

Table 31. Quarter 4, FY23, Activity Progress, Tanzania – GHSA

Activity	MTaPS Objective (s)	GHSA Result (s)	Activity Progress
Activity 2.2.1: Strengthen the capacity of journalists to advocate for and to increase awareness of IPC for infectious diseases in the community **Activity description:** Train journalists on IPC and support the development of the IPC communication strategy	5.4	2.2	MTaPS provided technical support in the review of the 2017 IPC/AMR communication strategy that resulted in the draft National Communication Strategy for IPC (2023–2028). The activity is completed.
Activity 3.2.1: Support the development of AMS in-service training curriculum and training materials to enhance HR competence in AMS **Activity description**: Develop curriculum and training materials for AMS in-service HCPs and train AMS teams of MTaPS-supported hospitals	5.4	3.2	A curriculum guide and training manual were developed for training in-service HCPs on AMS. Training was done for staff of 3 MTaPS-supported HFs where 24 (10 female) HCPs attended the initial pilot training which also provided feedback that will be used to refine the training materials and methodology.

FIELD SUPPORT ACTIVITIES

OVERVIEW

The goal of MTaPS' field support activities in Tanzania is to strengthen the country's pharmaceutical system to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable medical products and pharmaceutical services. MTaPS worked with the Tanzania Medicines and Medical Devices Authority (TMDA) to strengthen institutional capacity and further increase the Authority's capability to manage pharmaceutical regulatory systems by improving its marketing authorization and import processes for ARV drugs as well as enhancing its PV system using targeted interventions to enable evidence-based decision-making for patient safety. This will help maintain the TMDA's regulatory capacity maturity level 3, according to the WHO's Global Benchmarking Tool, and provide evidence to elevate the TMDA toward maturity level 4.

CUMULATIVE PERFORMANCE TO DATE

MTaPS Tanzania provided technical support to the TMDA, enhancing efficiency by strengthening the expertise and skills of professionals to ensure the quality, safety, and efficacy of medicines, such as ARVs. MTaPS helped train 52 (17 female) TMDA medicine evaluators to conduct medicine dossier assessments, which will help reduce the processing time for applications for the registration of new medicines by increasing the number of qualified assessors at the Authority. In addition, the assessors trained with support from MTaPS Tanzania will continue to train new staff and ensure sustainable knowledge transfer within the TMDA and Tanzania at large. MTaPS supported the TMDA to organize a product dossier review retreat that evaluated 50 dossiers (12 for ARVs). The trained assessors applied knowledge and practical expertise to the evaluation of the medical products. This helped to reduce the backlog of pending dossiers for medicines used to manage HIV/AIDS and increase expeditious authorization of ARVs and access to quality-assured ARVs and other medicines.

MTaPS Tanzania 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), which allowed incorporation of four pediatric experts into the committee. VTC members were trained in PV and now have the capacity to assess pediatric ADRs and provide feedback to ADR reporters. MTaPS Tanzania also supported the development of guidelines for monitoring the safety of medicines used in the pediatric population, which will help improve monitoring medicines, including those for chronic diseases such as HIV/AIDS, and monitoring children's susceptibility to ADRs.

The TMDA, with support from MTaPS, trained 27 TMDA staff (10 female), external assessors, and interns to assess PSURs and risk management plans (RMPs), thus increasing the number of competent assessors at the TMDA. This support has helped the TMDA improve its monitoring, reviewing, and reporting of safety issues arising from medicines used by the public, including the pediatric population.

MTaPS facilitated a process improvement mapping for the registration and importation of ARVs for the public sector, which aimed to identify barriers and bottlenecks in the supply chain of ARVs and mitigate them by engaging both the TMDA and medicines importers. MTaPS facilitated a stakeholder validation

workshop that proposed findings, challenges, and recommendations for improving the process for registration and importation of ARVs for the public sector. The activity helped to create awareness of bottlenecks and appropriate steps to ensure product quality/safety in registering and importing medicines; increase opportunities to streamline the regulatory environment and guidelines for ARVs and improve efficiency during clearance of imported medicines, including ARVs; and eliminate wastage of products for managing HIV/AIDS and other diseases. The interventions will ultimately improve both public access to quality-assured medicines required for treating HIV and treatment outcomes, enabling a better quality of life for people living with HIV and other diseases.

MTaPS provided technical support to the TMDA to train 26 clinical trial officers (16 female) on evaluation of clinical trial applications (CTAs) and inspection of clinical trial sites for good clinical practices (GCP) compliance. Participants were trained on the review of pre-clinical, clinical, and manufacturing data and developing scientific assessment reports following applicable regulations and guidelines that contributed to improving the competency of TMDA assessors in analyzing and writing summary assessments based on clinical trial assessment data. The CTA trainees further trained on inspection of clinical trial sites for GCP compliance for 25 (13 female) participants. In addition, the trainees gained practical experience by conducting inspections of two clinical sites located in the Dar es Salaam region: Mwananyamala Regional Referral Hospital and Muhimbili University of Health and Allied Sciences. The intervention contributed to efforts to strengthen clinical trials control in Tanzania and solidify TMDA's maturity level 3 rating for the following WHO GBT sub-indicator CT03.01: Enough competent staff (education, training, skills, and experience) are assigned to perform clinical trials oversight activities.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS Tanzania provided technical support to the TMDA to train three qualified persons responsible for pharmacovigilance (QPPV) from various marketing authorization holders (MAHs) on coordination of PV activities with regards to approved medicines including requirements for completing and submitting PSURs and RMPs per TMDA regulations. Additionally, MTaPS supported the training of TMDA junior assessors on assessing PSURs and RMPs. These trained assessors conducted hands-on assessment of 18 RMPs and 76 PSURs to address the existing backlog of PSUR and RMP assessment. This enabled strengthening of the PV system in line with the existing TMDA regulations.

MTaPS supported the TMDA to train HCPs from PV centers and TMDA zonal offices on advanced PV to strengthen their PV system and conduct PV investigations at their respective regions. Subsequently, 10,080 copies of PV-related guidelines, safety manuals, and reporting forms were printed and distributed. Additionally, HCPs, patients, and clients of five regions were sensitized and encouraged to report AEFIs and ADRs they encounter.

QUARTER 4/YEAR 5 ACHIEVEMENTS AND RESULTS

In quarter 4, MTaPS Tanzania accomplished the following:

- Trained QPPVs on PV principles and junior assessors on assessment of PSURs and RMPs that contributed to strengthening the functionality of the national PV system with content and format aligned to the existing TMDA regulations
- Sensitization of HFs, clients, and patients at facilities to report AEFIs and ADRs encountered and distribution of 10,080 PV-related guidelines, safety manuals, and reporting forms to HFs

RESULT AREA 2: SYSTEMS TO PROVIDE PATIENT-CENTERED CARE AND SERVICES STRENGTHENED

Activity 2.1.1: Support capacity building for PV PSUR and RMP implementation by domestic pharmaceutical manufacturers/MAHs and evaluation by the TMDA

MTaPS provided technical support to the TMDA to train 33 QPPVs (16 female) from August 14-15, 2023. The QPPVs were trained on coordination of PV activities with regards to the approved medicines they are managing for their MAHs; the establishment, management, and monitoring of PV safety profile; the development and submission of PV documents including PSURs and RMPs; and how to conduct post-authorization safety studies. The training will help the QPPVs support their MAHs to set up a functioning internal PV system for follow-up on safety of their medical products and to submit PSUR and RMP documents on time with the required content and format as per the existing TMDA regulations.

MTaPS supported the TMDA to train 24 TMDA junior assessors (6 female) on assessing PSURs and RMPs. The training capacitated the assessors with knowledge and skills on the assessment of PSURs and RMPs relating to use of medicinal products submitted by MAHs and/or QPPVs. The training included hands-on assessment of RMPs and PSURs to address their existing backlog where the assessors effectively conducted assessment of 76 PSURs and 18 RMPs.

Activity 2.1.2: Provide support for strengthening of PV at referral (PV centers) and at TMDA zonal offices

MTaPS Tanzania technically supported the TMDA to train 30 HCPs (16 female) from PV centers and TMDA zonal offices on advanced PV training to strengthen their PV centers through conducting PV investigations at the regions. The activity was followed by printing and distribution of 10,080 PV-related guidelines, PV safety manual, and PV reporting forms to HFs as well as sensitization of HFs in five regions (Dar es Salaam, Pwani, Iringa, Njombe, Singida) on PV reporting and encouraging clients and patients that were encountered at the facilities to report any AEFIs and ADRs that they experience.

An MTaPS-trained PV investigation team (standing) conducts sensitization for HCPs and meets clients at Zinga dispensary reproductive and child health clinic in Bagamoyo district, Pwani region, Tanzania. Photo credit: Stephano Simba, MTaPS

BEST PRACTICES/LESSONS LEARNED

- None this quarter.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

PY5 activities are completed. FY24 work plan is under development.

Table 32. Quarter 4, FY23, Activity Progress, Tanzania – Field Support

Activity	MTaPS Objective (s)	GHSA Result (s)	Activity Progress
Activity 2.1.1: Support capacity building for PV PSUR and RMP implementation by domestic pharmaceutical manufacturers/MAHs and evaluation by the TMDA **Activity description:** Development of training materials for establishment of a functioning PV system and hands-on preparation of PSUR and RMP documentation; training of junior assessors and QPPVs on PV principles and submission and evaluation of PSURs and RMPs	2.4	N/A	Trained 33 QPPVs (16 female) and 24 junior assessors (6 female) to help improve quality of RMP and PSUR reporting and reduce backlog of PSUR and RMP assessment
Activity 2.1.2: Provide support for strengthening of PV at referral (PV centers) and at TMDA zonal offices **Activity description:** Support the TMDA to strengthen its PV centers through advanced training of people from referral PV centers and TMDA zonal offices; support the implementation of training sessions for zonal PV officers to sustain their understanding of PV functions; print and distribute the PV-related guidelines, safety manual, and reporting forms to HFs to improve the PV system in Tanzania	2.4	N/A	Trained 30 (16 female) PV investigation team members and conducted PV sensitization in 5 regions to improve assessment and reporting of ADRs and AEFIs in Tanzania

R. UGANDA

GHSA ACTIVITIES

OVERVIEW

In the 2017 JEE assessment, Uganda achieved a score of 3 ("developed capacity") for both IPC and AMS. MTaPS aims to support Uganda in combatting the emergence and spread of AMR by enhancing the capacity of in-country stakeholders and HCFs through a health system-strengthening approach. This includes implementing Uganda's NAP-AMR and working toward achieving a higher JEE score, which would result in an improvement in the WHO Benchmarks for IHR Capacities. MTaPS Uganda offers direct technical support to GOU MDAs in three key areas of the GHSA AMR action package: optimizing AMU through AMS, enhancing IPC practices, and strengthening government-led MSC for the national AMR program through the NAMRSC of the OHP.

CUMULATIVE PERFORMANCE TO DATE

As of June 2023, MTaPS has supported Uganda to improve its JEE (version 2) score for MSC/AMR by assisting with 50% (2/4) of level 2 capacity actions, 50% (2/4) of level 3 actions, and 75% (3/4) of level 4 actions. MTaPS collaborated with the Uganda OHP TWC to establish the NAMRSC and its TWCs. In addition, MTaPS has acknowledged the contributions of two female leaders and advocates for AMR in Uganda, highlighting their efforts to promote gender equity in leadership roles. With MTaPS' support, the ASO TWC produced three biannual AMS newsletters and held regular meetings.

In IPC, as of June 2023, MTaPS has supported 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 in conducting 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 99 mentorship visits in 13 HFs, reaching 2,546 HCWs (56% female, 44% 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 knowledge to 356 district health team members (85 female, 271 male), 277 HFs, and 396 HCWs (226 female, 170 male).

In the area of AMS, as of June 2023, MTaPS has supported Uganda in improving 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 toward 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 in developing 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 (import data) for 2019–2022. MTaPS assessed AMS

policies, the regulatory framework, and the supply chain as well as existing systems for monitoring AMU in humans and animals in both the 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, in developing 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 in developing the national IPC strategy for the agricultural sector. These activities support completion of actions under capacity level 2 on the JEE-2.

YEAR 5 ACHIEVEMENTS AND RESULTS

MTaPS collaborated with Makerere University to support the ASO TWC of the NAMRSC in publishing the third and fourth editions of the multisectoral biannual AMS newsletter. The AMS newsletters are a platform for dissemination of key NAP-AMR activities and information exchange that help to build human resource capacity through better sharing of data and use of data for decision making for AMR, hence supporting progress toward achieving JEE-2 capacity level 3 and advance toward JEE-2 capacity level 4 for AMR coordination.

MTaPS supported the MOH and the NAMRSC in designating MTaPS-supported hospitals as COEs for AMS for outcome and impact assessment for AMS. A COE for AMS is an HCF that implements best practices in AMS and has emerged as a leader and reference standard to guide AMS practice. Designating hospitals as AMS COEs is expected to contribute to cost reduction and cost optimization due to reduced expenditure on antimicrobials, shorter hospital stays for patients, and reduced incidence of resistant infections and HAIs, as well as provide evidence-based practice that is context specific and scalable to other and lower-level HCFs.

MTaPS supported the NAMRSC of the OHP in reviewing the implementation of the NAP-AMR. The review established the status of implementation of the NAP-AMR and the WHO IHR benchmarks, documented challenges, made actionable recommendations for the next NAP-AMR, and mapped potential funding for NAP-AMR activities. The results of the NAP-AMR review were disseminated and validated by key stakeholders.

MTaPS disseminated the results of its program implementation in the supported HFs to stakeholders with the goal of validating and sharing program results in the lead-up to MTaPS' closeout in the country.

Q4/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 the national and subnational levels and share the newsletter on the documentation platform (Y4)

MTaPS collaborated with Makerere University and the ASO TWC of the NAMRSC to publish the fourth edition of the biannual AMS newsletter. This publication serves as a crucial platform for sharing information on AMR activities at both the national and subnational levels. The newsletter facilitates

information exchange among the three sectors (MSC, IPC, and AMS) and promotion of the implementation of NAP-AMR activities.

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.

Following data collection from various stakeholders across the country in quarter 2, representing the human health, animal health, and environmental health sectors, MTaPS, working with the NAMRSC of the OHP, developed a draft report demonstrating the status of and barriers to NAP-AMR implementation (Table 33). Additionally, the report details the status of implementation of IHR capacities and actionable recommendations for NAP-AMR implementation, and it maps out potential sources of funding for AMR implementation in Uganda. During Q4, MTaPS disseminated the report and subsequently validated the results with various stakeholders.

Table 33. Key findings of the NAP-AMR review

Overall status of NAP-AMR implementation	▪ The NAP-AMR (2018–2023) was well aligned to the global AMR action plan ▪ Inadequate consultation, involvement, and implementation at the subnational level ▪ National coordination of AMR activities recorded an overall modest level of advancement (score of 2: some attributes achieved, and a few others commenced) in the last 4 years
Sector performances	▪ The highest level of advancement was attained in the human health sector, with a consolidated score of 3 (developed capacity) across the five objectives of the NAP. ▪ Both the animal health and fish sectors showed limited capacity. ▪ In the crop sector, the NAP-AMR was not adopted; hence, no technical capacity was built. ▪ In the water and environment sector, the highest score, 3, was attained in the surveillance objective, but no capacity was registered across the three other objectives of the NAP.
Funding	▪ Less than 10% of the approximately USD 206 million proposed 5-year investment required to implement the AMR-NAP was directly invested.
Barriers to NAP-AMR implementation	▪ Lack of OH policy, absence of SOPs/guidelines for AMR coordination mechanisms at both the national and subnational levels ▪ Lack of direct government financial support to the national OHP (NOHP) ▪ Informal human resources dedicated to NAP-AMR implementation with no clear TOR, key performance targets, or remunerations, hence questionable sustainability of operations of the NOHP beyond donor funding
Recommendations	▪ Involve all stakeholders at the national and subnational levels in drafting and dissemination of the next NAP-AMR ▪ Diversify AMR funding streams with GOU as a lead sponsor ▪ Mainstream the NOHP under the office of the prime minister and allocate financial votes for its operations ▪ Prioritize AMR-NAP strategic activities in the work plans of participating MDAs ▪ A TWC on resource mobilization and monitoring and evaluation should be created to strengthen resourcing and real-time tracking of implementation of the next NAP-AMR. ▪ The next NAP-AMR should align strategic priority activities to the mandates of the collaborating sectors for full ownership and adoption.

RESULT AREA 2: IPC

Activity 2.5.1: Improve the quality of health care services through strengthening IPC at COEs

During Q4, MTaPS disseminated the results of assessments of programmatic outcomes and impact in six supported HFs as part of project closeout activities. The results were subsequently validated by the hospital IPC committees and administration, and recommendations for IPC sustainability were adopted, including support from the regional implementing partners.

RESULT AREA 3: OPTIMIZE USE OF ANTIMICROBIAL MEDICINES 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

In Q3, MTaPS, working with the MOH and ASO TWC, undertook a qualitative evaluation of AMS interventions in six MTaPS-supported HFs. The results demonstrated perceived benefits of AMS interventions in the HFs, including strengthening of hospital AMS programs, promotion of AMU, and improved awareness about AMR and AMS among HCWs. In Q4, the results of this assessment were disseminated by MTaPS to and validated by the hospital AMS teams and MTCs in the six supported HFs, and the recommendations were subsequently adopted to improve and sustain hospital AMS programs.

Activity 3.5.1: Designate hospitals as COEs in AMS

MTaPS, working with the MOH and NAMRSC, developed and applied a tool for designating HFs as COEs for AMS. The tool allows for assessment of AMS structures and outcomes and impact of AMS interventions in hospitals. MTaPS disseminated the results of this assessment in the six hospitals, and the designated AMS COEs were recognized by various health stakeholders at the national and subnational levels. During these meetings, participants developed sustainability plans to maintain best AMS practices in these facilities.

BEST PRACTICES/LESSONS LEARNED

- By leveraging the expertise of the NOHP, NAMRSC, and its TWCs, the GOU can strengthen support for implementation of AMR control efforts, including AMS and IPC.
- Involvement of hospital leadership in endorsing and investing in IPC and AMS programs enhances the credibility of hospital AMS and IPC programs and bolsters the capacity of the AMS/IPC teams and committees to implement AMS and IPC interventions.
- Despite resource limitations, it is possible to build effective hospital AMS and IPC programs that can improve patient outcomes, ensure patient safety, optimize AMU, and control AMR.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

No further activities are planned.

Table 34. Quarter 4, 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 report underwent technical review and is being prepared for editorial review. The results and report were validated by stakeholders following technical review. The report will be printed and handed over to the NAMRSC and NOHP.
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	The report completed technical and editorial review and was submitted to the Mission. The results were validated and disseminated to the health facilities and recommendations for sustainability were adapted.
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	The report completed technical and editorial review and was submitted to the Mission. The results were validated and disseminated to the health facilities and recommendations for sustainability were adapted.
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	5.4	3.2	The tool is currently undergoing editorial review. The report was completed and submitted to the Mission. The results of AMS COEs were validated and disseminated in the health facilities and AMS COEs were acknowledged.

5. PROGRESS BY REGIONAL BUREAUS

A. ASIA REGIONAL BUREAU

OVERVIEW

MTaPS set out to advance pharmaceutical management systems within the Asia region by strengthening the capacity to institutionalize transparent and evidence-based decision making and use robust information to define and cost pharmaceutical coverage and improving medicine regulatory capacity and pharmaceutical-sector governance.

CUMULATIVE PERFORMANCE TO DATE

Under Objective 1, MTaPS played a pivotal role in advancing HTA in Asia. This included collaborative development of an extensive HTA roadmap in partnership with global thought leaders, fostering institutionalization of HTA practices in the region. MTaPS conducted in-depth assessments of nine countries/territories, introducing the innovative HTA institutionalization canvas to comprehensively evaluate HTA systems. Supported by funding from the Asia Bureau, MTaPS provided hands-on support to countries, resulting in HTA institutionalization in Indonesia and guidance for medical device assessment in the Philippines. The evaluation of the need for an HTA hub led to a recommendation to strengthen HTAsiaLink's existing initiatives, aligned with the commitment to HTA best practices in Asia.

Under Objective 2, MTaPS made significant progress in implementation of the OHT, conducting regional and in-person training sessions in several countries. This included the completion of the Bangladesh Social Health Protection (SHP) benefits costing and development of dissemination materials for pharmaceutical expenditure (PE) tracking standardization in the Asian region. Notably, MTaPS completed PE tracking in Bangladesh for health commodity expenditure, producing a comprehensive report.

Under Objective 3, MTaPS used a mapping exercise to identify 18 key entities (initiatives, networks, and stakeholders), including the ASEAN and WHO Collaborative Procedure for Accelerated Registration, that strengthen pharmaceutical regulatory systems and potential opportunities for collaboration. Additionally, competency mapping for NRAs in Nepal, Bangladesh, and the Philippines was conducted, aligning with the WHO global competency framework. With MTaPS support, these NRAs developed capacity-building plans to enhance workforce competency toward the achievement of ML 3. MTaPS also facilitated technical capacity-strengthening trainings on good manufacturing practice, vaccine dossier evaluation, and good review practices for medical product registration.

Under Objective 4, MTaPS collaborated with the Philippines DOH to evaluate procurement laws, rules, and policies, with a focus on enhancing strategic procurement mechanisms, particularly the PPM. The Philippines DOH submitted a policy proposal for PPM implementation to the Government Procurement Policy Board (GPPB) for approval in 2023. To mitigate potential delays, additional activities were identified for Y5, including generating evidence for selecting priority medicines and facilities for piloting PPM, assessing the capacity of DOH-retained hospitals and LGUs for PPM. In addition, MTaPS, in partnership with WHO and other stakeholders, developed COI guidance resources.

YEAR 5 ACHIEVEMENTS AND RESULTS

Under Objective 1, in pursuit of advancing HTA in Asia, MTaPS conducted stakeholder key informant interviews and analyzed and validated the findings. MTaPS made a presentation summarizing the HTA Asia hub report at the International Health Economics Association Congress. MTaPS further expanded its impact in Indonesia and the Philippines through cross-country peer learning initiatives, facilitating communication channels and planned events to enhance HTA practices. MTaPS also developed an HTA business model canvas, offering a practical tool for countries to implement or advance HTA.

Under Objective 2, the implementation of the OHT in Bangladesh saw significant progress, with data incorporation completed and preliminary results reported. MTaPS developed capacity strengthening materials for standardizing PE tracking in the Asia region and completed PE tracking for MNCH products in Bangladesh. Additionally, MTaPS developed a standard process guideline for PE tracking of MNCH products in Bangladesh.

Under Objective 3, MTaPS collaborated with various stakeholders to bolster capacity within the medical product regulatory systems of ASEAN member states. MTaPS organized a regional TOT course focused on evaluation of biological products and vaccines, enhancing the knowledge and skills of staff from NRAs. MTaPS' regional training course on good review practices for dossier evaluation processes in ASEAN member states further contributed to strengthening regulatory capacities. Additionally, MTaPS worked closely with the WHO Southeast Asia Regulatory Office (SEARO) and SEARN to develop a regional capacity-building strategy, endorsed by the Assembly of the Members of SEARN, to structure capacity building in regulatory functions. With MTaPS' support, capacity-building plans were developed for the NRAs of Bangladesh, Nepal, and the Philippines to address competency gaps and improve regulatory efficiency and effectiveness.

Under Objective 4, MTaPS conducted a comprehensive analysis of provisions and policy gaps related to procurement mechanisms, focusing on the introduction of PPM. A policy proposal for PPM implementation was submitted by the DOH to the GPPB and is under review. MTaPS is collaborating with IQVIA to conduct an assessment that will guide DOH in selecting commodities and facilities and developing a generic implementation plan for PPM piloting once approved by GPPB. This multiphase approach includes desk reviews, data collection, analysis, and interviews with selected LGUs to establish criteria for selecting health products and facilities for the pilot program.

Q4/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: Continue to explore and support the development of an HTA hub or collaborative institution in the Asia region and dissemination of products

MTaPS conducted a comprehensive study to assess the demand for a regional HTA hub in the Asia region and identify specific needs. The study employed mixed methods, including literature reviews, electronic surveys, and key informant interviews. The resulting assessment report was submitted to

USAID and published on the MTaPS website. During the HTAsiaLink Conference in Malaysia in September 2023, MTaPS, HTAsiaLink, and the Health Intervention and Technology Assessment Program (HITAP) discussed the possibility of collaborating to support HTAsiaLink as the regional HTA hub. This collaboration aims to develop an integrated regional strategy for building HTA capacity, improving the political economy for HTA, gaining buy-in from key policymakers, and providing targeted support to regional priorities. Progress on this collaboration will be reported at the May 2024 Priorities Conference in Bangkok, Thailand. MTaPS also actively participated in global and regional dissemination efforts. It presented papers at the International Health Economics Association Conference in Cape Town, South Africa, and the HTAsiaLink Conference in Malaysia, where it received an award for one of its presentations. Three abstracts have been accepted for publication in the *International Journal of Technology Assessment in Health Care*.

Activity 1.2.1: Support cross-country learning exchange and in-person technical assistance on HTA in the Asia region

At the HTAsiaLink Conference in Malaysia in September 2023, MTaPS organized a meeting between Indonesia MOH and the Philippines Health Technologies Assessment Division to share current methods and processes for HTA in their respective countries. The countries agreed to hold a cross-country learning exchange event in Manila in November 2023. The week-long event will include dissemination of the Philippines HTA guideline development on medical devices and sharing of advanced methods (i.e., RWE and MCDA) conducted in the country. MTaPS will guide the countries to develop action plans at the end of this event.

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: Build capacities related to the use of OHT to cost pharmaceutical benefits packages

MTaPS conducted technical training on the utilization of the OHT for pharmaceutical benefits package costing. Subsequently, the tool was implemented in Bangladesh to cost the country's SHP benefits package. Initially, 124 interventions were identified for costing, but after a thorough review and consultations, 38 interventions with significant incidence rates in SHP implementation areas were shortlisted. Disease-related data were collected from several HCFs, and 26 interventions were selected for cost analysis. MTaPS completed the costing process, delivering a first draft of the costing report along with an Excel database containing SHP costing data and two additional costing scenarios.

Activity 2.2.1: Develop materials for standardization of PE tracking in the Asia region

MTaPS developed comprehensive PE tracking training materials to support capacity strengthening in the Asia region. Learning and experiences were used by MTaPS to develop the PE training materials, including learning from PE tracking in Burkina Faso, Benin, and Vietnam. MTaPS used the material for capacity strengthening training in Indonesia for 44 participants (28 female and 16 male). In Bangladesh, MTaPS presented these training materials to the Health Economics Unit and other stakeholders for their use in supporting capacity strengthening for other units in the MOH.

OBJECTIVE 3: BUILD HARMONIZED, SUSTAINABLE, AND RESILIENT MEDICINE REGULATORY SYSTEMS IN ASIA

Activity 3.1.1: Develop capacity-building plans and support implementation for the countries in which competency mapping exercises were conducted and develop a regional capacity-building strategy for SEARN

In collaboration with the WHO SEARO, MTaPS played a key role in supporting the development of a regional capacity-building strategy for SEARN member states. MTaPS participated in meetings and discussions focused on drafting the strategy and contributed to the finalization of the draft. The strategy was presented to and adopted by the Assembly of the Members of SEARN during a meeting held in Jakarta, Indonesia, from July 26 to 27, 2023. Furthermore, MTaPS collaborated with the Directorate General of Drug Administration, Bangladesh, and the Food and Drug Administration in the Philippines to review and validate proposed training plans stemming from the competency mapping exercise conducted in PY4. The validation process resulted in prioritized capacity development topics and training plans for these regulatory agencies.

Activity 3.3.1: Disseminate strategies and lessons learned for effective medicine registration harmonization in the Asia region

In July 2023, MTaPS hosted a regional webinar series entitled "Strengthening Pharmaceutical Regulatory Systems in the Asian Region." This event featured speakers from various organizations, including WHO, SEARO, SEARN, PQM+, and Therapeutic Goods Administration (TGA), as well as NRAs from Nepal and Bangladesh. The webinar aimed to provide insights into ongoing efforts to enhance pharmaceutical regulatory systems in Asia, identify existing needs and gaps, and discuss strategies for improvement. The overarching theme emphasized strengthening these systems to ensure greater access to safe, quality-assured, and efficacious medicines in the region. MTaPS shared valuable resources developed in collaboration with local and international stakeholders, including regional networks like ASEAN and SEARN. Additionally, MTaPS completed a risk communication plan and a regional guidance document for the implementation of competency mapping that provides guidance for NRAs on conducting competency assessments and developing capacity training plans, as well as available training courses in the domain areas offered by various organizations.

OBJECTIVE 4: PHARMACEUTICAL-SECTOR GOVERNANCE IN ASIAN COUNTRIES STRENGTHENED

Activity 4.1.1(a): COI manual and e-Learning course development

MTaPS conducted a thorough evaluation of an alpha version of the course developed as part of the JLN learning exchange, involving 36 participants from eight countries, including health care and management specialists. The feedback collected between July 12 and 25, 2023, showed high satisfaction with the course content. Approximately 91% of 8 respondents found modules 1 to 3 and supplementary modules very useful or extremely useful, and 89% strongly agreed that workbook questions enhanced their learning. Module 7 and 8 presentations received praise, with an average of 96% of respondents rating them as extremely useful or very useful. Based on this feedback, the course underwent necessary updates and is now being uploaded to the OpenWHO learning platform with technical approval by WHO.

Activity 4.1.1(b): Conduct a review/assessment on procurement policy, organizational capacity, and technical competency in the Philippines

In Q4, MTaPS conducted an internal validation and finalization of a legal analysis report on procurement policies, organizational capacities, and technical competencies in the Philippines. Unfortunately, the planned multisectoral workshop for document validation could not proceed due to conflicting priorities among government counterparts. MTaPS collaborated with DOH PS and engaged IQVIA, an MTaPS subcontractor, to conduct an assessment to help DOH generate evidence for selecting commodities and facilities and developing a generic implementation plan for piloting PPM, subject to GPPB approval. The initial phase included desk reviews, data collection, preliminary analysis of health product categories, and the establishment of initial selection criteria. Interviews with selected LGUs were also conducted to finalize the criteria for selecting health products and facilities for the pilot program.

BEST PRACTICES/LESSONS LEARNED

- In supporting HTA hub activities in Asia, productive collaboration with HTAsiaLink is essential. This can be achieved by supporting underrepresented voices in Asia that have not yet participated in the HIPER Health for All Conference and Priorities 2024 Conference. It is crucial to work toward developing the HTA registry with HTAsiaLink and diplomatically navigate differences in perceived needs by regional stakeholders. Such an approach ensures that the activities are designed to meet the actual needs of the stakeholders, so that the support provided is effective and sustainable. Additionally, the collaboration with HTAsiaLink will boost participation from individuals and countries not yet in the HTA ecosystem.
- Interaction with country-based individuals during the COI e-Learning development process was critical to ensure that the content had workplace relevance.
- It is important to request WHO feedback and approvals as early as possible and to develop contingencies that take into account potential delays on the WHO side. For example, the process of receiving WHO feedback and approvals for the COI training materials was protracted when WHO was responding to the COVID-19 pandemic and monkeypox outbreak.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity and description	Date
(PY5) Activity 3.1.4: Global and regional dissemination of MTaPS regulatory system-strengthening work in Asia **Activity description:** Development of two manuscripts, "Promoting convergence and Harmonization of Medicines Registration in Asia" and 'Regulatory Workforce Development in Asia," both submitted to peer-reviewed journals	December 2023
(PY5) Activity 4.1.1(a): COI manual and e-Learning course development **Activity description:** Execute on storyboard formatting remediations and finalize the upload to OpenWHO	December 2023

Table 35. Quarter 4, FY23, activity progress, Asia Regional Bureau

Activity	MTaPS objective(s)	Activity progress
Activity 1.1.1: Continue to explore and support the development of an HTA hub or collaborative institution in the Asia region and dissemination of products	5.1	MTaPS conducted a comprehensive study to assess the demand for a regional HTA hub in the Asian region and identify specific needs. This assessment involved mixed methods, including literature reviews, surveys, and interviews. The resulting report was submitted to USAID and published on the MTaPS website. Additionally, MTaPS discussed potential collaboration with HTAsiaLink and HITAP at the HTAsiaLink Conference in Malaysia to support HTAsiaLink as the regional HTA hub, aiming to enhance HTA capacity and regional initiatives.
Activity 1.2.1: Support cross-country learning exchange and in-person technical assistance on HTA in the Asia region	5.1	At the HTAsiaLink Conference in Malaysia in September 2023, MTaPS facilitated a meeting between the MOHs from Indonesia and the Philippines to exchange knowledge on their respective HTA processes. Both countries agreed to organize a cross-country learning exchange event in Manila in late November 2023, focusing on sharing expertise, including advanced HTA methods like RWE and MCDA.
Activity 2.1.1: Build capacities related to the use of the OHT to cost pharmaceutical benefits packages	1.1, 2.3, 4.1, 5.3	MTaPS provided technical training on the use of the OHT for pharmaceutical benefits package costing. This tool was then applied in Bangladesh to cost their SHP benefits package. After careful review and consultation, 38 interventions with significant impact in SHP areas were selected for cost analysis, resulting in the completion of the costing process with a draft report and related data.
Activity 2.2.1: Develop materials for standardization of pharmaceutical expenditure tracking in the Asia region	1.1, 2.3, 4.1, 5.3	MTaPS developed comprehensive training materials for PE tracking to enhance capacity strengthening in the Asian region. These materials were based on experiences and lessons learned from PE tracking in countries like Burkina Faso, Benin, and Vietnam. A training was conducted in Indonesia for 44 participants and the training resources were shared with stakeholders in Bangladesh to support capacity strengthening.

Activity	MTaPS objective(s)	Activity progress
Activity 3.2.2 (Y4): Develop and continuously review regional training plans for NRA staff to build their technical capacity on key aspects of registration	2.4.3	A regional guidance document for the implementation of competency mapping has been developed and submitted for editorial review.
Activity 3.3.1 (Y4): Support the development of a risk communication plan	2.4.3	A risk communication plan has been developed and submitted for editorial review.
Activity 3.1.1 (Y5): 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	Training plans have been validated and planned for implementation in PY6.
Activity 3.3.1 (Y5): Disseminate strategies and lessons learnt for effective medicines registration harmonization in Asia region	2.4.3	A regional webinar has been done. Manuscript writing has been carried over to PY6.
Activity 4.1.1(a): Conduct a review/assessment on procurement policy, organizational capacity, and technical competency in one Asian country (the Philippines)	4.1.1(a)	MTaPS conducted internal validation and finalization of a legal analysis report on procurement policies, organizational capacities, and technical competencies in the Philippines. It initiated an assessment, in collaboration with DOH PS and IQVIA, to gather evidence for selecting commodities and facilities and developing a generic implementation plan for piloting PPM. This involved desk reviews, data collection, preliminary analysis by health product category, and interviews with selected LGUs to finalize criteria for selecting health products and facilities for the pilot.
Activity 4.1.1(b): COI manual and e-Learning course development	4.1.1(b)	MTaPS conducted an extensive evaluation of the COI e-Learning course, involving 36 participants from eight countries. Feedback collected between July 12 and 25, 2023, indicated high satisfaction, with approximately 91% finding modules 1 to 3 and supplementary modules very useful or extremely useful, and 89% strongly agreeing that workbook questions enhanced their learning. Modules 7 and 8 received praise, with an average of 96% of respondents rating them as extremely useful or very useful. The course is now undergoing necessary updates and is set to be uploaded onto the OpenWHO.

6. PROGRESS IN ACHIEVING CONTRACT DELIVERABLES

Table 36. FY23 Annual and Quarter 4 progress in achieving contract deliverables

Contractual Deliverable	Due Date	Submission Date	Comments
Annual Work Plans	8/31/23	8/31/23	
Quarterly Performance Report, PY5 Quarter 3	8/31/23	8/15/23	The deadline for the PY5 Q3 report was revised to 8/31/23 per correspondence with Mr. Imran Mahmud on 7/6/23. MSH submitted the report in advance of the agreed-upon submission date.
Quarterly Performance Report, PY5 Quarter 2	4/30/23	4/27/23	
Subcontract reporting (eSRS)	4/30/23	4/28/23	
Reporting of foreign taxes	4/16/23	4/14/23	
Quarterly Performance Report, PY5 Quarter 1	2/28/23	2/28/23	The deadline for the PY5 Q1 report was revised to 2/28/23 per correspondence with Mr. Imran Mahmud on 2/22/21. The PY5 Q1 report was resubmitted with updated annexes on 4/6/2023.
Environmental Mitigation and Monitoring Report	11/30/22	11/29/22	
Quarterly Performance Report, PY4 Quarter 4 and Year 5 Annual Report	10/31/22	10/31/22	
Subcontract reporting (eSRS)	11/9/22	11/7/22	The Small Business Administration extended the time for filing by 10 days past the standard deadline for FY 2022 reports.
Annual report of government property in contractor's custody	N/A—annual submission	10/28/22	There is no specified deadline in the contract. Annual report is required, so MSH submits the report by 10/31 each year.

7. PROGRAM SPOTLIGHT

MTaPS Builds Local Capacity to Strengthen Pharmacovigilance and Safety Surveillance in Kenya

Identification of Capacity Gaps Supports Aim to Qualify as a Vaccine Manufacturing Country

Reaching Remote Areas to Strengthen Infection Prevention and Control and Antimicrobial Stewardship Practices in Tanzania

Empowering Media in Nepal to Champion Public Awareness of Antimicrobial Resistance

Document Management Repositories Increase Efficiency at Nepal's Department of Drug Administration

USAID
FROM THE AMERICAN PEOPLE

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

SUCCESS STORY

MTaPS Builds Local Capacity to Strengthen Pharmacovigilance and Safety Surveillance in Kenya

USAID MTaPS is supporting the Pharmacy and Poisons Board of Kenya to strengthen the regulatory component of pharmaceutical systems in Kenya. The efforts focus on developing capacity for pharmacovigilance to improve patient safety.

PHOTO CREDIT: ELIAS ONYANGO, MTAPS KENYA

Participant receives certificate after QPPV training on June 9, 2023.

Background

Pharmacovigilance broadly relates to the detection, assessment, understanding, and prevention of adverse effects or any other medicine- or vaccine-related problems. In countries with strong regulatory systems, it is mandatory to appoint qualified persons for pharmacovigilance (QPPV) who are personally responsible, by law, for the safety of the human medicines and vaccines marketed by their pharmaceutical companies.

Pharmacovigilance and safety surveillance following the market authorization of health products and technologies (HPTs) are an integral part of the health care system to promote patient safety. The HPTs include but are not limited to medicines, COVID-19 vaccines, and other vaccines.

In Kenya, the Pharmacy and Poisons Board (PPB) is the national body that regulates the practice of pharmacy and the manufacture and trade of drugs, including vaccines, to ensure the safety of the population. The Pharmacy and Poisons (Pharmacovigilance and Post Marketing Surveillance System) rules state that medicine marketing authorization holders (MAHs) must appoint QPPVs, while at subnational/county levels, a designated county vigilance focal person (CVFP) is required to coordinate the implementation of the vigilance and surveillance activities related to the health products and technologies available for use within their counties.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact: Ndinda Kusu,
Country Project Director,
USAID MTaPS Kenya
nkusu@mtapsprogram.org

A Foundation for Increased Collaboration

In 2021, Kenya upgraded the web-based Pharmacovigilance Electronic Reporting System (PvERS) to include the reporting of adverse events following immunization, medication errors, transfusion reactions, and medical device incidents. The US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program supported the PPB in 2022 in developing a mobile Pharmacovigilance Electronic Reporting System (mPvERS), which interlinks with PvERS and allows for the real-time transmission of pharmacovigilance reports from handheld mobile devices to enable users from remote parts of the country to easily access the system. In 2023 Kenya's president, His Excellency William Ruto, launched the PvERS as part of the digital government services and systems to be accessed through the e-citizen. The partnership between MTaPS and the Kenya PPB, rooted in localization of interventions and the pursuit of sustainability, paved the way for more collaboration.

Collaborating on Curriculum Development

In response to these requirements, MTaPS partnered with the PPB and the University of Nairobi's Department of Pharmacy to develop a curriculum and conduct the inaugural QPPV training for nominated staff from MAHs.

During two weeks of face-to-face training, the course incorporated various teaching and learning methods, including demonstrations, lectures, small-group discussions, problem-solving activities, exercises, case studies, participant-led presentations, role-plays, and videos. Participants also joined a field visit to one of the multinational MAHs to see firsthand how a pharmacovigilance system is run.

To ensure that stakeholders were updated on the new rules, MTaPS collaborated with the African Union's New Partnership for Africa's Development Agency to support sensitization workshops on the newly established Pharmacovigilance and Post Market Surveillance System rules. The first workshop was held in October 2022 and targeted stakeholders from various sectors, including academia; research; the Ministry of Health; community, hospital, and industrial pharmacies; and sponsoring agencies.

The PPB convened a second workshop in May 2023 to sensitize the CVFPs on the rules, given the immense role they are expected to play in strengthening vigilance activities at the county level.

Pharmacovigilance Training

Seventeen participants (nine female, eight male) from local manufacturers successfully completed the QPPV training. In a subsequent evaluation, more than 90% of the participants indicated that the course objectives in all modules were achieved to a great extent and that the course content was very relevant and met their expectations.

> **"The QPPV training at Maanzoni was relevant as it covered the latest industry regulations and guidelines. It was also engaging as it combined didactic and interactive activities, such as group discussions and case studies. This hands-on approach not only made learning more enjoyable but also helped in retaining information more effectively. The fact that it was face-to-face also provided a forum to connect with fellow QPPVs, academia, and industry professionals during our training sessions. These networking opportunities allowed us to share experiences, exchange ideas, and build lasting relationships that can benefit both our QPPV career and enhance patient safety!"**
>
> **–Dr. Mercy Maina, QPPV, Boehringer Ingelheim, Kenya.**

A further 52 participants (20 female, 32 male) from 41 counties and 2 national referral hospitals attended the CVFP sensitization training.

Following a request by MTaPS, the CVFPs were granted privileged access rights for the national pharmacovigilance reporting platform. This enables them to see aggregate vigilance reports from facilities within their counties and make follow-up and other interventions when required. They will also be able to receive notifications and download reports in case of a serious event, in order to launch an investigation. These additional rights are not available to other health care providers.

"The PV sensitization meeting was worthwhile. I understood my roles as a County Vigilance Focal Person to improve on the quality, safety, and efficacy of health products and Technologies in Siaya."
–Dr. Dominic Arek, CVFP—Siaya.

Establishing Systems for Improved Patient Safety

The newly trained QPPVs will take the lead in establishing pharmacovigilance systems within their MAHs and plan for inspections to be conducted. They will also be able to form a professional association for continuous mentorship and benchmarking.

The CVFPs will be a crucial link between the PPB and the counties at the peripheral health facilities and community level. They will coordinate and participate in investigations of serious adverse reactions, events, signals, and quality defects of health products and technologies, and notify the PPB as required. They will also collaborate with the National Pharmacovigilance and Post Marketing Surveillance Technical Working Group and recommend regulatory actions.

Improving the capacity for pharmacovigilance within Kenya will boost the safety of human medicines and vaccines, by ensuring that both MAHs and county governments are able to appoint qualified individuals to lead on surveillance, investigations, and inspections. This will promote swift regulatory action on behalf of the PPB to ensure the safety of the public.

"The QPPV course was very timely and the uptake was good with active engagement of participants. The University of Nairobi's Department of Pharmacy was honored to collaborate with USAID MTaPS Program and PPB. I look forward to subsequent trainings going forward."

USAID
FROM THE AMERICAN PEOPLE

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

USAID
FROM THE AMERICAN PEOPLE

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

SUCCESS STORY

Identification of Capacity Gaps Supports Kenya's Aim to Qualify as a Vaccine Manufacturing Country

MTaPS has supported regulatory capacity development in Kenya to strengthen pharmaceutical systems. The initiative, carried out with Kenya's regulatory agency, is contributing to ensuring that the country—and continent—is better prepared to save lives and protect patients in future pandemics.

PHOTO CREDIT: LABORATORY & ALLIED LTD.

Manufacturing facility in Nairobi.

Background

Regulatory systems play a key role in ensuring the quality, safety, and efficacy of medical products. Effective regulatory systems are an essential component of health systems and contribute to life-saving innovation and improved patient safety. In Kenya, the Pharmacy and Poisons Board (PPB) is the national body that regulates the practice of pharmacy and the manufacture and trade in medications, including vaccines, to ensure patient safety.

Kenya is not a human-vaccine manufacturing country, which impacted its response to the COVID-19 pandemic. To be recognized by the World Health Organization (WHO) as a vaccine manufacturer, the PPB is required to have maturity level 3 (ML3) status as assessed using the Global Benchmarking Tool (GBT), WHO's primary tool for evaluating regulatory systems and identifying areas for improvement. At ML3, the country is assumed to have a stable, well-functioning, and integrated regulatory system. This entails having sufficient human resource capacity, training, knowledge, and skills to be able to formulate regulations and guidelines and undertake various regulatory functions, such as clinical trial oversight.

Program Response

In November 2022, WHO assessed the PPB against its GBT. One major finding was the need to build human resource capacity.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact: Ndinda Kusu,
Country Project Director,
USAID MTaPS Kenya
nkusu@mtapsprogram.org

Jointly with the PPB, the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program carried out a mapping exercise in six PPB departments to identify competency gaps. The exercise required background research and administering a comprehensive questionnaire that MTaPS adapted from the WHO Competency Mapping Framework and implementation tool.

The results showed the need to strengthen capacity in the various regulatory functions, including clinical trial oversight, to be able to handle vaccine regulations effectively. Clinical trials involve testing medicines and vaccinations on volunteers or patients, under controlled conditions, to determine their safety, dosage, and potential side effects. The results of these trials are critical in determining whether medicines and vaccines can be approved for safe use in humans.

Developing Clinical Trial Capacity for Vaccine Manufacturing

Following the assessment, and in collaboration with the PPB, MTaPS conducted trainings in clinical trials. These focused on two key competencies: clinical trial protocol assessment and review and clinical trial site inspection and accreditation. This builds human resource capacity and will assist the PPB in achieving ML3.

A WHO-approved trainer of trainers from the Ghana Food and Drugs Authority (FDA Ghana) conducted the intensive training sessions, based on the success FDA Ghana had in attaining ML3 in 2020 following a similar exercise by WHO. Eighteen PPB staff were trained in an exercise that included plenary discussions, group work, hands-on assignments, and presentations, and pretest and posttest evaluations were conducted to assess understanding before and after each topic. All participants gained adequate knowledge and skills to undertake their roles in clinical trial protocol assessment and clinical trial site inspection and accreditation.

MTaPS also facilitated the participation of one member of PPB staff in a learning tour at Indonesia's national regulatory authority, Badan POM, which included an inspection of a vaccine manufacturing company. This collaboration will be critical for enhancing the capacity of the PPB in clinical trial oversight.

Toward Sustainability

The recommendations from the competency mapping activity will be incorporated into the PPB's training policy and calendar. Technical skills training gaps that were identified will be used to strengthen the regulatory training processes and strategies, including the overall training policy.

The exercise has enabled the PPB to recruit new staff more effectively, and the recommendations and priorities have been used during the onboarding of the new employees. The PPB is also better equipped to identify competency gaps, provide more customized training and professional development, and evaluate performance.

Building on the trainings, the PPB will carry out a clinical trial site inspection and assessment based on these learnings and collaborate with FDA Ghana, Badan POM, and other similar collaborators to build further capacity.

> **"The competency mapping report was circulated to all staff at PPB to guide training requests and training projection plans. The report will be great reference for PPB to revise the current competency matrix."**
> **– Dr. Karim Wanga, PPB**

Achieving WHO ML3 will provide a strong foundation for economic growth, pharmaceutical industry development, and improved public health outcomes. Additional ML3 certification benefits include attracting foreign direct investment, regulatory cost savings and efficiency gains, strengthened health systems, and improved public health. This is an important step toward strengthening pharmaceutical systems, which will guarantee that Kenya—and by extension, Africa—can produce vaccines when required and have better emergency preparedness in case of future pandemics.

USAID FROM THE AMERICAN PEOPLE

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

USAID
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Through the Tanzania ECHO Program, USAID MTaPS and the health ministry partnered to strengthen local clinical expertise through virtual mentoring sessions delivered to health care providers in their place of work.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact: Edgar Lusaya,
Country Project Director,
USAID MTaPS Tanzania
elusaya@mtapsprogram.org

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

Reaching Remote Areas to Strengthen Infection Prevention and Control and Antimicrobial Stewardship Practices in Tanzania

PHOTO CREDIT: DR. DAMAS MAKUNDI, MZUMBE UNIVERSITY

IPC-AMS ECHO launch in Morogoro Region, April 8, 2023.

Identifying the Challenges

In 2016, a WHO Joint External Evaluation baseline evaluation rated Tanzania as having "no capacity" (score 1) for antimicrobial stewardship (AMS) and "developed capacity" (score 3) for health care-associated infection prevention and control (IPC) programs. The US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program, under the Global Health Security Agenda, collaborated the Ministry of Health (MoH) to address these issues through the development and dissemination of guidelines, training materials, a communication strategy, a national action plan, and face-to-face mentorship at health facilities.

Health care workers in Tanzania provide care for thousands of patients, and time for continuous medical education is limited. In addition, best practices and treatment guidelines change regularly. Therefore, health care providers, particularly those serving in relatively remote areas, need an easily accessible, low-cost, and quality means of professional development.

Strategizing for Improved IPC-AMS Practices

The Extension for Community Healthcare Outcomes (ECHO) is a collaborative model of virtual medical education platforms that help health care providers build the skills needed to offer expert-level care to patients at health facilities and in other settings.

MTaPS collaborated with MoH to design and deliver ECHO sessions, starting with 10 health facilities across seven regions, before expanding to 19 more regions of mainland Tanzania. Following curriculum development and facilitator identification, audio-visual equipment was provided to the facilities to enable remote delivery of sessions. The curriculum topics included hospital waste management, chlorine dilution, over-prescription of antibiotics, and the monitoring of hospital-acquired infections.

During each interactive session, one facility shares its experience of AMS or IPC implementation, and the participating health care providers learn from the facility by discussing the strengths and challenges of the approaches, antimicrobial resistance (AMR) containment and mitigation, and ways to improve AMS/IPC practices that support patient management. Discussion is guided by subject matter experts who provide additional information on the topic, modality of operations and session objectives. The ECHO platform, therefore, offers opportunities for cross-sharing, cross-fertilization, and mutual mentoring and learning among facilities and health care providers.

Impacts

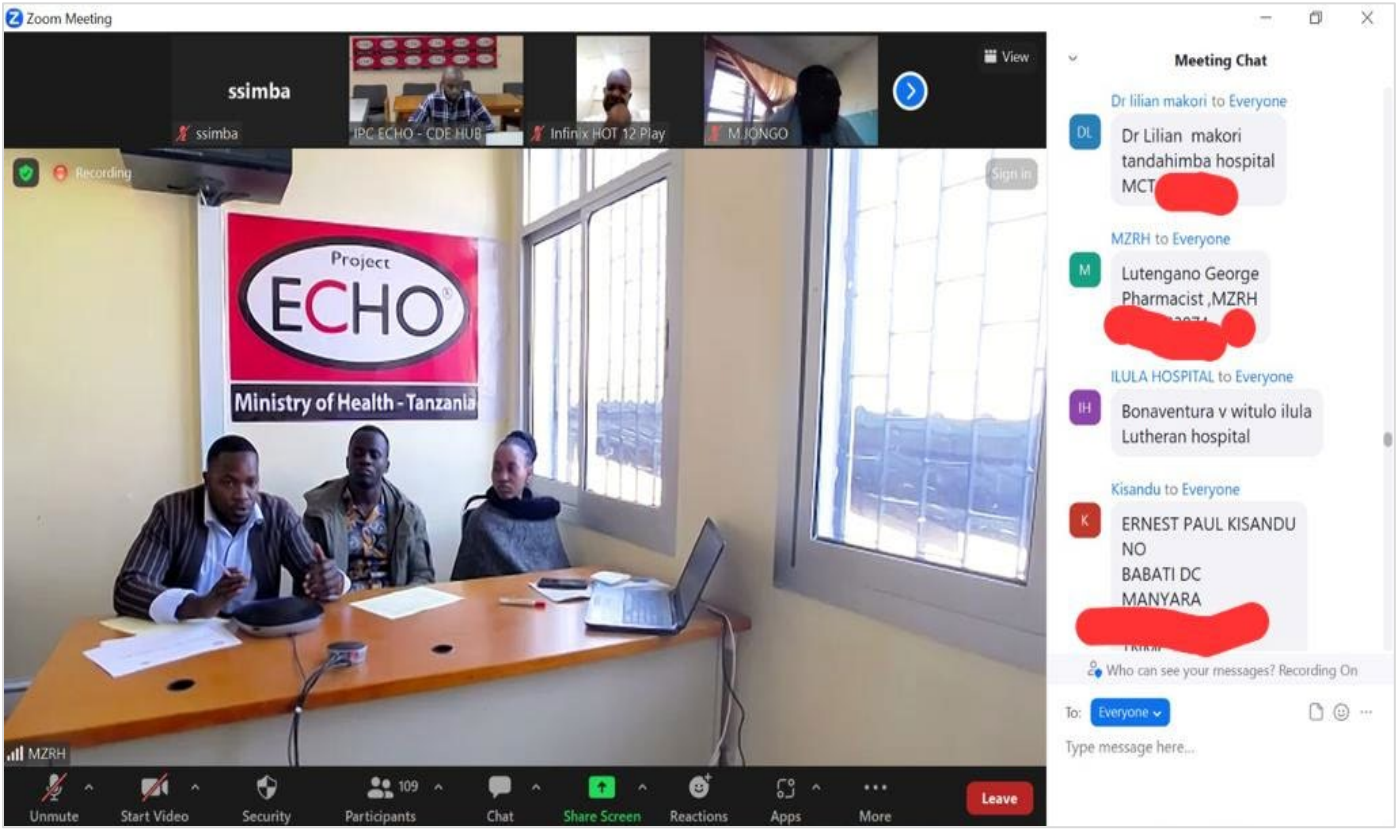
MTaPS coordinated a total of 28 monthly ECHO sessions, of which 15 focused on IPC and 13 focused on AMS. Each of these sessions was attended by an average of 56 healthcare providers, for a total of 1,579 trained on these topics. The healthcare providers who attended included clinicians, nurses, pharmacists, laboratory experts and medical attendants.

The IPC and AMS ECHO sessions offer opportunities for cross-sharing, cross-fertilization, peer mentoring, and learning among participating health facilities and health care providers. At least three health care workers from each of the 10 MTaPS-supported facilities reported that the IPC and AMS ECHO sessions helped them strengthen collaboration between quality improvement teams and AMS committees and strengthened IPC and AMS interventions for AMR containment. They also reported that monitoring for surgical site infections improved, which resulted in a reduction of these infections in the participating facilities. Additional reported benefits included increased awareness and practices of requesting laboratory culture and sensitivity testing and proper prescription of antibiotics.

An impact evaluation, including focus group discussions, was carried out between January and April 2023. The key question asked at focus group discussions was the perceived benefits of IPC and AMS ECHO sessions compared to physical supportive supervision. The perceived benefits noted in the evaluation report included (1) greater and timely understanding of the importance of culture and sensitivity to reduce the unnecessary use of antibiotics, (2) improved networking and cross-learning between hospitals, and (3) Receiving quicker updates that accelerated processes for collecting and reporting IPC data through the appointment of a department focal person.

"ECHO learning capacitated us on instrumental decontamination, the use of personal protective equipment and the importance of culture and sensitivity in order to reduce the irrational use of antibiotics."
– Health care provider, Morogoro Hospital

In addition to providing feedback about gaps to be addressed in future programs, such as upgrading internet net-work connections and offering supportive supervision on IPC and AMS, the evaluation also informed a revision of the curricula that ensures that the topics remain relevant and necessary.



IPC ECHO session. The chat features IPC ECHO participants from private and non-MTaPS-supported facilities/regions. Photo credit: Stephano Simba, MTaPS

Reaching the Difficult-to-Reach and Moving Toward Sustainability

Additional public and private hospitals from different regions have been able to benefit from these learning experiences, including Muhimbili National Hospital, Jakaya Kikwete Cardiac Institute, Muhimbili Orthopaedic Institute, Mirembe Specialized Hospital, Geita Regional Referral Hospital, Vwawa District Hospital, Sokoine Regional Referral Hospital, Queen of Universe Hospital, Msata Health Center, and Songea Regional Referral Hospital. Remote learning through Project ECHO has enabled training in regions which would have otherwise been difficult to access, like Kigoma, Lindi Mtwara, and Ruvuma.

All training materials have been made available to MoH. MTaPS and MoH are committed to ensuring these sessions continue and are strategizing on how to ensure the sustainability of the continuing medical education offered under the ECHO platform.

USAID FROM THE AMERICAN PEOPLE

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

USAID
FROM THE AMERICAN PEOPLE

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

Empowering Media in Nepal to Champion Public Awareness of Antimicrobial Resistance

SUCCESS STORY

An AMR sensitization workshop and resource package targeting 400 journalists resulted in around 200 evidence-based media reports raising public awareness of rational antimicrobial use within the context of One Health spanning the human, animal, and environmental sectors. This initiative motivated journalists to take action and strengthened advocacy to establish and enforce policies to combat AMR and contribute to Nepal's Global Health Security Agenda.

Antimicrobial resistance (AMR) poses an urgent public health threat to the world, including Nepal, due to inappropriate use of antimicrobials, that is, medicines used to treat bacterial, viral, parasitic, and fungal infections of humans, animals, and plants. AMR makes infections harder or impossible to treat and increases the financial burden for patients and the government. To address this challenge, Nepal developed the National Action Plan on Antimicrobial Resistance 2021-2026 with five strategic pillars, including one on education and awareness.

To provide critical information about the current AMR landscape in Nepal, with support from the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program, the Ministry of Health and Population (MOHP) convened a workshop for 48 representatives from 27 multisectoral partner organizations to share information on their AMR activities and strategies, assess their implementation challenges, and unite behind a shared objective of AMR containment in Nepal.

Raising public awareness and promoting prudent antimicrobial use, particularly through the media, are vital steps to curb AMR. Well-informed media reporting can shift social norms, help individuals make informed decisions about antimicrobial use, encourage health care providers to prescribe responsibly, and promote farmers' and veterinarians' cautious application of antimicrobials, particularly those of most importance to human health. The One Health approach recognizes the interconnectedness of human, animal, and environmental health; therefore, engaging multisectoral stakeholders, including media, is crucial to safeguarding public health and mitigating AMR's impact.

Assessment of Media Knowledge of AMR

Media personnel are prospective allies and influencers in shaping public perception of AMR and behavior related to rational antimicrobial use from a One Health perspective. However, an analysis of Nepal's AMR-related publications unveiled a lack of strong case stories, evidence-based data, and explorative journalism. To better address this gap, MTaPS assessed the baseline knowledge of AMR among 114 journalists from all seven provinces of Nepal, using 15 structured questions covering AMR awareness, practices, infection prevention and control, antimicrobial stewardship, and impacts of gender on AMR.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact:
Dr Birna Trap, MTaPS Nepal Director,
btrap@mtapsprogram.org

Dr Santosh Dulal, MTaPS Nepal STA-AMR,
sdulal@mtapsprogram.org

Survey findings revealed the media's significant lack of AMR knowledge, with two-thirds answering all 15 questions on AMR incorrectly (Figure 1). This underscores the great potential of systematic media sensitization and education to contribute to evidence-based reporting to educate the public about AMR and the role that the public can play in combating its spread.

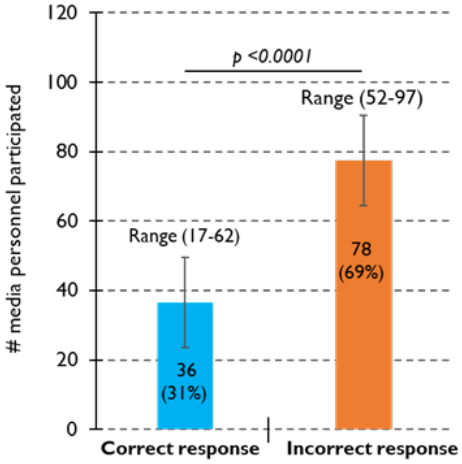


Figure 1. Journalists' (n=114) knowledge of AMR based on 15 closed-ended questions

Development of AMR Sensitization Workshop Package

MTaPS used the results of the AMR knowledge assessment to create an AMR sensitization workshop package of resources for media. The sensitization package benefited from stakeholders' insights and technical expertise, including the recommendations and approval from the Quality Standard and Regulation Division, MOHP. In addition, MTaPS consulted with members of the Health Journalist Forum Nepal, the Ministry of Agriculture & Livestock Development, Nepal Agriculture Research Council, National Public Health Laboratory, and Nepal Health Research Council, who played a crucial role in developing the package and translating it into Nepali. The consultations highlighted the importance of exploratory and investigative journalism, along with the need for case-specific discussions and evidence-based AMR-related articles tailored to local contexts. The package covered global and national AMR scenarios, gender/sex impacts, investigative journalism, and AMR-related topics in food, feed, environment, and animal husbandry as part of a One Health approach. MTaPS also used real-life case studies to illustrate the significance of evidence-based reporting and encouraged media personnel to adopt similar methods in their work.

In the first month, newly trained workshop participants produced over 200 evidence-based news reports on AMR.

Nationwide Media Sensitization on AMR

In a powerful collaborative effort with Provincial Health Secretaries and Directorates, the MOHP Quality Standard and Regulation Division and MTaPS held an AMR sensitization workshop for journalists in eight cities in all seven provinces—Biratnagar (Koshi), Janakpur (Madhesh), Chitwan and Kathmandu (Bagamati), Pokhara (Gandaki), Dang (Lumbini), Surkhet (Karnali), and Dhangadhi (Sudurpaschim)—in June and July 2023. A total of 405 media personnel (278 male, 127 female) participated. They appreciated the innovative approach that combined knowledge assessment with comprehensive training and a resource package and recognized AMR as a critical new topic for them to cover in their reporting. Moreover, during the workshop, media personnel expressed their strong commitment to advocating for public AMR awareness.

"The extent of antibiotic misuse across all sectors, posing a grave risk to countless lives, left me truly astonished despite my prior awareness. This remarkable AMR workshop has ignited an unwavering commitment within me to uncover and combat these malpractices within communities in the days ahead. I extend my profound gratitude to USAID MTaPS for granting me this invaluable learning opportunity, empowering me to make a difference as a journalist."
— Mr. Basu Neupane, Journalist, "Hamro Doctor" online media, https://www.hamrodoctornews.com/ Kathmandu, Bagamati Province

Journalists shared their remarks during the AMR sensitization workshop in Janakpur, Madhesh Province, June 7, 2023. Photo credit: MTaPS Nepal

The workshop yielded notable results that illustrated participants' significantly enhanced understanding of AMR—the post-test scores (from the 365 participants who took both tests) showed a significant three-fold increase from 25% to 78% in AMR knowledge (Figure 2).

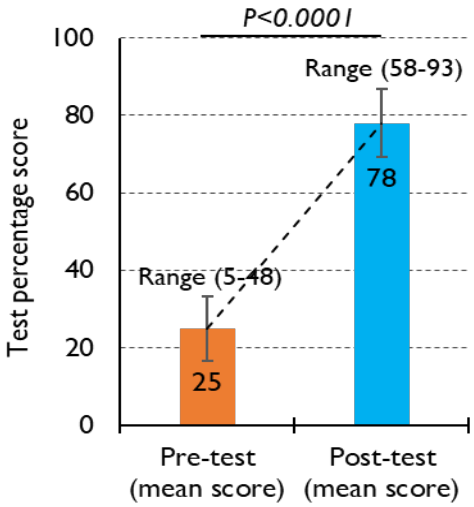


Figure 2. Pre- and post-test results showing journalists' (n=365) enhanced understanding of AMR after a sensitization workshop

Most importantly, the intervention led to an impressive surge in media coverage in producing over 200 evidence-based news reports on AMR using platforms like newspapers, TV, radio, and social media. This effort even prompted the Lumbini Province Health Secretary to allocate a dedicated budget for AMR awareness, which demonstrates a strong understanding of the importance of addressing this issue.

Journalists interact during the AMR sensitization workshop held in Chitwan, Bagamati Province, June 9, 2023. Photo credit: MTaPS Nepal

The workshop provided many journalists with their first exposure to health issues in general and AMR in particular. They were energized by the enthusiastic participation and pledged to use their voices to provide the public with evidence-based information on AMR and to advocate for strong policies across all One Health sectors—human, animal, and environmental.

"After this eye-opening training, I realized that everything we consume, from farm to table, is being affected by the misuse of antimicrobials. The very food we offer to improve our children's diet may inadvertently be endangering their health, turning into a slow poison. To secure our children's future, I am committed to take up this issue seriously and use my media platform to advocate for the rational use of antimicrobials and educate the public to fight against AMR."
— Ms. Shrijana Thapa, Journalist, *Deukhuri Today* local newspaper, https://deukhuritoday.com/, Dang, Lumbini Province

Journalists' Recommendations

The participating journalists strongly advocated for fellowships, offering financial incentives to journalists for developing AMR news reports to sustain the promotion of evidence-based AMR media coverage. They highlighted the importance of utilizing media in awareness programs in rural areas, where knowledge about the severity of indiscriminate antibiotic use and the impact of AMR is notably lacking among the general population. Furthermore, they emphasized the necessity for ongoing capacity-building programs to enhance their ability to cover AMR topics using ethical, innovative, and comprehensive approaches. The workshop participants communicated their primary objective as increasing public understanding and driving behavioral changes related to antimicrobial use and health-seeking, while also providing support for the establishment and enforcement of policies, laws, and regulations aimed at combating AMR.

By championing an informed and empowered media landscape, community journalists particularly play a pivotal role in enhancing public understanding and elevating AMR awareness. These roles can catalyze shifts in antimicrobial use behaviors while advocating for transformative policy changes to bolster the global campaign against the mounting threat of AMR.

Acknowledgements:

Dr. Madan K. Upadhyaya, Chief, Quality Standard and Regulation Division, Ministry of Health and Population

Provincial Health Secretaries and Directorates,
Government of Nepal

USAID
FROM THE AMERICAN PEOPLE

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

USAID
FROM THE AMERICAN PEOPLE

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

Document Management Repositories Increase Efficiency at Nepal's Department of Drug Administration

SUCCESS STORY

As DDA aspires to digitalize its public service delivery systems, repositories like these will be essential. MTaPS' collaboration with DDA to establish this system is expected to increase efficiency and utilization in the foreseeable future.

Mr. Sanjeev Sharma Kattel, Pharmacy Officer, DDA, using the biometric entry to access the document repository. Photo credit: MTaPS Nepal

Nepal's national medicines regulatory authority—the Department of Drug Administration (DDA)—is working toward reaching maturity level 3 according to the World Health Organization's indicator-based global benchmarking tool, which signifies a stable, well-functioning regulatory authority. The DDA's recent self-assessment produced several recommendations for its institutional development plan. One was to create a proper central management system to securely and systematically store DDA's thousands of hard copy documents. DDA's quality management system also required a system to control document flow. The documents include applications for the registration and authorization of pharmacies, wholesalers, manufacturers, and products, as well as those related to inspection. Another benefit would be gaining extra space, which DDA could use to expand its service delivery. Realizing these dual benefits, DDA requested support from USAID MTaPS to install repositories with proper access control in its divisions that deal with hundreds of documents each day. MTaPS agreed to help DDA implement a quality management system and achieve regulatory maturity.

Installing access-controlled repositories

The DDA usually receives hundreds of applications and dossiers each day, which need to be stored securely. Without a proper storage and indexing system, retrieving them quickly during assessment was difficult, as the documents would be piled in the thousands. The security of such documents was also an issue, as there was no proper access control linked to the document. It was concluded that the repositories would solve many of these problems.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact:
Dr Birna Trap, MTaPS Nepal Director,
btrap@mtapsprogram.org

Files arrangement before and after repositories installation. ***Photo Credit: MTaPS Nepal***

Installing access-controlled repositories

The DDA usually receives hundreds of applications and dossiers each day, which need to be stored securely. Without a proper storage and indexing system, retrieving them quickly during assessment was difficult, as the documents would be piled in the thousands. The security of such documents was also an issue, as there was no proper access control linked to the document. It was concluded that the repositories would solve many of these problems.

The task was challenging from the outset, as the proposed system had to fit into DDA's building structure, and installation could hinder service delivery. The inclusion of the biometric identification feature to enhance security was also a challenging task, especially considering the absence of a reference sample piece. Additionally, designing the system to accommodate different room specifications posed another significant challenge. Ultimately, after engaging in multiple rounds of discussions with the DDA, the design was finalized. The installation went smoothly until completion as the DDA continued its operations uninterrupted, apart from the pre-informed partial service halt of the initial two weeks at the pharmacy registration section, from alternate rooms within the DDA. DDA effectively communicated the contingency provision through the official notice to the service seekers, ensuring uninterrupted service delivery during the installation process. Out of five repositories, three were installed in the Drug Evaluation and Registration Division and one each at the Monitoring, Evaluation and Law Enforcement Division and Planning, Coordination and Management Division. The repositories have an access control feature for security using a biometric identification device and log data each time the repository is opened. The repositories installed at the Drug Evaluation and Registration Division have a combined capacity to hold up to 50,000 files, while each of those installed in two other divisions can accommodate up to 10,000 files. Based on the current rate of hard copy storage requirements, these repositories will have sufficient space to accommodate new applications for the next five years; in case the obsolete documents are destroyed phase-wise, enough space will be left for even longer.

DDA also recognized they needed additional staff to help scan and index the documents and move them out of bundles and on to secured shelves. MTaPS supported the DDA to hire four short-term assistants for this task. Once the transition and indexing of files into the repositories is completed, retrieval process should be easy, enhancing the efficiency of the DDA staff.

Mr. Sanjeev Sharma Kattel, Pharmacy Officer at DDA Industry Registration Section, expressed his excitement about using the system. He said that for years it had been difficult to store and archive thousands of physical files. The Drug Evaluation and Registration Division Head at DDA also committed to making best use of the system, while Mr. Bharat Bhattarai, the DDA Director General, expressed his gratitude to MTaPS for its assistance in the installation process and acknowledged that the repositories will prevent unauthorized access and enhance the service delivery.

> **"We did not have a document storage system before, and it was challenging to trace the approximately 50,000 documents. Now, since we have the repository system, we can strengthen the DDA documentation practices through proper access control and increase our work efficiencies. Furthermore, the short-term assistants will be of great help to transition from piles to files through this system. I would like to express my sincere gratitude to USAID MTaPS for this collaboration."**
> **—Mr. Sanjeev Sharma Kattel, DDA Pharmacy Officer**

With the repositories, visible changes are already under way at DDA. One remarkable improvement is the speed at which dossiers and application files can now be retrieved. Previously, retrieving these files from storage would take hours, if not days, and only a few staff were able to locate them due to inadequate indexing. However, with the installation of repositories and proper indexing, authorized staff can easily retrieve these documents within minutes. This has greatly enhanced staff efficiency and decreased waiting time of the clients, improving the customer experience. One of the positive externalities resulting from the installation is the improved office environment which improves staff morale. As Nepal aspires to digitalize its public service delivery systems, repositories like these will be essential. MTaPS' collaboration with DDA to establish this system is expected to increase efficiency and utilization in the foreseeable future.

USAID
FROM THE AMERICAN PEOPLE

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

8. MONITORING, EVALUATION, RESEARCH, & LEARNING

A. MONITORING & EVALUATION

YEAR 5 ACHIEVEMENTS AND RESULTS

Data Management System

In PY5, MTaPS continued to use the DevResults data management system to aggregate, store, and manage the project's performance monitoring data. At the end of every quarter, all MTaPS countries reported on the performance monitoring data selected for PY5 in DevResults. MTaPS' HQ MERL team reviewed and validated the monitoring data and entered the final data in the quarterly reports for PY5.

MTaPS' HQ MERL team conducted data submission and management training for all MTaPS' M&E POCs at the start of every quarterly reporting month to ensure that the data submission is timely and data quality is maintained. New M&E staff joining country teams were also provided tailored orientations on M&E data flow process in MTaPS.

MTaPS country teams continued to collect data to track the implementation and progress of COVID-19 activities. MTaPS reported COVID-19 data in USAID Data Information Solutions (DIS) on a quarterly basis. COVID-19 data was also added to DevResults every quarter. MTaPS' HQ MERL team reviewed and validated the COVID-19 data before including it in the quarterly reports and DIS. Eleven MTaPS countries were reporting on COVID-19 activities at the beginning of PY5. Six MTaPS countries had reported on COVID-19 data by the end of PY5 Q4.

DATA DASHBOARDS

MTaPS' HQ MERL team continues to use Power BI dashboards to reflect on the performance monitoring data every quarter. MSH's SI team provides support to the MTaPS team in updating Power BI dashboards with the most recent monitoring data every quarter. MTaPS' HQ MERL team has conducted multiple dashboard training sessions with a range of internal stakeholders, including technical leads, portfolio managers, country directors, country MEL POCs, and the SMT to help navigate these dashboards and reinforce their use for regular review and reflection on the project's progress.

The HQ MERL team also calculates progress toward targets for each country at the end of every quarter. The findings from this analysis are shared with all MTaPS countries, followed by a discussion on targets not met

DATA QUALITY

In PY5, MTaPS continues to strive for high data quality. The external consultant hired by MTaPS' HQ MERL team in PY4 to conduct a data quality audit provided findings and recommendations from this data quality audit conducted in six countries on selected indicators. The recommendations and action plans from this exercise were shared with the six country teams. The consultant also presented the findings to MTaPS Bangladesh and MTaPS Mali staff members. This presentation was also attended by the USAID

Mission representatives in these two countries. Based on the findings presented and action steps suggested, MTaPS' HQ MERL team created a Global Data Quality Assurance Plan for all MTaPS countries. Country-specific data quality action plans were also developed based on the recommendations from this data quality audit. MTaPS' HQ MERL team and country M&E POCs worked together to adapt the data quality improvement recommendations to their contexts.

DATA-DRIVEN DECISION MAKING

The MERL HQ team continues to encourage data use for decision-making within MTaPS. Key strategies are in place to ensure that high-quality, complete, and relevant data are available for decision-making. The use of data dashboards for review and reflection on monitoring data trends is regularly reinforced. A knowledge exchange on data-driven decision-making was conducted in February 2023 where the Mali and Uganda country teams presented examples of data-driven decision-making in their respective countries. Expanded MERL team meetings attended by all M&E POCs in MTaPS continue to reinforce the use of data for decision-making purposes.

QUARTER 4 PROGRESS

DEVRESULTS DATA AND DASHBOARDS

MTaPS country teams continued to use DevResults data management software to submit quarterly, semi-annual, and annual data for PY5. MTaPS' HQ MERL team reviewed and validated this data and added it to the PY5 Q4/Annual Report. For Q4, monitoring data has also been consolidated in data reference sheets to share for review and reflection with a varied range of stakeholders, including technical leads, country directors, and country MEL POCs. These data reference sheets provide trends in data to showcase country/portfolio progress under each sub-objective and objective and encourage a reflection on MTaPS' key achievements through quantitative evidence. MTaPS' HQ MERL team developed country-specific data reference sheets for countries that are closing by the end of PY5 (Uganda, Mozambique, and Ethiopia) so the quantitative evidence can be used to present the progress made under MTaPS objectives through country close-out events and end-of-project reports. Other than this, the Power BI dashboards are also being updated after every quarter for all countries to use visualizations of performance monitoring data for review and reflection on progress made by the project.

COVID-19 IN-COUNTRY ACTIVITY REPORTS

In PY5 Q4, Kenya, Bangladesh, and Nigeria no longer had COVID-19 activities going on, and they did not report any COVID-19 data in this PY5 Q4. Cameroon, Philippines, Madagascar, Tanzania, Côte d'Ivoire, and Rwanda reported on COVID-19 indicators in PY5 Q4.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Update DevResults Data Management Software for USAID-Approved PY6 Indicators and Targets	October 2023
M&E Close-out Coordination with Countries	Ongoing
Execute Year 6 MEL Plan Activities	October 2023 onwards
Finalize Endline Protocol	October–December 2023

B. KNOWLEDGE MANAGEMENT AND LEARNING

YEAR 5 ACHIEVEMENTS AND RESULTS

In PY5, MTaPS developed 32 technical briefs and highlights to address learning questions and 16 technical briefs to document implementation knowledge. MTaPS conducted 16 PSS in Practice Knowledge Exchanges to share implementation knowledge and lessons learned with staff and partners.

QUARTER 4 PROGRESS

TECHNICAL DOCUMENTATION

During Quarter 4, MTaPS developed 25 technical briefs and highlights to address learning questions:

Asia Bureau: Using the One Health Tool to Allocate Pharmaceutical Budgets. MTaPS drafted a technical highlight to respond to the learning question: What strategies and information are required for policymakers in the Ministry of Health through using the OHT, to appropriately allocate budgets for pharmaceuticals?

Asia Bureau: Strengthening Medical Products Registration in the Asia Region. MTaPS drafted a technical brief on its support for NRAs to improve regulatory capacity, streamline regulatory processes, and adopt best practices in medical product registration and marketing authorization. This technical brief addresses the following learning question: How will medical products registration contribute to the improvement of overall regulatory systems strengthening?

Strengthening Health Management Information Systems for Procurement and Supply Chain Management (PSCM) in Bangladesh. MTaPS drafted a technical highlight on efforts to implement information management systems (e.g., eAMS, DGFP eLMIS, DGHS eLMIS, and QuanTB) that facilitate data-driven decision making by system users and managers. This technical highlight addresses the following learning question: What are the critical lessons learned in strengthening the capacity of national- and subnational-level managers to use data from the various information management systems for monitoring performance and decision-making processes?

Strengthening Infection Prevention and Control (IPC) at the National and Health Care Facility Levels in Bangladesh. MTaPS drafted a technical brief on supporting IPC governance structures at the national and subnational levels, conducting facility-level IPC assessments, and building capacity for improved IPC practices. This technical brief addresses the following learning question: What are the lessons learned from strengthening IPC governance capacity and practice at the national and facility levels in Bangladesh?

Introducing Comprehensive Electronic Recording and Reporting for TB in Bangladesh. MTaPS revised a technical brief on e-TB Manager, a web-based national electronic TB recording and reporting system that improves the ability to adjust patients' treatment regimens in a timely manner. This technical brief addresses the following learning question: What are the critical success factors in the implementation and use of e-TB Manager in Bangladesh?

Building Multisectoral Coordination to Combat Antimicrobial Resistance in Burkina Faso. MTaPS drafted a technical highlight on use of the One Health platform as a mechanism for partner collaboration, an essential approach to strengthening global health security. This technical brief addresses the following learning questions: What are the key factors enabling or hindering MSC on AMR at the national level? How can MSC efforts be sustained?

Strengthening Multisectoral Coordination to Contain Antimicrobial Resistance in Cameroon. MTaPS drafted a technical highlight on lessons learned from using the One Health platform to improve MSC and to ensure updating of Cameroon's national action plan for AMR. This technical brief addresses the following learning question: What are the critical lessons learned in the strengthening of MSC bodies on AMR?

Advancing Antimicrobial Stewardship in Côte d'Ivoire. MTaPS drafted a technical brief on establishing DTCs and building their AMS capacity, resulting in an increased number of functional DTCs with improved AMS assessment scores. This technical brief addresses the following learning question: How has the functionality of DTCs improved with MTaPS-supported interventions?

Strengthening Antimicrobial Stewardship in Ethiopia. MTaPS drafted a technical brief summarizing efforts for addressing AMR by optimizing use of antimicrobial medicines through improved AMS and overcoming barriers to building institutional capacity for AMS. This technical brief addresses the following learning question: What are the primary barriers to building institutional capacity in AMS? How can these barriers be overcome in the Ethiopian context?

Strengthening Multisectoral Coordination for Combating AMR in Ethiopia. MTaPS drafted a technical brief on strengthening governance structures for effective coordination of AMR containment in Ethiopia. This technical brief addresses the following learning question: What are the critical drivers for sustainable improvements in MSC on AMR?

Mapping Pharmaceutical Expenditure Data Sources in Indonesia. MTaPS drafted a technical brief describing the program's efforts to identify sources of pharmaceutical expenditure data and build the capacity of Indonesia's HA team to track, collect, and analyze pharmaceutical expenditure data. This technical brief addresses the following learning question: What are the key policy questions related to pharmaceutical expenditure in Indonesia and what are the necessary adaptations to the general pharmaceutical expenditure tracking guidelines for the Indonesian context?

Strengthening the Health Care Priority-Setting Process in Indonesia. MTaPS drafted a technical brief on the program's role in improving HTA in Indonesia, including improving the topic identification, selection, and prioritization process for better evaluation of health technologies and interventions. This technical brief addresses the following learning questions: What are the current processes and institutional structures for decision making/priority setting in Indonesia? What are the key policy/regulatory priorities for the primary stakeholders? How can these be aligned to streamline HTA processes?

The Rational Use of Antimicrobials in Jordan. MTaPS drafted a technical highlight on its efforts to develop localized protocols for rational use of antimicrobials, through collaboration with the Ministry of Health in Jordan. This technical highlight addresses the following learning question: What approaches are effective for building institutional and health facility capacity in rational use of antibiotics and IPC?

Sustaining Improvements in the Coordination and Governance of Pharmaceutical Systems in Jordan. MTaPS drafted a technical brief on its efforts to support the institutionalization of framework agreements for public procurement of pharmaceuticals. This technical brief addresses the following learning question: What factors contribute to sustaining improvements in governance in pharmaceutical systems?

Strengthening Multisectoral Coordination to Contain Antimicrobial Resistance (AMR) in Kenya. MTaPS drafted a technical brief summarizing program support to the Government of Kenya for strengthening MSC to address the rising threat of AMR in the country. This technical brief addresses the following learning questions: What are the factors enabling or hindering MSC on AMR at the national and MTaPS–focus county levels? How can MSC be sustained?

Effective and Sustainable Governance Structures for Combating Antimicrobial Resistance (AMR) at Health Facilities in Kenya. MTaPS drafted a technical brief describing assistance to the Government of Kenya to establish IPC and AMR committees at the national, county, and health care facility levels as effective and sustainable governance structures for AMR containment. This technical brief addresses the following learning question: What are some of the incentives and enablers for the effective and sustainable functioning of IPC and MTC/AMS committees?

Strengthening Multisectoral Coordination (MSC) for Combating Antimicrobial Resistance (AMR) at the National Level in Mali. MTaPS drafted a technical brief in French on supporting the national MSC committee (GCMN-RAM) and its IPC and AMS TWGs through activities aimed at strengthening MSC for AMR containment. This technical brief addresses the following learning question: What are the key factors enabling or hindering MSC on AMR at the national level?

Supporting Infection Prevention and Control (IPC) in the Health Care Sector in Mozambique. MTaPS finalized a technical brief describing efforts to improve IPC at the national and health facility levels by using WHO tools for systematic assessment, programming, prioritization, and monitoring of IPC activities. This technical brief addresses the following learning question: How have IPCAF health assessments helped prioritize key IPC activities?

Strengthening Multisectoral Coordination for Containing Antimicrobial Resistance in Nigeria. MTaPS drafted a technical brief describing program support to the Government of Nigeria to strengthen governance and capacity in the country for effective MSC for AMR containment. This technical brief addresses the following learning question: What are the critical drivers for improving MSC on AMR?

Strengthening Infection Prevention and Control in Nigeria. MTaPS drafted a technical brief on efforts to strengthen governance and capacity for IPC at the national, state, and health facility levels in Nigeria. This technical brief addresses the following learning question: What are the minimum critical elements of IPC programs that are required to achieve successful and sustainable IPC improvements based on the experience working in the MTaPS-supported health care facilities?

Supporting Rwanda FDA to Strengthen Its Regulatory Services. MTaPS drafted a brief summarizing program support to the Rwanda FDA in strengthening the quality of its regulatory services through implementation of a QMS. This technical brief addresses the following learning question: What is the effect of the QMS implementation on the quality of the Rwanda FDA's regulatory services?

Strengthening Pharmacovigilance in Rwanda. MTaPS drafted a technical brief highlighting the program's support to Rwanda in introducing the web-based PViMS for spontaneous reporting of AEs and AEFIs related to the Ebola vaccine and other vaccines and medicines. This technical brief addresses the following learning question: What are the key facilitators and barriers of routine use of PViMS for spontaneous reporting?

Adherence to IPC Standards in MTaPS-Supported Health Facilities in Senegal. MTaPS drafted a technical brief in French on its approach to improving IPC practices in Senegal, through revitalization of nosocomial infection committees, which resulted in improved IPCAF scores at MTaPS-supported health facilities. This technical brief addresses the following learning question: What is the level of adherence to IPC standards in MTaPS-supported facilities?

Improving Infection Prevention and Control in Tanzania. MTaPS drafted a technical brief on its efforts to assess and strengthen IPC governance, build institutional capacity to manage IPC, make IPC-related information available for use in decision making, and improve IPC practices and services. This technical brief addresses the following learning question: What factors contribute to an effective and sustainable national IPC program in Tanzania?

Introducing the WHO AWaRe Antibiotics Categorization in Tanzania. MTaPS drafted a technical brief on efforts to introduce and implement the WHO-recommended AWaRe categorization of antibiotics to achieve more rational antibiotic use in Tanzania's health facilities. This technical brief addresses the following learning question: What factors facilitate adherence to AWaRe antibiotics categorization guidelines in health facilities?

During Quarter 4, MTaPS also developed 8 technical briefs and highlights to document implementation knowledge:

Asia Bureau: Managing Conflicts of Interest in Public Pharmaceutical Committees. MTaPS drafted a technical highlight on developing a manual for managing COI in public pharmaceutical agencies for stronger pharmaceutical management in LMICs.

Asia Bureau: Mapping Regulatory Workforce Competency for National Regulatory Authorities. MTaPS drafted a technical brief on workforce competency mapping of NMRAs in Bangladesh, Nepal, and the Philippines to determine the regulatory capacity–building needs of these NMRAs at institutional and individual levels.

Institutionalizing the Electronic Asset Management System (eAMS) in Bangladesh. MTaPS updated a technical highlight on development of a centralized, web-based eAMS to strengthen the process of deploying, operating, maintaining, upgrading, and disposing of assets cost-effectively.

Improving COVID-19 Vaccination Rates in Low-Performing Districts in Côte d'Ivoire. MTaPS drafted a technical brief on use of microplanning as a tool to improve immunization coverage at the local level.

Improving Early Tuberculosis Detection in DRC. MTaPS drafted a technical brief on the strengthening of the capacity of community health workers in Ituri province to improve TB screening and referral.

Strengthening Pharmacovigilance for Improved Patient Safety in Mozambique. MTaPS finalized a technical brief on monitoring AEs in patients on the newly introduced TLD regimen to improve the process of care and treatment outcomes for people living with HIV.

Implementing Antimicrobial Stewardship at a Teaching Hospital in Nigeria. MTaPS drafted a technical highlight on its approach to strengthen AMS at the facility level, through improving governance structures and capacity building of health care workers, which resulted in stronger AMS practices at Enugu State University Teaching Hospital (ESUTH).

Strengthening Health Commodity Procurement and Supply Chain Management (PSCM) in the Philippines. MTaPS drafted a technical highlight on development and implementation of an eLMIS for addressing PSCM challenges in the Philippines.

COUNTRY SUMMARY REPORTS

MTaPS supported the development of end-of-project reports to the Mission highlighting country program achievements, results, lessons learned and recommendations.

Mozambique Country Summary Report. The report summarized MTaPS' efforts to strengthen Mozambique's pharmaceutical regulatory system and services, AMR containment, and Ebola IPC response.

Uganda Country Summary Report. The report summarized MTaPS' efforts to strengthen Uganda's capacity for AMR containment through improved MSC, IPC, and AMS practices.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Support finalization and dissemination of Technical Briefs and Technical Highlights	October–December 2023
Support development of conference presentations	October–December 2023
Support development of technical webinars	October–December 2023
Support development of Country Summary Reports	October–December 2023
Support development of Core and Health Area Summary Reports	October–December 2023
Support development of Country End-of-Project Presentations	October–December 2023
Support Country End-of-Project Events	October–December 2023
Support Global End-of-Project Event	October–December 2023

C. RESEARCH

YEAR 5 ACHIEVEMENTS AND RESULTS

This year, MTaPS submitted 74 conference abstracts to a range of global and regional conferences and three cases to the USAID Health Systems Strengthening Case Competition. As a result of these efforts, the program presented a variety of posters and presentations at 22 global and regional conferences. In addition, MTaPS conducted PSS skills-building workshops at the PtD Indaba 2022, Global Health Supply Chain Summit 2022, SAPICS 2023, and PharmaConnect 2023, resulting in the engagement of over 200 individuals on the PSS concept and the sharing of tools and approaches for adaptation and use in their local context. With respect to publications, the program produced seven peer-reviewed publications this year:

- "Development and evaluation of a continuous quality improvement program for antimicrobial stewardship in six hospitals in Uganda" in *BMJ Open Quality*
- "Gaps in data collection for sex and gender must be addressed in point prevalence surveys on antibiotic use" in *Frontiers in Antibiotics*
- "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" in *Antimicrobial Resistance & Infection Control*
- "Moving from Assessments to Implementation: Promising Practices for Strengthening Antimicrobial Resistance Containment Capacity" in *One Health Outlook*
- "Contracting retail pharmacies as a source of essential medicines for public sector clients in low- and middle-income countries: a scoping review of key considerations, challenges, and opportunities" in *Journal of Pharmaceutical Policy and Practice*
- "Institutionalizing HTA in Ethiopia: seizing the window of opportunity" in *International Journal of Technology Assessment in Health Care*
- "What is the appropriate antimicrobial use surveillance tool at the health facility level for Uganda and other low- and middle-income countries?" in *Journal of Global Antimicrobial Resistance*

QUARTER 4 PROGRESS

This quarter, MTaPS continued with its implementation of several research studies:

- Under the CSL portfolio, MTaPS completed data collection for a case study examining the status of disability inclusion in the health supply chain sector in Ethiopia. Together with the findings from a landscape analysis completed in Q2, the study will inform guidance for governments on inclusive employment practices in health supply chains.
- Also under the CSL portfolio, MTaPS continued the impact evaluation of a client, stock, and workflow management application on unmet family planning need at the last mile in Luapula Province, Zambia. This quarter, the team completed several supervisory and monitoring visits and will start endline data collection next quarter.

- Under the Cross Bureau portfolio, MTaPS completed a three-country case study of the mandate, function, and structure of national pharmaceutical services units. The team started drafting a manuscript to help disseminate the results.
- Also under Cross Bureau, MTaPS is finalizing an evaluation of a package of social behavior change (SBC) interventions aimed at motivating compliance with antimicrobial prescribing guidelines among providers in selected hospitals in Uganda. The team completed the SBC interventions and will begin endline data collection in October.

MTaPS published a paper entitled "Institutionalizing health technology assessment in Ethiopia: seizing the window of opportunity" in the *International Journal of Technology Assessment in Health Care.* Based on a review of international evidence and published normative principles and guidelines, the paper highlights key considerations for successful formulation, adoption, and implementation of HTA policies and practices in Ethiopia,

On August 1–2, 2023, MTaPS participated in PharmaConnect 2023, a regional pharmaceutical conference held in Lusaka, Zambia. MTaPS moderated a panel on enhancing the role of regulators and streamlining regulatory processes. The panel included regulators from Ghana, Kenya, South Africa, and Zambia. The panel discussed the current regulatory landscape at both the national and continental level, reflected on what has been going well and some of the critical bottlenecks they are dealing with, and provided some insights for streamlining regulatory processes across Africa. MTaPS also delivered a plenary entitled *Ensuring access to medicines: The critical role of national pharmaceutical services units* and conducted two workshops. The first workshop focused on skills-building for pharmaceutical management and introduced approximately 80 participants to the concept of pharmaceutical systems and a curated collection of PSS tools, approaches, and country case studies. The second workshop focused on how to be a successful academic in the areas of PSS leadership, research, and teaching. A total of 39 (nine females, 30 males) pharmacy and pharmaceutical science academic staff from 10 universities, representing three countries, participated in the 4-hour workshop and engaged in interactive activities to develop skills in PSS curriculum and assessment development.

This quarter, MTaPS submitted 30 abstracts to eight global or regional conferences (Table 37).

Table 36. Submitted conference abstracts

Conference	Abstract Title	Abstract Status
20th General Membership Meeting of the Reproductive Health Supplies Coalition Accra, Ghana October 16–20, 2023	Strengthening Pharmaceutical Systems Benefits Maternal Health	Not accepted
	Improving Access to Maternal Health Medical Products through Optimization of Product Registration	Accepted as part of blended parallel session on Maternal Health Manufacturing and Regulatory Concerns
African Epidemiological Association Conference Bamako, Mali October 25–27, 2023	L'importance des comités techniques d'hygiène et de sécurité dans la prévention et le contrôle des infections (PCI) en milieu de soins au Mali	Accepted presentation
	Utilisation de nouvelles approches de renforcement de capacités pour préparer les établissements de santé à la prévention et au contrôle des infections (PCI) du COVID-19	Notification pending

Conference	Abstract Title	Abstract Status
International Society of Pharmacovigilance Bali, Indonesia November 6–9, 2023	Strengthening Pharmacovigilance to Improve Health Products Safety Surveillance and Reporting in Kenya	Accepted poster
Global Health Supply Chain Summit 2023 Nairobi, Kenya November 14–16, 2023	Informing Global Fund guidance for the financing of non-malaria commodities for integrated community case management	Waitlisted
	Leveraging civil society to improve the resilience of supply chain for essential medical products	Accepted poster
	Subnational procurement—does it ensure availability as well as quality and affordability of medicines?	Waitlisted
	Building community health workers' capacity for service provision and stock management at the last mile: development and implementation of a digital tool	Accepted presentation
	Making the health supply chain workforce inclusive for persons with disabilities	Accepted poster
	Unlocking Pharmaceutical System Potential: Introducing PSS Insight v2.0 for Data-Driven Decision Making	Accepted poster
	Situational analysis of family planning services availability at the last mile in Luapula Province, Zambia	Accepted poster
	Building sustainable and resilient health supply chains: the critical role of governance and core pharmaceutical services	Notification pending
	Pharmaceutical System Strengthening for Self-Reliant Health Supply Chains	Accepted poster
3rd International Conference on Public Health in Africa (CPHIA) Lusaka, Zambia November 27–30, 2023	Optimizing prophylactic use of antibiotics among surgery patients in Ethiopia, January–May 2023	Notification pending
	The use of antimicrobials in maternal health: a study in public hospitals in three Kenyan counties, September 2022	Notification pending
	Improving Antibiotic Prescribing Patterns in Six Hospitals: Impact of Interventions Following Baseline Antimicrobial Use Survey in Enugu and Kebbi States of Nigeria from August 2022–July 2023.	Notification pending
	Developing an "AWaRe" Classification of Antibiotics for Bacterial Infections in Nigeria, June–August 2023	Notification pending
	Targeted COVID-19 vaccination outreach: private sector adoption of SCALES 3.0 for increased vaccination uptake, May to June 2023	Notification pending
	Improvement of HAI surveillance system in Tanzania	Notification pending
	Designing and implementing antimicrobial stewardship pre-service training in Kenya, February 2022	Notification pending
	Advancing subnational level multisectoral coordination in Kenya for the containment of antimicrobial resistance	Notification pending
	Measuring progress on the implementation of Kenya National Action Plan on Prevention and Containment of Antimicrobial Resistance 2017–2022 using a pre-agreed monitoring and evaluation framework tool, July 2022	Notification pending
	Use of digital and mobile technology to strengthen pharmacovigilance and improve health products safety surveillance and reporting in Kenya, April 2022	Notification pending
	Delivery of licensure-linked infection prevention and control and antimicrobial stewardship for continuing professional development courses through health professional associations in Kenya, August 2023	Notification pending

Conference	Abstract Title	Abstract Status
	Capacity building of national regulatory authority towards WHO Maturity Level 3 (vaccine producing) authorization oversight and regulation	Notification pending
2023 Global Digital Health Forum Washington DC December 4–6, 2023	Flexible Digitalization of Regulatory Authorities	Notification pending
6th Biennial SCOMRA Cairo, Egypt December 5–7, 2023	Flexible Digitalization of National Regulatory Authority Functions	Notification pending
	The critical need to prioritize registration of maternal child health medicines	Notification pending
	Sustainable local manufacturing and resilient health supply chains: the critical role of strong regulatory systems	Notification pending
Workshop on Corruption and Conflicts of Interest in Healthcare London School of Economics January 12–14, 2023	Addressing conflicts of interest in pharmaceutical systems in low- and middle-income countries: from gap analysis to prevention and management.	Notification pending

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Activity & Description	Date
Prepare presentations and posters for participation in the upcoming conferences listed in Table 36	October–December 2023
Next steps for the research studies are included in the respective activity descriptions under their portfolio sections of the report	October–December 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	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 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	10/10				10/10
	Bangladesh		No	Yes	Yes	Yes	Yes				Yes
	Burkina Faso		No	No	Yes	No	Yes				Yes
	Cameroon		No	No	No	No	Yes				Yes
	Côte d'Ivoire		No	No	No	No	N/A				N/A
	DRC		No	Yes	Yes	Yes	Yes				Yes
	Ethiopia		No	No	No	Yes	Yes				Yes
	Kenya		No	No	No	No	Yes				Yes
	Mali		No	No	No	No	N/A				N/A
	Mozambique		No	No	No	No	Yes				Yes
	Nigeria		No	No	No	No	Yes				Yes
	Senegal		No	Yes	Yes	Yes	Yes				Yes
	Tanzania		No	Yes	Yes	Yes	Yes				Yes
GH-IO 2	Has the country implemented WHO AWaRe categories (yes/no)?	Annually	1/12	3/12	8/12	7/12	10/11				10/11
	Bangladesh		Yes	Yes	Yes	Yes	Yes				Yes
	Burkina Faso		No	No	Yes	Yes	Yes				Yes
	Cameroon		No	No	No	No	Yes				Yes
	Côte d'Ivoire		No	No	No	No	Yes				Yes
	DRC		No	Yes	Yes	Yes	Yes				Yes
	Ethiopia		No	No	Yes	Yes	Yes				Yes
	Kenya		No	No	Yes	Yes	Yes				Yes
	Mali		No	No	Yes	No	N/A				N/A
	Mozambique		No	No	No	No	Yes				Yes
	Nigeria		No	No	No	No	No				No

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Senegal		No	No	Yes	Yes	Yes				Yes
	Tanzania		No	Yes	Yes	Yes	Yes				Yes
GH-IO 5	*% of MTaPS-supported facilities with compliance with at least 60% prescribed antibiotics coming from WHO's AWaRE access category*	Baseline/ endline	71%	N/A	49%	55%	67% (35/52)				67% (35/52)
	Cote d'Ivoire		0%	N/A	N/A	100%	N/A				N/A
	DRC		28%	N/A	N/A	0%	25% (3/12)				25% (3/12)
	Jordan		0%	N/A	N/A	N/A	N/A				N/A
	Kenya		80%	N/A	N/A	N/A	92% (22/24)				92% (22/24)
	Mali		80%	N/A	49%	56%	62% (10/16)				62% (10/16)
	Senegal		0%	N/A	N/A	0%	N/A				N/A
	Tanzania		100%	N/A	N/A	N/A	N/A				N/A
	Uganda		100%	N/A	N/A	100%	N/A				N/A
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	N/A				N/A
IO.2	Mean % availability across a set of tracer medicines	Annually	78%	75%	76%	78%	50% (50/100)				50% (50/100)
	Nepal										
IO.3	% of medicines on the EML that have at least one registered product available	Annually					29% (434/1,477)				29% (434/1,477)
	DRC MNCH		0%	N/A	N/A	17%	79% (30/38)				79% (30/38)
	Nepal		84%	N/A	73%	72%	75% (318/426)				75% (318/426)
	Rwanda		49%	N/A	N/A	N/A	15% (86/1,013)				15% (86/1,013)
IO.4	Has the country's regulatory system increased its score since the last WHO global regulatory benchmarking assessment in at least	Annually	0	N/A	N/A	N/A	Yes				Yes

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	one regulatory function (yes/no)?										
	Nepal		Yes	Yes	Yes	N/A	Yes				Yes
IO.5/GH-IO-4	*% of surveyed patients who can correctly state instructions dosage of antimicrobial prescriptions*	Baseline/ endline	76%	N/A	N/A	N/A	39% (1,324/3,376)				39% (1,324/3,376)
	Nepal		76%	N/A	N/A	N/A	37% (1,166/3,136)				37% (1,166/3,136)
	Mali		32%	N/A	55%	54%	66% (158/240)				66% (158/240)
IO.6	*Optimal level of medicines prescribing indicators (composite indicator)*	Annually	.38	N/A	.50	N/A	.25				.25
	Nepal										
MNCH 17	# of countries participating in the dissemination of the regulation guidelines for medical devices	Annually	0	0	0	N/A	N/A				N/A
MNCH 18	# of MNCH medical devices included in the guidelines	Annually	N/A	N/A	0	N/A	N/A				N/A
MNCH 19[13]	# 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	N/A				N/A
MNCH 4	# of oxygen manufacturers committed to addressing weaknesses identified	Annually	0	0	0	N/A	N/A				N/A
MNCH 6	# of countries using the RMNCH forecasting supplement	Annually	0	N/A	5	8	N/A				N/A
MNCH 9	# of best practices identified and documented on	Annually	0	3	N/A	N/A	N/A				N/A

[13] The activity has changed scope; therefore, this indicator is not applicable anymore.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	elements of pharmaceutical management in social accountability MNCH interventions from the literature										
MNCH 10	# of MTaPS-supported NMRAs implementing improved registration practices relevant for MNCH medical products	Semi-annually	0	1	N/A	1	0		N/A[14]		0
MNCH 11	# of countries supported to develop and implement action plans for regional harmonization efforts relevant for MNCH medical products	Semi-annually	N/A	0	N/A		0		N/A[15]		0
MNCH 12	# of quality-assured MNCH products registered in selected country	Semi-annually	0	N/A	N/A	123	N/A		N/A		N/A
MNCH 13	# of countries supported to implement decentralized procurement systems	Semi-annually	0	1	N/A	1	N/A		N/A		N/A
MNCH 21	# of quantification guidance documents developed	Annually	0	0	0	5	2				2
MNCH 22	# of countries in selected region implementing regulation of medical devices	Semi-annually	0	N/A	N/A	N/A	0[16]		N/A		N/A
MNCH 23	# of countries participating in the joint assessment of MNCH medical devices	Annually	N/A	N/A	N/A	N/A	0				0
MNCH 24	# of countries participating in the	Annually	N/A	N/A	N/A	N/A	23				23

[14] This is an ongoing activity from the Y3 work plan and data will be available in PY6 Q1.
[15] This indicator, rolling from Y4, is not relevant anymore, as the scope of the activity has changed.
[16] This activity, planned in Y4, is ongoing and data will be available by the end of PY6 Q1.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	meetings to disseminate the call-to-action paper to improve use of amoxicillin and gentamicin										
MNCH 25	# of countries receiving MTaPS support to include non-malaria commodities in their GF proposals	Annually	N/A	N/A	N/A	N/A			6		6
MNCH 26	# of countries participating in the dissemination of the oxygen quality assurance resource document	Annually	N/A	N/A	N/A	N/A			42		42
MNCH 27	Number of stakeholders involved in validation of oxygen QA resource document[17]	Annually	0	N/A	N/A	N/A			36		36
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	11	6			2		2
	Bangladesh		0	2	1	2			N/A		N/A
	DRC		N/A	N/A	N/A	N/A			N/A		N/A
	Indonesia		0	N/A	2	N/A			N/A		N/A
	Jordan		0	0	0	3			N/A		N/A
	Nepal		0	0	0	N/A			1		1
	Rwanda		0	1	4	1			1		1
	IGAD		0	0	4	N/A			N/A		N/A
MT 1.1.2	# of MTaPS-supported entities that monitor key elements of pharmaceutical management operations and make	Annually	0	0	29	17			17		17

[17] The activity being reported under MNCH 19 has changed scope and to measure the changed activity, MNCH 27 has been added.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	the information publicly available										
	DRC MNCH		0	0	29	17	17				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% (0/1)	100% (1/1)				100% (1/1)
	IGAD		0	N/A	100% (2/2)	N/A	N/A				N/A
	Mali		0	N/A	N/A	0% (0/1)	100% (1/1)				100% (1/1)
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	80				80
	Asia Bureau		0	0	1	4	1				1
	Cross Bureau		0	N/A	N/A	1	1				1
	Bangladesh		0	2	2	5	1				1
	Burkina Faso PV		0	1	0	N/A	N/A				N/A
	Global MNCH		0	1	0	N/A	N/A				N/A
	Indonesia		0	N/A	0	N/A	1				1
	Jordan		0	0	0	0	11				11
	Mali MNCH		0	N/A	N/A	1	N/A				N/A
	Mozambique		0	1	2	N/A	N/A				N/A
	Nepal		0	N/A	3	6	65				65
	Philippines		0	0	3	1	Data not available[6]				Data not available[6]
	Rwanda		0	26	17	0	N/A				N/A
	Tanzania PEPFAR		0	N/A	2	2	N/A				N/A
PP 1.1.1	# of policies and plans developed, enhanced, or implemented to improve service delivery governance and regulation because of MTaPS support	Annually	0	2	3	1	Data not available[18]				Data not available[6]

[18] Indicator data are collected through government sources that were not available at the time of data collection.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
PP 1.2.1	# of health workers who received in-service training using nontraditional platforms on PSS, PSCM, or PV with MTaPS support	Quarterly	0	0	N/A	1,872	1,048	N/A	815	Data not available[6]	1,863
MT 1.2.2	# of pharmaceutical regulatory enforcement mechanisms established or strengthened with MTaPS support	Semi-annually	0	0	5	8	4		20		24
	Burkina Faso		0	N/A	N/A	N/A	0		N/A		0
	Global MNCH		0	N/A	0	N/A	0		1		1
	Mozambique		0	0	2	N/A	N/A		N/A		N/A
	Rwanda		0	0	2	8	4		19		23
	Tanzania PEPFAR		0	N/A	1	N/A	N/A		N/A		N/A
MT 1.2.3	% of established pharmaceutical regulatory enforcement mechanisms that are functional	Semi-annually	50%	42% (11/26)	88% (15/17)	75% (3/4)	100% (1/1)		100% (1/1)		100% (1/1)
	Bangladesh		50%	100% (2/2)	100% (8/8)	100% (2/2)	100% (1/1)		100% (1/1)		100% (1/1)
	Mozambique		0%	22% (2/9)	67% (2/3)	N/A	N/A		N/A		N/A
	Rwanda		0%	83% (5/6)	83% (5/6)	75% (6/8)	N/A		N/A		N/A
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	N/A				N/A
	DRC MNCH		0	0	1	1	1				1
	Jordan		0	0	0	0	N/A				N/A
PP 1.3.1	% of USG-supported facilities using MTaPS-supported eLMIS	Quarterly	0	N/A	N/A	Data not reported	37% (12/32)	Data not available[19]	19% (7/36)	Data not available[7]	28% (39/68)
MT 1.3.2	# of civil society organizations or	Annually	0	0	0	0	N/A				N/A

[19] Indicator data are collected through government sources that were not available at the time of data collection.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	media groups that have disseminated information on pharmaceutical sector-monitoring activities or conducted advocacy for equity in access to medical products with MTaPS support										
	Jordan		0	0	0	0	N/A				N/A
MT 2.1.2	# of MTaPS-supported health professional training curricula developed or revised to address pharmaceutical management topics	Annually	0	5	2	7	5				5
	Asia Bureau		0	N/A	1	2	N/A				N/A
	Bangladesh		0	4	0	1	N/A				N/A
	IGAD		0	1	1	N/A	N/A				N/A
	Jordan		0	N/A	N/A	4	2				2
	Mali MNCH		0	N/A	N/A	N/A	3				3
MT 2.2.2	# of persons trained in pharmaceutical management with MTaPS support	Quarterly	0	1,827	12,480	9,862	2,180	1,628	2,009	2,265	8,815
	Asia Bureau		0	N/A	101	413	*Female* 19 *Male* 6 *Unknown* 80 ***Total*** 105	*Female* 9 *Male* 6 *Unknown* 0 ***Total*** 15	*Female* 19 *Male* 37 *Unknown* 0 ***Total*** 56	*Female* 4 *Male* 4 *Unknown* 0 ***Total*** 8	184
	Bangladesh		0	1,678	2,856	3,013	*Female* 256 *Male* 67 *Unknown* 0 ***Total*** 323	*Female* 60 *Male* 456 *Unknown* 0 ***Total*** 516	*Female* 301 *Male* 0 *Unknown* 61 ***Total*** 362	*Female* 138 *Male* 622 *Unknown* 0 ***Total*** 760	1,961
	Burkina Faso		0	N/A	N/A	N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* 10 *Male* 22 *Unknown* 0 ***Total*** 32	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	32
	Cross Bureau		0	N/A	N/A	124	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 54 *Male* 106 *Unknown* 411 ***Total*** 571	*Female* 0 *Male* 0 *Unknown* 1,260 ***Total*** 1,260	*Female* 0 *Male* 0 *Unknown* 1,064 ***Total*** 1,064	2,895
	DRC MNCH		0	N/A	373	192	*Female* 3 *Male* 8	*Female* *Male* N/A	*Female* 27 *Male* 128	*Female* 26 *Male* 142	334

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Unknown	0	*Unknown*		*Unknown*	0	*Unknown*	0	
							Total	11	***Total***		***Total***	155	***Total***	168	
	DRC Supply Chain		N/A	N/A	N/A	0	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	87	223
							Male		*Male*		*Male*		*Male*	136	
							Unknown		*Unknown*		*Unknown*		*Unknown*	0	
							Total		***Total***		***Total***		***Total***	223	
	IGAD		0	N/A	843	23	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	N/A	N/A
							Male		*Male*		*Male*		*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Indonesia		0	N/A	0	251	*Female*	14	*Female*	0	*Female*	37	*Female*	37	75
							Male	3	*Male*	3	*Male*	18	*Male*	18	
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total	17	***Total***	3	***Total***	55	***Total***	55	
	Jordan		0	N/A	N/A	50	*Female*	213	*Female*	96	*Female*	60	*Female*	10	677
							Male	160	*Male*	70	*Male*	61	*Male*	7	
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total	373	***Total***	166	***Total***	121	***Total***	17	
	Mali MNCH		0	N/A	N/A	8	*Female*	N/A	*Female*	4	*Female*	0	*Female*	3	37
							Male		*Male*	8	*Male*	0	*Male*	22	
							Unknown		*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total		***Total***	12	***Total***	0	***Total***	25	
	Mozambique		0	105	21	125	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	N/A	N/A
							Male		*Male*		*Male*		*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Nepal		0	N/A	38	121	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	229	733
							Male		*Male*		*Male*		*Male*	504	
							Unknown		*Unknown*		*Unknown*		*Unknown*	0	
							Total		***Total***		***Total***		***Total***	733	
	Philippines		0	N/A	7,615	5,191	*Female*	748	*Female*	N/A	*Female*	N/A	*Female*	N/A	1,048
							Male	300	*Male*		*Male*		*Male*		
							Unknown	0	*Unknown*		*Unknown*		*Unknown*		
							Total	1,048	***Total***		***Total***		***Total***		
	Rwanda		0	44	603	246	*Female*	113	*Female*	113	*Female*	0	*Female*	0	616
							Male	190	*Male*	200	*Male*	0	*Male*	0	
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total	303	***Total***	313	***Total***	0	***Total***	0	
	Rwanda PEPFAR		0	N/A	N/A	78	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	N/A	N/A
							Male		*Male*		*Male*		*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
						27	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*		N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Tanzania PEPFAR		N/A	N/A	30		*Male* *Unknown* ***Total***	*Male* *Unknown* ***Total***	*Male* *Unknown* ***Total***	*Male* *Unknown* ***Total*** N/A	
MT 2.2.3	# of in-person or e-Learning courses developed with MTaPS assistance	Annually	0	1	11	11	1				1
	Asia Bureau		0	N/A	3	2	1				1
	Bangladesh		0	0	0	N/A	N/A				N/A
	Cross Bureau		0	1	1	2	N/A				N/A
	IGAD		N/A	N/A	0	N/A	N/A				N/A
	Mozambique		0	0	1	1	N/A				N/A
	Philippines		0	0	4	6	Data not available[20]				Data not available[21]
	Rwanda		0	0	2	N/A	N/A				N/A
MT 2.2.4	# of people successfully completing MTaPS-developed e-Learning courses	Quarterly	0	65	6,917	4,227	1,180	528	2,032	2,221	5,961
	Asia Bureau		0	0	52	0	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* 4 *Male* 4 *Unknown* 0 ***Total*** 8	8
	Bangladesh FS		0	0	0	0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 8 *Male* 109 *Unknown* 0 ***Total*** 117	*Female* 295 *Male* 496 *Unknown* 11 ***Total*** 802	*Female* 331 *Male* 751 *Unknown* 1 ***Total*** 1,093	2,012
	Bangladesh GHSA		0	N/A	N/A	N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* 25 *Male* 31 *Unknown* 0 ***Total*** 56	56
	Côte d'Ivoire		0	N/A	N/A	N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	N/A
	Cross Bureau		0	6	8	208	*Female* 0 *Male* 0 *Unknown* 418 ***Total*** 418	*Female* 0 *Male* 0 *Unknown* 411 ***Total*** 411	*Female* 0 *Male* 0 *Unknown* 1,230 ***Total*** 1,230	*Female* 0 *Male* 0 *Unknown* 1,064 ***Total*** 1,064	3,123
	Mozambique		0	65	0	0	*Female* N/A	*Female* N/A	*Female* N/A	*Female* N/A	N/A

[20] Data sources were not available at the time of data submission.
[21] Data sources were not available at the time of data submission.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
							Male *Unknown* ***Total***	*Male* *Unknown* ***Total***	*Male* *Unknown* ***Total***	*Male* *Unknown* ***Total***	
	Philippines		0	0	6,857	3,892	*Female* 547 *Male* 215 *Unknown* 0 ***Total*** 762	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	762
	Rwanda		0	0	0	127	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	N/A
MT 2.4.1	# of days reduced for product registration in countries with MTaPS-supported NMRAs	Annually	0	0	180	0	N/A				N/A
	Mali MNCH		0	N/A	N/A	0	N/A				N/A
	Rwanda		0	N/A	N/A	N/A	240				240
MT 2.4.2	# of premises inspected by MTaPS-supported NMRAs	Annually	0	N/A	N/A	3,751	N/A				N/A
	Nepal		0	N/A	N/A	3,751	N/A				N/A
MT 2.4.3	# of regional harmonization initiatives with participation by MTaPS-supported NMRAs	Annually	0	0	3	10	2				2
	Asia Bureau		0	N/A	1	10	1				1
	Cross Bureau		0	N/A	N/A	N/A	1				1
	IGAD		0	N/A	2	N/A	N/A				N/A
	Mozambique		0	0	0	N/A	N/A				N/A
MT 2.4.4	# of countries that have conducted an assessment at any level of the regulatory system	Annually	2	1	2	1	1				1
	Nepal		Yes	Yes	Yes	Yes	Yes				Yes
	Rwanda		Yes	N/A	Yes	No	No				No
MT 2.4.5	# of medicines with current valid registration	Annually	0	N/A	N/A	60	482				482
	Mali MNCH		0	N/A	N/A	60	N/A				N/A
	Rwanda		0	N/A	N/A	N/A	482				482
MT 3.3.1	*Has the country used PSS metrics to assess*	Annually	No	N/A	N/A	No	No				No

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	its pharmaceutical system?										
	Cross Bureau		No	N/A	N/A	No	No				No
NP 1	% of USG-assisted organizations with improved performance	Annually	0	0%	0%	0% (0/1)	100% (1/1)				100% (1/1)
NP 2	# of wholesalers inspected according to the new good distribution practice inspection guidelines	Annually	0	0	0	22	8				8
NP 3	# of public- and private-sector pharmacies inspected according to the new good pharmacy practice inspection guidelines	Annually	0	0	12	N/A	N/A				N/A
NP 4	# of innovations supported through USG assistance	Annually	0	0	2	4	5				5
NP 5	% of surveyed medicines labeled in compliance with labeling requirements	Annually	8.7%	N/A	8.7%	0%	60% (60/100)				60% (60/100)
NP 6	% of private-sector pharmacies surveyed dispensing prescription medicines without prescription	Annually	25%	N/A	25%	N/A	N/A				N/A
NP 8	# of monitoring visits in which the GON participates	Annually	0	N/A	2	6	17				17
PP 1.5.1	# of TB and FP commodities for which a quantification process is completed with MTaPS support	Annually	0	0	0	6	14				14
PP 1.5.2	# of TB and FP commodities procured by the DOH through FAs, pooled procurement, or other innovative procurement	Annually	0	0	0	0	Data not yet available[10]				Data not yet available[10]

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	mechanisms with support from MTaPS										
PP 2.2.1	# of TB and FP products registered in the Philippines with MTaPS support	Annually	0	0	0	9	Data not yet available[22]				Data not yet available[10]
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	Data not yet available[10]				Data not yet available[10]
PP 3.3	% of MTaPS-supported entities carrying out supply chain management functions without external TA	Annually	0	0	33% (4/12)	25% (2/8)	Data not yet available[10]				Data not yet available[10]
MT 3.1.1	# and % of MTaPS-supported HFs that have newly implemented or improved PMIS to document specific components of the pharmaceutical system for analysis and reporting with MTaPS support	Semi-annually	90%	92% (4,303/4,690)	99% (2,006/2,016)	100% (20/20)	N/A		N/A		N/A
	Bangladesh		90%	92% (4,293/4,680)	100% (2,006/2,006)	N/A	N/A		N/A		N/A
	Rwanda Field Support		0%	100% (10/10)	0% (0/10)	N/A	N/A		N/A		N/A
	Rwanda PEPFAR		0%	N/A	N/A	100% (20/20)	N/A		N/A		N/A
MT 3.1.2	# and % of MTaPS-supported HFs using interoperable PMIS tools	Semi-annually	61% (61/100)	88% (3,884/4,410)	85% (6,434/7,565)	72% (8,957/12,367)	66% (5,137/7,716)		75% (5,111/6,816)		70% (10,253/14,537) /5,963)
	Bangladesh		61% (61/100)	88% (3,875/4,396)	77% (4,734/6,173)	72% (4,418/6,106)	66% (5,132/7,711)		75% (5,111/6,816) /5,958)		70% (10,243/14,527) /5,958)

[22] Data sources were not yet available at the time of data collection and submission.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Mozambique		0%	64% (9/14)	85% (1412/1652)	64% (9/14)	100% (5/5)		100% (5/5)		100% (5/5)
	Rwanda PEPFAR		0%	N/A	N/A	100% (20/20)	N/A		N/A		N/A
MT 3.1.3	# of countries that have a functional early warning system linking clinical and stock data	Annually	0	0	2	1	1				1
	Bangladesh		0	Yes	Yes	Yes	Yes				Yes
	Mozambique		0	No	No	No	N/A				N/A
MT 3.2.1	# and % of MTaPS-supported HFs that complete and submit an LMIS report on time for the most recent reporting period	Quarterly	54.11% (158/292)	92% (4,293/4,680)	76% (4,588/6,003)	72% (18,362/25,490)	77% (5,114/6,678)		75% (5,209/6,930)		67% (4,829/6,926)		70% (4,826/6,911)		76% (69,514/91,009)
	Bangladesh		74.3% (84/115)	92% (4,293/4,680)	77% (4,488/5,826)	74% (4,830/6,500)	*Hospitals*	65% (211/325)	*Hospitals*	63% (206/325)	*Hospitals*	53% (173/325)	*Hospitals*	56% (183/325)	77% (5,002/6,501)
							Other	77% (4,791/6,176)	*Other*	76% (4,729/6,176)	*Other*	69% (4,265/6,176)	*Other*	70% (4,327/6,176)	
							Total	77% (5,002/6,501)	***Total***	76% (4,935/6,501)	***Total***	68% (4,438/6,501)	***Total***	69% (4,510/6,501)	
	DRC MNCH		42% (74/177)	Data not reported	56% (100/177)	74% (132/177)	*Hospitals*	100% (10/10)	*Hospitals*	85% (12/14)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	78% (1,123/1,441)
							Health centers	79% (122/155)	*Health centers*	63% (262/415)	*Health centers*	92% (371/405)	*Health centers*	76% (296/390)	
							Other	83% (10/12)	*Other*	0% (0/0)	*Other*	100% (10/10)	*Other*	100% (10/10)	
							Total	80% (142/177)	***Total***	64% (274/429)	***Total***	92% (391/425)	***Total***	77% (316/410)	
MT 3.3.2	# of PSS technical documents authored by MTaPS	Semiannually	0	14	39	56	18				29				48
	Asia Bureau		0	N/A	N/A	0	1				1				2
	Cross Bureau		10	13	10	11	7				9				16
	CSL		0	N/A	1	10	0				1				1
	Global MNCH		0	1	1	9	4				6				10
	Indonesia		0	N/A	0	7	4				4				8
	Jordan		0	N/A	N/A	2	N/A				7				7
	Mali MNCH		0	N/A	N/A	N/A	N/A				1				1
	Mozambique		0	N/A	N/A	N/A	0				N/A				N/A
	Rwanda		0	N/A	27	17	3				0				3

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
MT 3.3.3	# of activities to engage with stakeholders to advance the PSS global learning agenda	Quarterly	0	4	12	64	28	8	15	16	67
	Asia Bureau		0	N/A	N/A	1	1	1	1	7	7
	Cross Bureau		0	11	12	31	19	2	9	4	34
	CSL[23]		0	N/A	0	16	N/A	N/A	N/A	N/A	N/A
	Indonesia		0	N/A	0	16	8	5	5	5	23
	Mozambique		0	N/A	N/A	N/A	N/A	0	0	N/A	0
PP 3.1	# of joint success stories produced	Annually	0	2	3	2	8				8
PP 3.4	# of gender assessments, analyses, studies, or research activities conducted by MTaPS on PSCM and PV	Annually	0	0	1	1	1				1
DRC 6	% of MTaPS-supported HFs 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)	N/A		N/A		N/A
MNCH 13	# of countries supported to implement decentralized procurement systems	Semiannually	0	N/A	N/A	N/A	N/A		N/A		N/A
MNCH 15	# of oxygen manufacturers committed to addressing weaknesses identified	Annually	N/A	N/A	0	N/A	N/A				N/A
MT 4.1.2	# of new or revised medicine pricing policies developed with MTaPSassistance	Annually	0	N/A	N/A	N/A	N/A				N/A
	DRC Supply Chain		0	N/A	N/A	N/A	N/A				N/A
	Indonesia		0	N/A	N/A	N/A	N/A				N/A
MT 4.2.1	# of pharmacy benefits programs	Annually	0	1	N/A	N/A	N/A				N/A

[23] CSL portfolio is currently implementing the remaining Y4 activities. Activity corresponding to indicator MT 3.3.3 was completed before this reporting period.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	introduced or improved in health sector with MTaPS support										
	Bangladesh		0	1	N/A	N/A	N/A				N/A
MT 4.2.2	Has the country established a national-level, multistakeholder platform for evidence-based pharmacy benefits program decision making (yes/no)?	Annually	0	N/A	0	N/A	N/A				N/A
	Indonesia		0	N/A	0	N/A	N/A				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	1		2		3
	Asia Bureau		0	N/A	N/A	N/A	N/A		0		0
	Bangladesh		0	2	0	0	N/A		N/A		N/A
	Indonesia		N/A	N/A	N/A	2	1		2		3
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	Yes				Yes
	Indonesia		N/A	N/A	No		Yes				Yes
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	Yes				Yes
	Indonesia		N/A	N/A	Yes	Yes	Yes				Yes
MT 4.3.3	Does the country have a system(s) to track pharmaceutical expenditures (yes/no)?	Annually	N/A	N/A	N/A	No	Yes				Yes
	Indonesia		N/A	N/A	N/A	No	Yes				Yes
MT 4.3.4	Has the country reduced the value of product losses (due to expired medicines, damage, or theft) per	Annually	N/A	N/A	0	N/A	N/A				N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	value of commodities received (yes/no)?										
	Indonesia		N/A	N/A	0	N/A	N/A				N/A
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	N/A				N/A
MT 5.1.1	% of SDPs with stockout 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)	Data not available[24]	20% (2,994/15,035)	Data not available[12]	26% (7511/28717)
	Philippines		40.5%	45% (5,896/13,114)	31% 5,661/18,258)	37% (15,398/40,738)	33% (4,517/13,682)	Data not available	20% (2,994/15,035)	Data not available	26% (7511/28,717)
	First-line TB meds (4 fixed-dose combinations)		40.5%	52% (929/1,784)	21% (358/1,705)	23% (1,085/4,703)	19% (291/1,541)	Data not available	16% (234/1483)	Data not available	17% (525/3,024)
	TB pediatric meds (4 fixed-dose combinations)		90.6%	97% (506/519)	49% (694/1,418)	53% (1,966/3,706)	44% (522/1,189)	Data not available	11% (374/3,494)	Data not available	19% (896/4,683)
	TB preventive treatment (for children)		63.8%	77% (582/753)	81% (967/1,189)	86% (1,663/1,940)	N/A	Data not available	N/A	Data not available	N/A
	TB second-line drug (levofloxacin 500 mg)		N/A	64% (127/199)	10% (18/186)	3.5% (7/198)	3% (6/182)	Data not available	24% (78/322)	Data not available	17% (84/504)
	TB second-line drug (moxifloxacin 400 mg)		N/A	50% (100/199)	7% (12/168)	N/A	N/A	Data not available	N/A	Data not available	N/A
	TB second-line drug (linezolid 600 mg)		N/A	47% (95/199)	5% (9/184)	9% (17/198)	4% (7/182)	Data not available	30% (98/322)	Data not available	21% (105/504)
	TB second-line drug (bedaquiline)		N/A	47% (95/199)	8% (14/183)	4.5% (9/198)	7% (13/182)	Data not available	25% (82/322)	Data not available	19% (95/504)
	GeneXpert cartridges		N/A	3% (13/395)	14% (46/338)	30% (367/1,207)	95% (694/728)	Data not available	38% (238/617)	Data not available	69% (932/1,345)
	FP injectable		30.2%	27% (466/1703)	22% (500/2,237)	28% (1,420/5,017)	29% (495/1,714)	Data not available	20% (318/1,585)	Data not available	25% (813/3,299)
	FP implant		52.7%	69% (796/1150)	42% (784/1,879)	50% (2,022/4,208)	44% (572/1,292)	Data not available	35% (344/993)	Data not available	40% (916/2,285)
	FP oral COC		25.6%	24% (418/1716)	14% (318/2,273)	34% (1,734/5,062)	35% (602/1,734)	Data not available	21% (339/1,585)	Data not available	28% (941/3,319)
	FP oral POP		69.3%	52% (715/1374)	24% (540/2,229)	22% (1,101/5,053)	20% (350/1,738)	Data not available	16% (257/1,575)	Data not available	18% (607/3,313)
	IUD		36.7%	37% (466/1264)	41% (836/2,022)	43% (1,892/4,369)	39% (567/1,458)	Data not available	39% (439/1,135)	Data not available	39% (1,006/2,593)

[24] Indicator data are collected through government sources that were not available at the time of data collection.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Male condom		38.9%	36% (592/1661)	25% (568/2,249)	20% (1,036/5,059)	23% (398/1,742)	Data not available	12% (193/1,602)	Data not available	18% (591/3,344)
MT 5.1.1 (FP)	Stockout rates of tracer medicines in MTaPS-supported HFs (FP)	Semiannually	0%	N/A	N/A	.00116% (70/60,363)	.06% (17/30,402)		.71% (185/26,062)		.36% (202/56,464)
	Bangladesh						.06% (17/30,402)		.71% (185/26,062)		
MT 5.1.1 (MNCH)	Stockout rates of tracer medicines in MTaPS-supported HFs (MNCH)	Semiannually	0%	N/A	N/A	N/A	32% (15,571/48,530)		29% (14,265/48,530)		31% (29,836/97,060)
	Bangladesh						32% (15,571/48,530)		29% (14,265/48,530)		
MT 5.1.1 (TB)	Stockout rates of tracer medicines in MTaPS-supported HFs (TB)	Semiannually	78%%	N/A	N/A	N/A	10% (45/436)		10% (100/972)		10% (145/1,408)
	Bangladesh						10% (45/436)		10% (100/972)		
MT 5.1.2	% of tracer products stocked according to plan	Semiannually	0%	N/A	28% (52/186)	28% (25/88)	100% (22/22)		13% (5/37)		46% (27/59)
	Bangladesh		0%	N/A	0% (0/7)	50% (3/6)	N/A		N/A		N/A
					92% (12/13)	50% (3/6)	N/A		N/A		
					14% (1/7)	0	N/A		N/A		
					0% (0/7)	0	N/A		N/A		
	DRC MNCH		0%	N/A	37% (14/38)	56% (11/19)	*Stocked according to plan*	100% (22/22)	13% (5/37)		46% (27/59)
					42% (16/38)	26% (5/19)	*Overstocked*	0% (0/22)	40% (15/37)		
					18% (7/38)	16% (3/19)	*Understocked*	0% (0/22)	19% (7/37)		
					53% (2/38)	0% (0/19)	*Stocked out*	0% (0/22)	27% (10/37)		
MT 5.1.2 (FP)	% of tracer products stocked according to plan (FP)	Semiannually	0%	N/A	N/A	50% (12/14)	33% (1/6)		16% (1/6)		16% (2/12)
	Bangladesh		0%	N/A	N/A	50% (12/14)	33% (6/18)		16% (1/6)		
MT 5.1.2 (TB)	% of tracer products stocked according to plan (TB)	Semiannually	0%	N/A	N/A	N/A	N/A		N/A		N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	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 TA	Semi-annually	0%	Data not reported	100% (3/3)	100% (3/3)	100% (3/3)		N/A		100% (3/3)
	Bangladesh		0%	Data not reported	100% (3/3)	100% (3/3)	100% (3/3)		N/A		
MT 5.2.1	% of MTaPS-supported HFs which have developed, adopted, or implemented pharmaceutical service standards	Semi-annually	0%	0%	0% (0/100)	0%	N/A		N/A		N/A
	Rwanda		0%	0%	0% (0/100)	0%	N/A		N/A		N/A
MT 5.2.2	% of MTaPS-supported HFs promoting patient-centered pharmaceutical services	Semi-annually	0%	N/A	N/A	100% (20/20)	N/A		N/A		N/A
	Rwanda		0%	N/A	N/A	100% (20/20)	N/A		N/A		N/A
MT 5.2.3	% of MTaPS-supported HFs implementing CQI approaches to improve medicine use	Semi-annually	0%	N/A	N/A	100% (20/20)	100% (20/20)		N/A		100% (20/20)
	Rwanda		0%	N/A	N/A	100% (20/20)	*Hospitals*	100% (10/10)	N/A		100% (02/20)
							Health centers	100% (10/10)			
							Pharmacies	0% (0/0)			
							Other	0% (0/0)			
							Total	100% (20/20)			
MT 5.3.1	% of MTaPS-supported HFs that have implemented	Quarterly	31% (31/100)	3% (3/110)	44% (46/105)	67% (414/615)	83% (75/90)	71% (64/90)	74% (67/90)	66% (46/70)	74% (252/340)

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
	medicine safety activities														
	Bangladesh		31% (31/100)	3% (3/100)	56% (28/50)	58% (38/65)	*Pharmacies*	77% (50/65)	*Pharmacies*	60% (39/65)	*Pharmacies*	65% (42/65)	*Pharmacies*	63% (41/65)	77% (50/65)
							Total	77% (50/65)	***Total***	60% (39/65)	***Total***	65% (42/65)	***Total***	63% (41/65)	
	Burkina Faso PV		0%	N/A	N/A	N/A	*Health centers*	N/A	*Health centers*	N/A	*Health centers*	N/A	*Health centers*	N/A	N/A
							Total	N/A	***Total***	N/A	***Total***	N/A	***Total***	N/A	
	IGAD		0%	Data not reported	24% (10/41)	6.5% (8/123)	*Hospitals*	N/A	*Hospitals*	N/A	*Hospitals*	N/A	*Hospitals*	N/A	N/A
							Health centers		*Health centers*		*Health centers*		*Health centers*		
							Pharmacies		*Pharmacies*		*Pharmacies*		*Pharmacies*		
							Total		***Total***		***Total***		***Total***		
	Mozambique		0%	N/A	100%	100% (14/14)	*Hospitals*	100% (1/1)	*Hospitals*	100% (1/1)	*Hospitals*	100% (1/1)	*Hospitals*	100% (1/1)	100% (5/5)
							Health centers	100% (4/4)	*Health centers*	100% (4/4)	*Health centers*	100% (4/4)	*Health centers*	100% (4/4)	
							Total	100% (5/5)	***Total***	100% (5/5)	***Total***	100% (5/5)	***Total***	100% (5/5)	
	Rwanda		0% (0/10)	0% (0/10)	50% (5/10)	N/A	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	N/A	100% (20/20)
							Health centers	100% (10/10)	*Health centers*	100% (10/10)	*Health centers*	100% (10/10)	*Health centers*		
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***		
	Rwanda PEPFAR		0%	N/A	N/A	100% (20/20)	*Hospitals*	N/A	*Hospitals*	N/A	*Hospitals*	N/A	*Hospitals*	N/A	N/A
							Health centers		*Health centers*		*Health centers*		*Health centers*		
							Total		***Total***		***Total***		***Total***		
MT 5.3.2	% of ADEs reported to the NMRA and reviewed by the NMRA	Semi-annually		22% (95/440)	53% (7,419/13,881)	16% (3,801/22,758)	52% (1,069/2,052)				25% (242/948)				43% (1,311/3,000)
	Bangladesh		68% (68/100)	22%	77% (449/ 586)	90% (852/945)	75% (385/513)				89% (232/261)				80% (617/774)
	Burkina Faso		0	N/A	N/A	N/A	N/A				N/A				N/A
	IGAD		0% (0/0)	N/A	100% (1,104/1,104)	N/A	N/A				N/A				N/A
	Mozambique		60%	N/A	56% (1,237/2,213)	12.19% (1,223/10,035)	N/A				N/A				N/A
	Mozambique PEPFAR		0	0	23% (1,563/6,635)	12.19% (1,223/10,035)	N/A				N/A				N/A
	Rwanda		N/A	73% (274/374)	55% (102/186)	29% (503/1,746)	44% (684/1,539)				1% (10/687)				31% (694/2,226)
	Tanzania PEPFAR		N/A	N/A	2,641/	N/A	N/A				N/A				N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
NP-MT 5.3.2	# of ADEs reported in Nepal	Annually	194	29	43	6	27				27
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	Data source not yet available				Data source not yet available
	Nepal		0	N/A	N/A	15	Data source not yet available				Data source not yet available
MT 5.4.1	% of MTaPS-supported HFs that have documented evidence of improvement in antimicrobial medicine prescription and/or use	Annually	0	N/A	N/A	0% (0/3)	N/A[25]				N/A
	Jordan		0	N/A	N/A	0% (0/3)	N/A				N/A
MT 5.4.2	% of MTaPS-supported HFs implementing locally identified and prioritized core elements of IPC activities	Semi-annually	0%	100%	100% (7/7)	100% (7/7)	N/A		N/A		N/A
	Mozambique		0%	100%	100% (7/7)	100% (7/7)	N/A		N/A		N/A
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	N/A	N/A	N/A	N/A
	Jordan		0	N/A	N/A	4	N/A	N/A	N/A	N/A	N/A
	Nepal		0	N/A	N/A	N/A	N/A	N/a	N/A	9	9
ML 1	# of marketing authorization commission meetings supported by MTaPS	Quarterly	0	0	0	1	N/A	N/A	N/A	N/A	N/A
	Mali MNCH		0	0	0	1	N/A	N/A	N/A	N/A	N/A
ML 2	# of quarterly meetings to orient key stakeholders on using directory of	Quarterly	0	0	0	1	N/A	N/A	N/A	N/A	N/A

[25] MTaPS Jordan facility assessments planned for PY6.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	registered medical products										
	Mali MNCH		0	0	0	1	N/A	N/A	N/A	N/A	N/A
EVD 1	# of policies, legislation, regulations, operational documents, or guidelines for EVD management developed or updated with TA from MTaPS	Quarterly	0	0	0	3	N/A	N/A	N/A	N/A	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					
	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*	N/A
	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	*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***	
EVD 3	# of persons who received EVD training with MTaPS support	Quarterly	0	0	0	924	N/A	N/A	N/A	N/A	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***	N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	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***	*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***	N/A
	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	*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)	99% (197/199)	100% (197/197)	Data not yet available[26]	100% (197/197)
	Philippines		0	0	20%	70% (564/801)	99% (197/199)	99% (197/199)	100% (197/197)	Data not yet available[14]	100% (197/197)
PH-P 1	# of products that complete HTA process with MTaPS support	Annually	0	N/A	N/A	1	N/A				N/A

[26] Data sources not available at time of data collection and submission

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Philippines										
PH- P 2	# of HIV/AIDS commodities that complete the quantification process with MTaPS support	Annually	0	N/A	N/A	9	Data not yet available[14]				Data not yet available[14]
	Philippines										
JO 1	# of National Vaccine Procurement Modernization Committee meetings with MTaPS support	Quarterly	0	N/A	N/A	3	1	0	N/A	N/A	1
	Jordan						1	0	N/A	N/A	1
JO 2	*# of HFs implementing AMR guidelines/protocols developed by MTaPS*	Annually	0	N/A	N/A	N/A	3				3
	Jordan		0				3				
JO 3	*# of active hospital-level AMS teams*	Annually	0	N/A	N/A	3	3				3
	Jordan		0				3				
JO 4	# of awareness-raising activities on AMR and rational use of antibiotics conducted	Quarterly	0	N/A	N/A	4	8	22	0	0	30
	Jordan		0	N/A	N/A	4	8	22	0	0	30
JO 5	# 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	1,575	0	0	2,700
	Jordan		0	N/A	N/A	0	*Female* 568 *Male* 557 *Unknown* 0 ***Total*** 1,125	*Female* 849 *Male* 726 *Unknown* 0 ***Total*** 1,575	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	
JO 6	# of awareness-raising activities to promote vaccine safety messages and reporting of ADRs conducted at the community level	Quarterly	0	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A
	Jordan		0	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
JO 7	# of COVID-19 vaccine safety surveillance reports produced with MTaPS support	Quarterly	0	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A
	Jordan		0	N/A	N/A	3	N/A	N/A	N/A	N/A	N/A
JO 8	*# of IPC assessments conducted at HFs*	Annually	N/A	N/A	N/A	N/A	N/A				N/A
	Jordan			N/A	N/A	N/A	N/A				
MSC 1	# of AMR-related in-country meetings or activities conducted with multisectoral participation	Quarterly	0	122	170	188	45	32	41	26	144
	Bangladesh		0	3	2	9	3	1	2	3	9
	Burkina Faso		0	2	2	4	1	3	3	4	11
	Cameroon		0	5	7	4	0	2	N/A	1	3
	Côte d'Ivoire		0	35	67	76	11	8	8	2	29
	DRC		0	6	20	8	2	1	2	3	8
	Ethiopia		0	1	N/A	5	3	1	4	1	9
	Jordan		0	0	2	N/A	N/A	N/A	N/A	N/A	N/A
	Kenya		0	38	26	24	8	4	3	3	18
	Mali		0	16	6	13	3	2	2	1	8
	Mozambique		0	0	13	12	3	3	3	N/A	9
	Nigeria		0	N/A	6	10	4	1	5	2	12
	Senegal		0	2	5	8	2	3	4	5	14
	Tanzania		0	4	2	8	1	1	4	0	6
	Uganda		0	9	7	7	4	2	1	1	8
MSC 2	# and % of female participants in meetings or other events organized by the multisectoral body on AMR	Semi-annually		39% (842/2,135)	42% (346/825)	32% (779/2,458)	36% (531/1,694)		36% (459/1,278)		33% (990/2,972)
	Bangladesh		29% (24/84)	29% (24/84)	29% (12/41)	20% (60/300)	20% (15/75)		27% (26/96)		24% (41/171)
	Burkina Faso		18% (3/17)	22% (6/27)	33% (10/10)	29% (5/17)	32% (39/123)		35% (17/48)		33% (56/171)
	Cameroon		50% (2/4)	39% (39/101)	52% (32/62)	27% (38/138)	57% (29/51)		37% (11/30)		49% (40/81)
	Côte d'Ivoire		38% (21/55)	38% (42/110)	43% (70/163)	39% (151/382)	37% (118/319)		37% (27/73)		37% (145/392)
	DRC		34%	36% (76/212)	32% (30/93)	35% (54/154)	41% (30/73)		34% (11/32)		39% (41/105)
	Ethiopia		22%	17% (16/93)	N/A	22% (71/321)	10% (31/304)		21% (39/186)		14% (70/490)

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Jordan		45% (5/11)	Data not reported	45% (5/11)	N/A	N/A		N/A		N/A
	Kenya		66%	44% (562/1270)	51% (105/207)	45% (101/226)	45% (123/270)		45% (82/183)		45% (205/453)
	Mali		15%	16% (20/124)	20% (22/109)	21% (82/394)	26% (74/287)		28% (29/105)		26% (103/392)
	Mozambique		48% (11/23)	N/A	40% (4/10)	40% (36/92)	39% (30/77)		53% (63/118)		48% (93/195)
	Nigeria		Data not reported	N/A	41% (17/41)	46% (44/95)	50% (5/10)		43% (20/46)		45% (25/56)
	Senegal		58% (54/93)	58% (54/93)	34% (11/32)	39% (70/181)	38% (13/34)		38% (114/298)		38% (127/332)
	Tanzania		14% (3/21)	14% (3/21)	0% (0/0)	22% (14/63)	28% (6/21)		28% (6/21)		28% (12/42)
	Uganda		Data not reported	N/A	61% (28/46)	43% (44/102)	36% (18/50)		33% (14/42)		35% (32/92)
MSC 3	# of policies, legislation, regulations, and operational documents related to NAP-AMR implementation developed or updated with MTaPS support	Annually	0	17	13	12	19				19
	Bangladesh		0	0	2	1	N/A				N/A
	Burkina Faso		0	0	1	1	0				0
	Cameroon		0	1	1	0	1				1
	Côte d'Ivoire		0	0	0	1	N/A				N/A
	DRC		0	3	0	0	N/A				N/A
	Kenya		0	3	3	1	3				3
	Mali		0	8	N/A	1	1				1
	Mozambique		0	N/A	2	N/A	3				3
	Nigeria		0	N/A	0	1	1				1
	Senegal		0	1	2	3	4				4
	Tanzania		0	1	2	1	3				3
	Uganda		0	0	0	2	1				1
MSC 4	# of multisectoral bodies that have developed a national monitoring framework with MTaPS support	Annually	0	1	1	8	3				3
	Bangladesh		0	0	0	N/A	N/A				N/A
	Burkina Faso		0	0	0	0	N/A				N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Cameroon		0	0	0	1	1				1
	Côte d'Ivoire		0	0	0	1	N/A				N/A
	DRC		0	0	0	1	N/A				N/A
	Kenya		0	1	1	1	1				1
	Mali		0	0	N/A	N/A	N/A				N/A
	Mozambique		0	0	0	0	N/A				N/A
	Nigeria		0	N/A	0	1	0				0
	Senegal		0	0	1	2	1				1
	Tanzania		0	0	0	1	N/A				N/A
	Uganda		0	0	0	0	N/A				N/A
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	41	159	0	240
	Bangladesh		0	0	0	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	N/A
	Burkina Faso		0	0	80	0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* *Male* *Unknown* ***Total***	N/A	0
	Cameroon		0	0	20	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	N/A
	Côte d'Ivoire		0	134	0	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	N/A
	DRC		0	0	463	0	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	N/A
	Ethiopia		0	150	N/A	22	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 5 *Male* 25 *Unknown* 0 ***Total*** 30	*Female* 31 *Male* 83 *Unknown* 0 ***Total*** 114	*Female* *Male* *Unknown* ***Total***	N/A	144
	Kenya		0	N/A	N/A	22	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* 0 *Male* 0 *Unknown* 0 ***Total*** 0	*Female* *Male* *Unknown* ***Total***	N/A	0
	Mali		0	30	2	0	*Female* N/A	*Female* N/A	*Female* N/A	*Female* N/A	N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Male		*Male*		*Male*		*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Mozambique		0	0	45	67	*Female*	6	*Female*	7	*Female*	24	*Female*	N/A	67
							Male	5	*Male*	4	*Male*	21	*Male*		
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*		
							Total	11	***Total***	11	***Total***	45	***Total***		
	Nigeria		0	N/A	0	25	*Female*	3	*Female*	0	*Female*	0	*Female*	0	29
							Male	26	*Male*	0	*Male*	0	*Male*	0	
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total	29	***Total***	0	***Total***	0	***Total***	0	
	Senegal		0	0	0	0	*Female*		*Female*		*Female*		*Female*	N/A	N/A
							Male	N/A	*Male*	N/A	*Male*	N/A	*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Tanzania		0	0	0	N/A	*Female*		*Female*		*Female*		*Female*		N/A
							Male	N/A	*Male*	N/A	*Male*	N/A	*Male*	N/A	
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Uganda		0	0	45	101	*Female*		*Female*		*Female*		*Female*	N/A	N/A
							Male		*Male*		*Male*		*Male*		
							Unknown	N/A	***Unknown***	N/A	*Unknown*	N/A	*Unknown*		
							Total		***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	50								50
	Bangladesh		0	0	0	0	1								1
	Burkina Faso		0	0	1	0	N/A								N/A
	Cameroon		0	0	20	20	46								46
	Côte d'Ivoire		0	1	2	6	1								1
	DRC		0	0	0	N/A	N/A								N/A
	Ethiopia		0	N/A	N/A	N/A	2								2
	Kenya		0	0	0	0	N/A								N/A
	Mali		0	1	2	N/A	N/A								N/A
	Mozambique		0	N/A	0	N/A	N/A								N/A
	Nigeria		0	N/A	0	N/A	N/A								N/A
	Senegal		0	0	0	0	N/A								N/A
	Tanzania		0	0	0	N/A	N/A								N/A
	Uganda		0	0	0	0	N/A								N/A
MSC 7	# of data collection and analysis mechanisms for	Annually	0	0	2	5	5								5

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	tracking AMR-related indicators developed or strengthened with MTaPS support										
	Bangladesh		0	0	0	N/A	N/A				N/A
	Burkina Faso		0	0	0	0	N/A				N/A
	Cameroon		0	0	0	1	1				1
	Côte d'Ivoire		0	0	0	0	N/A				N/A
	DRC		0	0	1	0	N/A				N/A
	Kenya		0	0	0	1	1				1
	Mozambique		0	N/A	1	2	1				1
	Nigeria		0	N/A	0	0	N/A				N/A
	Senegal		0	0	0	0	2				2
	Tanzania		0	0	0	1	N/A				N/A
	Uganda		0	0	0	0	N/A				N/A
IP 1	# of updated policies, pieces of legislation, regulations, or operational documents for improving IPC	Annually	0	9	3	7	13				13
	Bangladesh		0	0	0	N/A	5				5
	Burkina Faso		0	0	0	N/A	N/A				N/A
	Cameroon		0	0	1	1	N/A				N/A
	Côte d'Ivoire		0	7	0	0	N/A				N/A
	DRC		0	0	0	N/A	N/A				N/A
	Kenya		0	0	3	2	3				3
	Mali		0	1	N/A	1	N/A				N/A
	Mozambique		0	N/A	1	N/A	N/A				N/A
	Nigeria		0	N/A	1	1	2				2
	Senegal		0	0	0	1	3				3
	Tanzania		0	1	0	1	N/A				N/A
	Uganda		0	0	0	1	N/A				N/A
IP 2	# of persons trained in IPC with MTaPS support	Quarterly	0	1,199	7,477	3,886	577	465	1,745	915	3,717
	Bangladesh		0	0	95	264	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	N/A
	Cameroon		0	86	88	N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	*Female* *Male* *Unknown* ***Total*** N/A	N/A
	Côte d'Ivoire		0	0	131	158	*Female* *Male* *Unknown* N/A	*Female* *Male* *Unknown* N/A	*Female* *Male* *Unknown* N/A	*Female* *Male* *Unknown* N/A	N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Total		***Total***		***Total***		***Total***		
	DRC		0	0	94	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	N/A
	Ethiopia		0	0	N/A	28	*Female* *Male* *Unknown* ***Total***	33 39 0 72	*Female* *Male* *Unknown* ***Total***	70 69 0 139	*Female* *Male* *Unknown* ***Total***	51 117 0 168	*Female* *Male* *Unknown* ***Total***	0 0 0 0	394
	Kenya		0	642	5,230	742	*Female* *Male* *Unknown* ***Total***	52 33 0 85	*Female* *Male* *Unknown* ***Total***	96 71 0 167	*Female* *Male* *Unknown* ***Total***	370 171 0 541	*Female* *Male* *Unknown* ***Total***	88 45 0 133	926
	Mali		0	N/A	21	29	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	5 12 0 17	*Female* *Male* *Unknown* ***Total***	6 15 0 21	*Female* *Male* *Unknown* ***Total***	0 1 0 1	39
	Mozambique		0	0	0	57	*Female* *Male* *Unknown* ***Total***	8 6 0 14	*Female* *Male* *Unknown* ***Total***	5 9 0 14	*Female* *Male* *Unknown* ***Total***	24 21 0 45	*Female* *Male* *Unknown* ***Total***	N/A	73
	Nigeria		0	N/A	15	51	*Female* *Male* *Unknown* ***Total***	11 12 0 23	*Female* *Male* *Unknown* ***Total***	31 7 0 38	*Female* *Male* *Unknown* ***Total***	476 192 0 668	*Female* *Male* *Unknown* ***Total***	340 409 0 749	1,478
	Senegal		0	0	22	717	*Female* *Male* *Unknown* ***Total***	181 94 0 275	*Female* *Male* *Unknown* ***Total***	0 0 90 90	*Female* *Male* *Unknown* ***Total***	0 0 0 0	*Female* *Male* *Unknown* ***Total***	11 21 0 32	397
	Tanzania		0	471	17	117	*Female* *Male* *Unknown* ***Total***	43 65 0 108	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	108
	Uganda		0	0	1,247	1,770	*Female* *Male* *Unknown* ***Total***	0 0 0 0	*Female* *Male* *Unknown* ***Total***	0 0 0 0	*Female* *Male* *Unknown* ***Total***	160 142 0 302	*Female* *Male* *Unknown* ***Total***	N/A	302
IP 3	# and % of MTaPS-supported facilities that are using a 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)		91% (128/140)		90% (124/137)		95% (128/134)		98% (137/140)

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	100% (4/4)	*Hospitals*	55% (5/9)	*Hospitals*	67% (6/9)	*Hospitals*	100% (9/9)	*Hospitals*	100% (9/9)	100% (9/9)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	55% (5/9)	***Total***	67% (6/9)	***Total***	100% (9/9)	***Total***	100% (9/9)	
	Cameroon		0% (0/0)	0% (0/0)	100% (12/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Côte d'Ivoire		0% (0/0)	0% (0/0)	100% (12/12)	100% (22/22)	*Hospital*	100% (20/20)	*Hospital*	100% (20/20)	*Hospital*	100% (16/16)	*Hospital*	92% (12/13)	100% (20/20)
							Animal health centers	0% (0/0)	*Animal health centers*	0% (0/0)	*Animal health centers*	0% (0/0)	*Animal health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	100% (4/4)	*Others*	100% (7/7)	
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***	95% (19/20)	
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	50% (6/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	50% (6/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Ethiopia		0% (0/0)	50% (15/30)	N/A	100% (5/5)	*Hospitals*	100% (5/5)	*Hospitals*	100% (7/7)	*Hospitals*	100% (8/8)	*Hospitals*	100% (8/8)	100% (8/8)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (5/5)	***Total***	100% (7/7)	***Total***	100% (8/8)	***Total***	100% (8/8)	
	Kenya		0% (0/0)	0% (0/0)	100% (20/20)	100% (20/20)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	100% (20/20)
							Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	
							Others	0%	*Others*	0%	*Others*	0%	*Others*	0%	

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
								(0/0)		(0/0)		(0/0)		(0/0)	
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	
	Mali		0% (0/0)	0% (0/0)	100% (16/16)	100% (16/16)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	100% (16/16)
							Health centers	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (16/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (3/3)	*Hospital*	N/A	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*		
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*		
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (3/3)	***Total***		
	Nigeria		0% (0/0)	N/A	0% (0/0)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
	Senegal		100% (3/3)	100% (3/3)	100% (8/8)	100% (13/13)	*Hospitals*	83% (10/12)	*Hospitals*	83% (10/12)	*Hospitals*	Data not collected[27]	*Hospitals*	67% (8/12)	77% (10/13)
							Health centers	0% (0/1)	*Health centers*	0% (0/1)	*Health centers*		*Health centers*	0% (0/1)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*		*Others*	0% (0/0)	
							Total	77% (10/13)	***Total***	77% (10/13)	***Total***		***Total***	61% (8/13)	
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	
	Uganda			0%			*Hospitals*	100%	*Hospitals*	100%	*Hospitals*	100%	*Hospitals*	100%	100%

[27] MTaPS Senegal was unable to collect IPC data for PY5 Q3. Focus was on national program activities.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
				(0/0)				(7/7)		(7/7)		(7/7)		(7/7)	(7/7)
			0% (0/0)		100% (13/13)	100% (13/13)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
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	100% (4/4)								100% (4/4)
	Bangladesh		No	No	No	No	Yes								Yes
	Kenya		No	Yes	Yes	Yes	Yes								Yes
	Mali		No	No	Yes	Yes	Yes								Yes
	Nigeria		No	N/A	Yes	Yes	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)		87% (122/140)		90% (124/137)		81% (109/134)		42% (134/315)
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	50% (2/4)	*Hospitals*	44% (4/9)	*Hospitals*	67% (6/9)	*Hospitals*	100% (9/9)	*Hospitals*	100% (9/9)	100% (9/9)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	44% (4/9)	***Total***	67% (6/9)	***Total***	100% (9/9)	***Total***	100% (9/9)	
	Cameroon		0% (0/6)	100% (6/6)	100% (12/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Côte d'Ivoire		50% (2/4)	100% (4/4)	100% (12/12)	92% (20/22)	*Hospitals*	100% (20/20)	*Hospitals*	100% (20/20)	*Hospitals*	100% (16/16)	*Hospitals*	0% (0/13)	100% (20/20)
							Animal health centers	0% (0/0)	*Animal health centers*	0% (0/0)	*Animal health centers*	0% (0/0)	*Animal health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	100% (4/4)	*Others*	0% (0/7)	
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***	0% (0/20)	

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	50% (6/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	50% (6/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Ethiopia		0% (0/0)	70%	N/A	0% (0/5)	*Hospitals*	100% (5/5)	*Hospitals*	100% (7/7)	*Hospitals*	100% (8/8)	*Hospitals*	100% (8/8)	100% (8/8)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (5/5)	***Total***	100% (7/7)	***Total***	100% (8/8)	***Total***	100% (8/8)	
	Kenya		100% (16/16)	100% (16/16)	100% (20/20)	100% (20/20)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	100% (20/20)
							Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	
	Mali		0% (0/5)	0% (0/5)	94% (15/16)	100% (16/16)	*Hospital*	89% (8/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	100% (16/16)
							Health centers	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	94% (15/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (3/3)	*Hospital*	N/A	100% (6/6)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*		
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*		
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (3/3)	***Total***		
	Nigeria		0% (0/3)	N/A	0% (0/0)	14% (1/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
	Senegal		0%	0%	100%	92%	*Hospitals*	75% (9/12)	*Hospitals*	33% (4/13)	*Hospitals*		*Hospitals*	67% (8/12)	54%

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
			(0/3)	(0/3)	(8/8)	(12/13)	*Health centers*	0% (0/1)	*Health centers*	0% (0/1)	*Health centers*	Data were not collected[28]	*Health centers*	0% (0/1)	(7/13)
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*		*Others*	0% (0/0)	
							Total	69% (9/13)	***Total***	31% (4/13)	***Total***		***Total***	61% (8/13)	
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	
	Uganda		0% (0/7)	100% (7/7)	100% (13/13)	100% (13/13)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
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)		93% (130/140)		90% (124/137)		95% (128/134)		98% (137/140)
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	100% (6/6)	*Hospitals*	100% (9/9)	*Hospitals*	100% (9/9)	*Hospitals*	100% (9/9)	*Hospitals*	100% (9/9)	100% (9/9)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (9/9)	***Total***	100% (9/9)	***Total***	100% (9/9)	***Total***	100% (9/9)	
	Cameroon		0% (0/0)	83% (5/6)	100% (12/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Côte d'Ivoire		100% (4/4)	100% (4/4)	100% (12/12)	100% (22/22)	*Hospitals*	100% (20/20)	*Hospitals*	100% (20/20)	*Hospitals*	100% (16/16)	*Hospitals*	85% (12/13)	100% (20/20)
							Animal health centers	0% (0/0)	*Animal health centers*	0% (0/0)	*Animal health centers*	0% (0/0)	*Animal health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	100% (4/4)	*Others*	100% (7/7)	
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***	95% (19/20)	

[28] MTaPS Senegal was unable to collect IPC data for PY5 Q3. Focus was on national program activities.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	50% (6/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	50% (6/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Ethiopia		0% (0/0)	100%	N/A	100% (5/5)	*Hospitals*	100% (5/5)	*Hospitals*	86% (6/7)	*Hospitals*	100% (8/8)	*Hospitals*	100% (8/8)	100% (8/8)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (5/5)	***Total***	86% (6/7)	***Total***	100% (8/8)	***Total***	100% (8/8)	
	Kenya		0% (0/16)	100% (16/16)	92% (18/20)	100% (20/20)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	100% (20/20)
							Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	***Total***	100% (20/20)	
	Mali		0% (0/5)	0% (0/5)	75% (12/16)	100% (16/16)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	100% (16/16)
							Health centers	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (16/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (3/3)	*Hospital*	N/A	100% (6/6)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*		
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*		
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (3/3)	***Total***		
	Nigeria		0% (0/3)	N/A	0% (0/3)	86% (6/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
	Senegal		100% (3/3)	100% (3/3)	100% (8/8)	92% (12/13)	*Hospitals*	83% (10/12)	*Hospitals*	83% (10/12)	*Hospitals*	Data were not collected[29]	*Hospitals*	67% (8/12)	77% (10/13)
							Health centers	0% (0/1)	*Health centers*	0% (0/1)	*Health centers*		*Health centers*	0% (0/1)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*		*Others*	0% (0/0)	
							Total	77% (10/13)	***Total***	77% (10/13)	***Total***		***Total***	61% (8/13)	
	Tanzania		17% (1/6)	100% (6/6)	100% (10/10)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)

[29] MTaPS Senegal was unable to collect IPC data for PY5 Q3. Focus was on national program activities.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	
	Uganda		100% (7/7)	100% (7/7)	100% (13/13)	100% (13/13)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
IP 7	# and % of MTaPS-supported facilities with improved HH compliance	Annually	0	100% (36/36)	85% (88/104)	73% (103/141)	82% (112/137)								82% (112/137)
	Bangladesh		0	N/A	100% (2/2)	100% (4/4)	*Hospitals*	22% (2/9)							22% (2/9)
							Total	22% (2/9)							
	Cameroon		0	N/A	100% (12/12)	92% (11/12)	*Hospitals*	42% (5/12)							42% (5/12)
							Total	42% (5/12)							
	Côte d'Ivoire		0	100% (4/4)	90% (9/12)	45% (10/22)	*Hospitals*	84% (11/13)							90% (18/20)
							Others	100% (7/7)							
							Total	90% (18/20)							
	DRC		0	N/A	57% (4/7)	100% (12/12)	*Hospitals*	100% (12/12)							100% (12/12)
							Total	100% (12/12)							
	Ethiopia		0	N/A	N/A	0% (0/5)	*Hospitals*	62% (5/8)							62% (5/8)
							Total	62% (5/8)							
	Kenya		0	100% (16/16)	100% (20/20)	100% (20/20)	*Hospitals*	100% (19/19)							100% (20/20)
							Health centers	100% (1/1)							
							Total	100% (20/20)							
	Mali		0	N/A	94% (15/16)	75% (12/16)	*Hospital*	90% (8/9)							86% (14/16)
							Health centers	86% (6/7)							
							Total	86% (14/16)							
	Mozambique		0	N/A	0% (0/7)	43% (3/7)	*Hospitals*	100% (3/3)							100% (3/3)
							Total	100% (3/3)							
	Nigeria		0	N/A	0% (1/3)	14% (1/7)	*Hospitals*	100% (7/7)							100% (7/7)
							Total	100% (7/7)							
	Senegal		0	100% (3/3)	100% (8/8)	54% (7/13)	*Hospitals*	77% (10/12)							83% (10/13)
							Health Centers	0% (0/1)							
							Total	83% (10/13)							
	Tanzania		0	100% (6/6)	100% (10/10)	100% (10/10)	*Hospitals*	100% (10/10)							100% (10/10)
							Total	100% (10/10)							
	Uganda		0	100% (7/7)	100% (7/7)	100% (13/13)	*Hospitals*	86% (6/7)							86% (6/7)
							Total	86% (6/7)							

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
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)	89% (122/137)				89% (122/137)
	Bangladesh		0	50% (1/2)	100% (2/2)	100% (4/4)	*Hospitals*	100% (9/9)			100% (9/9)
							Total	100% (9/9)			
	Cameroon		0	N/A	100% (12/12)	92% (11/12)	*Hospitals*	92% (11/12)			92% (11/12)
							Total	92% (11/12)			
	Côte d'Ivoire		0	N/A	80% (8/12)	41% (9/22)	*Hospitals*	85% (11/13)			90% (18/20)
							Others	100% (7/7)			
							Total	90% (18/20)			
	DRC		0	N/A	0% (0/7)	100% (12/12)	*Hospitals*	100% (12/12)			100% (12/12)
							Total	100% (12/12)			
	Kenya		0	100% (16/16)	100% (20/20)	100% (20/20)	*Hospitals*	100% (19/19)			100% (20/20)
							Health centers	100% (1/1)			
							Total	100% (20/20)			
	Mali		0	N/A	94% (15/16)	81% (13/16)	*Hospital*	90% (8/9)			87% (14/16)
							Health centers	86% (6/7)			
							Total	87% (14/16)			
	Mozambique		0	N/A	100% (7/7)	100% (7/7)	*Hospitals*	100% (3/3)			100% (3/3)
							Total	100% (3/3)			
	Nigeria		0	N/A	0% (0/3)	14% (1/7)	*Hospitals*	100% (7/7)			100% (7/7)
							Total	100% (7/7)			
	Senegal		0	100% (3/3)	100% (8/8)	100% (13/13)	*Hospitals*	58% (7/12)			54% (7/13)
							Health centers	0% (0/1)			
							Total	54% (7/13)			
	Tanzania		0	100% (6/6)	60% (6/10)	100% (10/10)	*Hospitals*	100% (10/10)			100% (10/10)
							Total	100% (10/10)			
	Uganda		0	N/A	0% (0/7)	100% (13/13)	*Hospitals*	86% (6/7)			86% (6/7)
							Total	86% (6/7)			
AS 1	# of policies, pieces of legislation, regulations, or operational documents related to AMS developed or updated with MTaPS support	Annually	0	5	12	18	20				20
	Bangladesh		0	0	0	1	N/A				N/A
	Burkina Faso		0	0	2	2	N/A				N/A
	Cameroon		0	0	0	0	1				1
	Côte d'Ivoire		0	1	0	0	N/A				N/A

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	DRC		0	1	3	1	N/A				N/A
	Ethiopia		0	N/A	N/A	2	2				2
	Kenya		0	1	3	3	5				5
	Mali		0	1	N/A	1	N/A				N/A
	Mozambique		0	N/A	1	3	6				6
	Nigeria		0	N/A	0	1	1				1
	Senegal		0	0	1	1	1				1
	Tanzania		0	1	2	1	3				3
	Uganda		0	0	0	2	1				1
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)	85% (122/144)	94% (130/138)	82% (122/148)	86% (131/153)
	Bangladesh		0% (0/0)	0% (0/0)	0% (0/2)	50% (2/4)	*Hospitals* 44% (4/9) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 44% (4/9)	*Hospitals* 44% (4/9) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 44% (4/9)	*Hospitals* 100% (9/9) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (9/9)	*Hospitals* 100% (9/9) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (9/9)	100% (9/9)
	Burkina Faso		0% (0/0)	0% (0/0)	25% (3/12)	0% (0/10)	*Hospitals* 100% (10/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (10/10)	*Hospitals* *Health centers* *Others* ***Total*** N/A	*Hospitals* 60% (6/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 60% (6/10)	*Hospitals* 40% (4/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 40% (4/10)	60% (6/10)
	Cameroon		0% (0/0)	0% (0/0)	92% (11/12)	100% (12/12)	*Hospitals* 100% (12/12) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (12/12)	*Hospitals* 100% (12/12) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (12/12)	*Hospitals* 92% (11/12) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 92% (11/12)	*Hospitals* 92% (11/12) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 92% (11/12)	100% (11/11)
	Côte d'Ivoire		0% (0/0)	0% (0/0)	75% (9/12)	91% (20/22)	*Hospitals* 70% (14/20) *Health centers* 0% (0/0) *Others* 0% (0/0)	*Hospitals* 100% (20/20) *Health centers* 0% (0/0) *Others* 0% (0/0)	*Hospitals* 94% (15/16) *Health centers* 0% (0/0) *Others* 100% (4/4)	*Hospitals* 100% (13/13) *Health centers* 0% (0/0) *Others* 43% (3/7)	85% (17/20)

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Total	70% (14/20)[30]	***Total***	100% (20/20)	***Total***	95% (19/20)	***Total***	80% (16/20)	
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Ethiopia		0% (0/0)	N/A	N/A	0% (0/5)	*Hospitals*	100% (5/5)	*Hospitals*	100% (7/7)	*Hospitals*	100% (8/8)	*Hospitals*	100% (8/8)	100% (8/8)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (5/5)	***Total***	100% (7/7)	***Total***	100% (8/8)	***Total***	100% (8/8)	
	Kenya		6% (1/16)	100% (18/18)	83% (20/24)	100% (21/21)	*Hospitals*	95% (20/21)	*Hospitals*	100% (21/21)	*Hospitals*	100% (21/21)	*Hospitals*	100% (21/21)	92% (22/24)
							Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	
							Pharmacy	0% (0/2)	*Others*	0% (0/2)	*Pharmacy*	0% (0/2)	*Pharmacy*	0% (0/2)	
							Total	87% (21/24)	***Total***	92% (22/24)	***Total***	92% (22/24)	***Total***	92% (22/24)	
	Mali		0% (0/0)	0% (0/0)	56% (9/16)	75% (12/16)	*Hospital*	78% (7/9)	*Hospitals*	89% (8/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	100% (16/16)
							Health centers	86% (6/7)	*Health centers*	86% (6/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	81% (13/16)	***Total***	87% (14/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	
	Mozambique		0% (0/7)	Data not reported	0% (0/7)	43% (3/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (3/3)	*Hospitals*	N/A	100% (6/6)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*		
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*		
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (3/3)	***Total***		
	Nigeria		0% (0/3)	N/A	0% (0/0)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
	Senegal		0% (0/0)	0% (0/0)	0% (0/8)	0% (0/14)	*Hospitals*	0% (0/12)	*Hospitals*	0% (0/12)	*Hospitals*	N/A	*Hospitals*	0% (0/13)	0% (0/13)
							Health centers	0% (0/1)	*Health centers*	0% (0/1)	*Health centers*		*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*		*Others*	0% (0/0)	
							Total	0% (0/13)	***Total***	0% (0/13)	***Total***		***Total***	0% (0/13)	

[30] Data were not collected from six facilities in PY5 Q1.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
	Tanzania		0% (0/6)	0% (0/6)	20% (2/10)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	***Total***	100% (10/10)	
	Uganda		43% (3/7)	100% (7/7)	100% (13/13)	100% (13/13)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	100% (7/7)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	***Total***	100% (7/7)	
AS 3	# of persons trained in AMS topics with MTaPS support	Quarterly	0	436	4721	4,051	1,080		522		824		212		2,638
	Bangladesh		0	0	0	420	*Female*	N/A	*Female*	0	*Female*	26	*Female*	27	260
							Male		*Male*	0	*Male*	145	*Male*	62	
							Unknown		*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total		***Total***	0	***Total***	171	***Total***	89	
	Burkina Faso[31]		0	0	97	86	*Female*	158	*Female*	N/A	*Female*	N/A	*Female*		
							Male	192	*Male*		*Male*		*Male*		
							Unknown	0	*Unknown*		*Unknown*		*Unknown*		
							Total	350	***Total***		***Total***		***Total***		
	Cameroon		0	0	222	17	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	N/A	N/A
							Male		*Male*		*Male*		*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Côte d'Ivoire		0	0	237	104	*Female*	6	*Female*	N/A	*Female*	N/A	*Female*	N/A	36
							Male	30	*Male*		*Male*		*Male*		
							Unknown	0	*Unknown*		*Unknown*		*Unknown*		
							Total	36	***Total***		***Total***		***Total***		
	DRC		0	0	274	91	*Female*	N/A	*Female*	N/A	*Female*	N/A	*Female*	N/A	N/A
							Male		*Male*		*Male*		*Male*		
							Unknown		*Unknown*		*Unknown*		*Unknown*		
							Total		***Total***		***Total***		***Total***		
	Ethiopia		0	0	N/A	180	*Female*	36	*Female*	14	*Female*	55	*Female*	0	490
							Male	93	*Male*	132	*Male*	160	*Male*	0	
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*	0	
							Total	129	***Total***	146	***Total***	215	***Total***	0	
	Kenya		0	165	1,333	869	*Female*	271	*Female*	169	*Female*	23	*Female*	28	895
							Male	237	*Male*	128	*Male*	16	*Male*	23	
							Unknown	0	*Unknown*	0	*Unknown*	0	*Unknown*	0	

[31] Continuing activity from PY4; activity not planned for the rest of PY5.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Total	508	***Total***	297	***Total***	39	***Total***	51	
	Mali		0	0	136	49	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	0 6 0 6	6
	Mozambique		0	0	0	34	*Female* *Male* *Unknown* ***Total***	7 8 0 15	*Female* *Male* *Unknown* ***Total***	5 7 0 12	*Female* *Male* *Unknown* ***Total***	24 21 0 45	*Female* *Male* *Unknown* ***Total***	N/A	72
	Nigeria		0	N/A	18	108	*Female* *Male* *Unknown* ***Total***	0 0 0 0	*Female* *Male* *Unknown* ***Total***	7 10 0 17	*Female* *Male* *Unknown* ***Total***	19 14 0 33	*Female* *Male* *Unknown* ***Total***	0 0 0 0	50
	Senegal		0	0	0	0	*Female* *Male* *Unknown* ***Total***	0 0 0 0	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	7 12 0 19	*Female* *Male* *Unknown* ***Total***	23 19 0 42	61
	Tanzania		0	201	0	N/A	*Female* *Male* *Unknown* ***Total***	0 0 0 0	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	N/A	*Female* *Male* *Unknown* ***Total***	10 14 0 24	24
	Uganda		0	70	2,513	1,776	*Female* *Male* *Unknown* ***Total***	17 25 0 42	*Female* *Male* *Unknown* ***Total***	18 32 0 50	*Female* *Male* *Unknown* ***Total***	160 142 0 302	*Female* *Male* *Unknown* ***Total***	N/A	N/A
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)		74% (106/144)		94% (130/138)		83% (123/148)		87% (137/154)
	Bangladesh		0% (0/0)	0% (0/0)	0% (0/2)	50% (2/4)	*Hospitals* *Health centers* *Others* ***Total***	44% (4/9) 0% (0/0) 0% (0/0) 44% (4/9)	*Hospitals* *Health centers* *Others* ***Total***	44% (4/9) 0% (0/0) 0% (0/0) 44% (4/9)	*Hospitals* *Health centers* *Others* ***Total***	100% (9/9) 0% (0/0) 0% (0/0) 100% (9/9)	*Hospitals* *Health centers* *Others* ***Total***	100% (9/9) 0% (0/0) 0% (0/0) 100% (9/9)	100% (9/9)
	Burkina Faso		0% (0/0)	100% (5/5)	25% (3/12)	0% (0/10)	*Hospitals* *Health centers* *Others* ***Total***	100% (10/10) 0% (0/0) 0% (0/0) 100% (10/10)	*Hospitals* *Health centers* *Others* ***Total***	N/A	*Hospitals* *Health centers* *Others* ***Total***	60% (6/10) 0% (0/0) 0% (0/0) 60% (6/10)	*Hospitals* *Health centers* *Others* ***Total***	60% (6/10) 0% (0/0) 0% (0/0) 60% (6/10)	100% (10/10)
	Cameroon		0% (0/0)	0% (0/6)	92% (11/12)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	92% (11/12)	100% (12/12)

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result		PY5 Q2 result		PY5 Q3 result		PY5 Q4 result		PY5 cumulative result
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	***Total***	92% (11/12)	
	Côte d'Ivoire[32]		0% (0/0)	100% (2/2)	90% (9/10)	91% (20/22)	*Hospitals*	70% (14/20)	*Hospitals*	100% (20/20)	*Hospitals*	94% (15/16)	*Hospitals*	100% (13/13)	85% (17/20)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	100% (4/4)	*Others*	43% (3/7)	
							Total	70% (14/20)	***Total***	100% (20/20)	***Total***	95% (19/20)	***Total***	80% (16/20)	
	DRC		0% (0/0)	100% (3/3)	100% (7/7)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	50% (6/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% 0/0)	*Others*	0% 0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (12/12)	***Total***	33% (6/12)	***Total***	100% (12/12)	***Total***	100% (12/12)	
	Ethiopia		3% (1/30)	13% (4/30)	N/A	0% (0/5)	*Hospitals*	100% (5/5)	*Hospitals*	100% (7/7)	*Hospitals*	100% (8/8)	*Hospitals*	100% (8/8)	100% (8/8)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	100% (5/5)	***Total***	100% (7/7)	***Total***	100% (8/8)	***Total***	100% (8/8)	
	Kenya		100% (18/18)	100% (18/18)	92% (22/24)	91% (21/23)	*Hospitals*	95% (20/21)	*Hospitals*	100% (21/21)	*Hospitals*	100% (21/21)	*Hospitals*	100% (21/21)	92% (22/24)
							Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*	100% (1/1)	
							Pharmacy	0% (0/2)	*Pharmacy*	0% (0/2)	*Pharmacy*	0% (0/2)	*Pharmacy*	0% (0/2)	
							Total	87% (21/24)	***Total***	92% (22/24)	***Total***	92% (22/24)	***Total***	92% (22/24)	
	Mali		0% (0/5)	0% (0/5)	13% (2/16)	75% (12/16)	*Hospital*	78% (7/9)	*Hospitals*	89% (8/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	100% (16/16)
							Health centers	86% (6/7)	*Health centers*	86% (6/7)	*Health centers*	100% (7/7)	*Health centers*	100% (7/7)	
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	
							Total	81% (13/16)	***Total***	87% (14/16)	***Total***	100% (16/16)	***Total***	100% (16/16)	
	Mozambique		0% (0/7)	Data not reported	57% (4/7)	100% (7/7)	*Hospital*	0% (0/7)	*Hospital*	0% (0/7)	*Hospital*	100% (3/3)	*Hospital*	N/A	100% (6/6)
							Health centers	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*	0% (0/0)	*Health centers*		
							Others	0% (0/0)	*Others*	0% (0/0)	*Others*	0% (0/0)	*Others*		

[32] Data were not collected from six facilities in PY5 Q1.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
							Total 0% (0/7)	***Total*** 0% (0/7)	***Total*** 100% (3/3)	***Total***	
	Nigeria		0% (0/3)	N/A	0% (0/3)	14% (1/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	100% (7/7)
	Senegal		0% (0/3)	0% (0/3)	0% (0/8)	0% (0/14)	*Hospitals* 0% (0/12) *Health centers* 0% (0/1) *Others* 0% (0/0) ***Total*** 0% (0/13)	*Hospitals* 0% (0/12) *Health centers* 0% (0/1) *Others* 0% (0/0) ***Total*** 0% (0/13)	*Hospitals* *Health centers* *Others* ***Total*** N/A	*Hospitals* 8% (1/13) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 8% (1/13)	8% (1/13)
	Tanzania		0% (0/6)	100% (6/6)	20% (2/10)	60% (6/10)	*Hospitals* 60% (6/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 60% (6/10)	*Hospitals* 70% (7/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 70% (7/10)	*Hospitals* 100% (10/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (10/10)	*Hospitals* 100% (10/10) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (10/10)	100% (10/10)
	Uganda		86% (6/7)	100% (7/7)	100% (13/13)	100% (13/13)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	*Hospitals* 100% (7/7) *Health centers* 0% (0/0) *Others* 0% (0/0) ***Total*** 100% (7/7)	100% (7/7)
AS 5	#/% of MTaPS-supported facilities that have documented evidence of improvement in antimicrobial medicine prescribing or use	Annually		49% (27/55)	29% (35/120)	36% (57/155)	65% (88/135)				65% (88/135)
	Bangladesh		0%	N/A	0% (0/2)	50% (2/4)	*Hospitals* 0% (0/9) ***Total*** 0% (0/9)				0% (0/9)
	Burkina Faso		0%	0% (0/5)	0% (0/12)	0% (0/10)	*Hospitals* 0% (0/10) ***Total*** 0% (0/10)				0% (0/10)
	Cameroon		0%	N/A	0% (0/12)	92% (11/12)	*Hospitals* 92% (11/12) ***Total*** 92% (11/12)				92% (11/12)
	Côte d'Ivoire		0%	0% (0/2)	0% (0/12)	14% (3/22)	*Hospitals* 92% (12/13) *Health centers* 43% (3/7) ***Total*** 75% (15/20)				75% (15/20)
	DRC		0%	100% (3/3)	0% (0/7)	58% (7/12)	*Hospitals* 100% (12/12) ***Total*** 100% (12/12)				100% (12/12)
	Kenya		0%	100% (18/18)	92% (22/24)	91% (21/23)	*Hospitals* 100% (21/21) *Health centers* 100% (1/1) *Pharmacies* 0% (0/2) ***Total*** 92% (22/24)				92% (22/24)

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	Mali		0%	N/A	13% (2/16)	0% (0/16)	*Hospital* *Health centers* ***Total***	N/A[33]			N/A
	Mozambique		0%	N/A	71% (5/7)	28% (2/7)	*Hospitals* ***Total***	100% (3/3) 100% (3/3)			100% (3/3)
	Nigeria		0%	N/A	0% (0/3)	0% (0/7)	*Hospitals* ***Total***	57% (4/7) 57% (4/7)			57% (4/7)
	Senegal		0%	N/A	0% (0/8)	0% (14/14)	*Hospitals* ***Total***	0% (0/13) 0% (0/13)			0% (0/13)
	Tanzania		0%	100% (6/6)	60% (6/10)	70% (7/10)	*Hospitals* ***Total***	100% (10/10) 100% (10/10)			100% (10/10)
	Uganda		0%	0% (0/7)	0% (0/7)	31% (4/13)	*Hospitals* ***Total***	86% (6/7) 86% (6/7)			86% (6/7)
DRC 1	# of quality-assured MNCH, RH/FP, and TB medicine products registered with MTaPS support	Semi-annually	0	0	29	26	N/A		N/A		N/A
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	323				323
DRC 3	# of HFs that are implementing the posttraining action plan	Annually	0	0	0	50	22				22
DRC 4	% of facilities implementing appropriate storage of oxytocin	Quarterly	0	N/A	64% (46/72)	75% (54/72)	76% (55/72)	83% (60/72)	83% (60/72)	N/A	83% (60/72)
DRC 5	# of DPS and/or IPS using the updated directory of registered medicines	Semi-annually	0	0	7	4	4		4		8
DRC 8	# of HZs involved in provincial quantification exercises with MTaPS support	Semi-annually	0	0	19	10	N/A		N/A		N/A

[33] Facilities are in process of completing assessments.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
DRC 9	# of MNCH treatment protocols or job aids disseminated to HFs with MTaPS support	Semi-annually	0	0	0	0	N/A		N/A		N/A
DRC 10	# of contraceptive kits (reduced FP package) distributed to CCSs in MTaPS-supported HZs	Semi-annually	0	0	0	0	0		N/A		0
DRC 11	% of CCSs reporting contraceptive data to HFs in MTaPS-supported HZs	Semi-annually	0%	0	0% (0/12)	0%	0% (0/12)		100% (152/152)		100% (152/152)
DRC 12	# of mini awareness-raising campaigns for active detection of TB and adherence to TB treatment supported by MTaPS	Semi-annually	0	0	0	2	N/A		N/A		N/A
DRC 13	# of sensitization meetings to explain the role and scope of National Supply Chain Management Professionals Association	Annually	0	N/A	N/A	N/A	N/A				N/A
BG 1	% of procurement packages of DGFP and DGHS that are on schedule	Annually	0	0	82%	50%	50% (1/2)				50% (1/2)
BG 4	% of target HFs that keep complete TB patient information (as per national standards)	Annually	0	N/A	44%	71% (64/90)	66% (58/88)				66% (58/88)
BG 8	# of laws, policies, regulations, action plans, or standards formally proposed, adopted, or implemented as supported by USG assistance	Annually	N/A	N/A	N/A	N/A	4				4
BG 9	# of program approaches/initiative adopted/changed because of evidence-	Annually	N/A	N/A	N/A	N/A	3				3

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	based recommendations and/or advocacy by USAID-supported activities										
BG 10	# and % of district hospitals using eAMS	Annually	N/A	N/A	N/A	N/A	75% (46/61)				75% (46/61)
BG 12	# of health commodities tracked through USAID-supported eLMIS	Annually	N/A	N/A	N/A	N/A	N/A				N/A
BG 13	# of organizations whose members/staff were trained and/or mentored through USAID support	Semi-annually	N/A	N/A	N/A	N/A	5		59		64
BG 14	# of TB patients registered in e-TB Manager	Quarterly	0	N/A	N/A	N/A	70,495	74,365	74,285	76,675	295,280
IN 4.3.1a	# of analytical products developed and used to inform policies or guidance based on evidence	Annually	0	N/A	N/A	1	5				5
IN 4.3.1b	% of TB financing expected from domestic sources	Annually	0	N/A	N/A	N/A	22%				22%
IN 4.3.3b	# of health personnel receiving capacity development support to optimize the management of health services	Annually	0	N/A	N/A	242	60				60
IP.MP.1[34]	# of facilities receiving MTaPS support to strengthen IPC and/or WASH practices for monkeypox	Quarterly	0	N/A	N/A	N/A	30	46	46	55	177
	DRC		0	N/A	N/A	N/A	30	46	46	55	177
IP.MP.2	# of people trained to prevent, detect, and/or respond to monkeypox outbreak with MTaPS support	Quarterly	0	N/A	N/A	N/A	N/A	71	248	N/A	319

[34] Indicators IP.MP.1, 2, 3, 4, 5, 6, and 7 track progress on monkeypox activities in DRC.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	DRC		0	N/A	N/A	N/A	N/A	71	248[35]	N/A	319
IP.MP.3	# of posttraining supervision visits conducted	Quarterly	0	N/A	N/A	N/A	N/A	3	3	N/A	6
	DRC		0	N/A	N/A	N/A	N/A	3	3	N/A	6
IP.MP.4	# of field supervision visits conducted	Quarterly	0	N/A	N/A	N/A	N/A	N/A	5	5	10
	DRC		0	N/A	N/A	N/A	N/A	N/A	5	5	10
IP.MP.5	Were the findings from supervision visits sent to HZs and/or HFs?	Quarterly	0	N/A	N/A	N/A	N/A	N/A	1	5	6
	DRC		0	N/A	N/A	N/A	N/A	N/A	1	5	6
IP.MP.6	Are the recommendations made after supervision visits implemented by HZs and/or HFs?	Quarterly	0	N/A	N/A	N/A	N/A	N/A	1	16	17
	DRC		0	N/A	N/A	N/A	N/A	N/A	1	16	17
IP.MP.7	# and % of MTaPS-supported HFs that are using standardized tool(s) for monitoring IPC and informing programmatic improvement for monkeypox	Semi-annually	N/A	N/A	N/A	N/A	0		47		47
	DRC		N/A	N/A	N/A	N/A	0		47		47
AB HL5	*# of analytical products and services completed and used to advance health development goals in Asia*	Annually	0	N/A	8	3	1		1		1
	Asia Bureau		0	N/A	8	3	1				1
AB HL7	*# of individuals receiving capacity development support to advance health development goals in Asia*	Annually	0	N/A	401	173	134				134
	Asia Bureau		0	N/A	401	173	134				134
AB HL8	*# of institutions and/or platforms receiving*	Annually	0	N/A	30	15	2				2

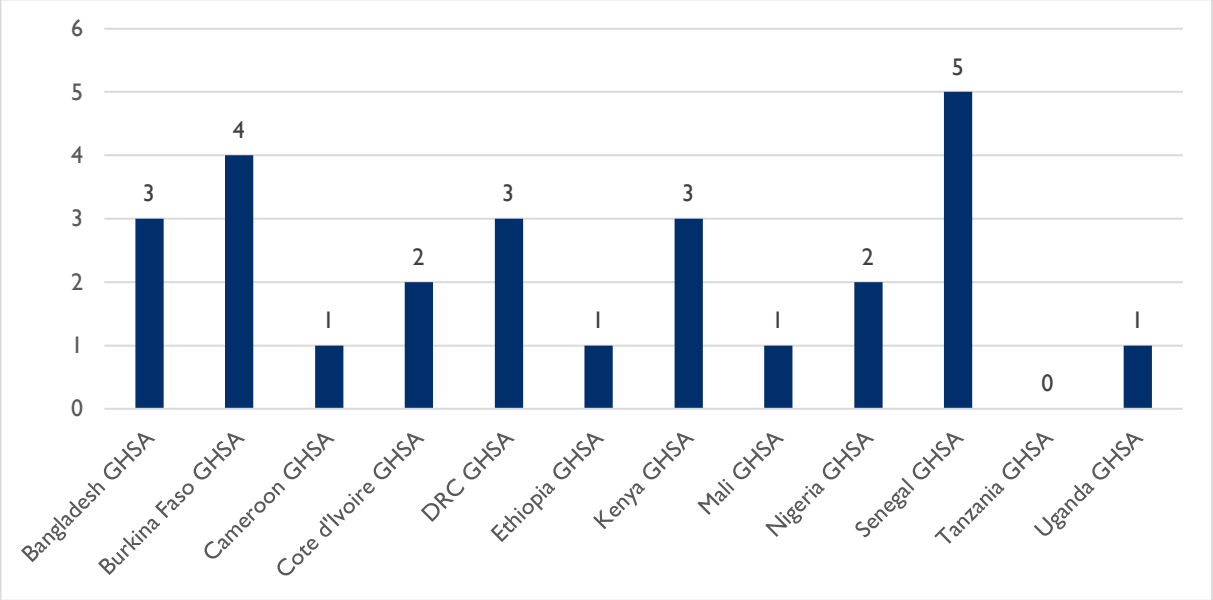
[35] Training took place in PY5 Q2, due to reporting delays the values are reported in Q3.

Code	Performance indicator	Reporting frequency	Baseline value	PY2 result	PY3 result	PY4 result	PY5 Q1 result	PY5 Q2 result	PY5 Q3 result	PY5 Q4 result	PY5 cumulative result
	capacity strengthening support to advance health development goals in Asia										
	Asia Bureau		0	N/A	30	15	2				2

ANNEX 2. GLOBAL HEALTH SECURITY AGENDA—QUARTER PROGRESS FOR FY23Q4

SUMMARY OF ACTIVITIES FOR THIS QUARTER (FY23Q4)

SELECTED MTAPS GHSA INDICATOR PROGRESS



Annex Figure 1. MSC1. Number of AMR-related in-country meetings or activities conducted with multisectoral participation in PY5Q4

Annex Table 2.1 IP3. Percentage of MTaPS-supported facilities using standardized tools for monitoring IPC and informing programmatic improvement

	Country											
Quarter	Bangladesh[1]	Cameroon	Côte d'Ivoire[2]	DRC[3]	Ethiopia[4]	Kenya	Mali	Mozambique[5]	Nigeria[6]	Senegal[7]	Tanzania	Uganda[8]
PY4Q3	50% (2/4)	100% (12/12)	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)	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)
PY5Q2	67% (6/9)	100% (12/12)	100% (20/20)	50% (6/12)	100% (7/7)	100% (20/20)	100% (16/16)	100% (7/7)	100% (7/7)	77% (10/13)	100% (10/10)	100% (7/7)
PY5Q3	100% (9/9)	100% (12/12)	100% (20/20)	100% (12/12)	100% (8/8)	100% (20/20)	100% (16/16)	100% (3/3)	100% (7/7)	Data not collected	100% (10/10)	100% (7/7)
PY5Q4	100% (9/9)	100% (12/12)	95% (19/20)	100% (12/12)	100% (8/8)	100% (20/20)	100% (16/16)	Not applicable	100% (7/7)	61% (8/13)	100% (10/10)	100% (7/7)

[1] Five new facilities were added at the beginning of PY5. In PY5 Quarter 1 and Quarter 2, supportive supervision was not provided to four facilities and training was not provided to three facilities.

[2] In PY5 Quarter 4, San Pedro opened a new *Centre Hospitalier Régional* (Regional Hospital [CHR]), which led to a suspension of IPC activities, and MTaPS-trained IPC committee members relocated to other facilities.
[3] In PY5 Quarter 2, six facilities did not receive supportive supervision but DTCs were functional.
[4] In PY5 Quarter 2, as requested by the Ethiopia MOH and Addis Ababa City Administration Health Bureau, two hospitals were added; in Quarter 3, one additional facility was added.
[5] In PY4 Quarter 3, a new IPC coordinator was hired and could only support three HFs; the remaining facilities did not have supportive supervision and information could not be collected for this indicator. In PY5 Quarter 3, four facilities were dropped (total facilities were reduced from seven to three) due to budget constraints. MTaPS Mozambique completed implementation in June 2023; therefore Quarter 4 data is not relevant.
[6] In PY4 Quarter 3, the IPC team started the implementation of its work plan in two facilities, following the completion of capacity training for its IPC team.
[7] In PY4 Quarter 3, information for five facilities was not captured. In PY5 Quarter 1–Quarter 2, one facility had inadequate IPC capacity; a strategic plan was created in Quarter 2 to improve capacity. Data for the two remaining facilities was not obtained. In PY5 Quarter 3, data was not collected at facilities and values could not be reported due to time constraints. Activities were focused on national IPC implementation. In PY5 Quarter 4, data could not be collected from five facilities.
[8] In PY5, the number of facilities was reduced to seven due to funding constraints and the need to scale down activities.

Annex Table 2.2. IP5. Percentage of MTaPS-supported facilities implementing CQI to improve IPC

	Country											
Quarter	Bangladesh[1]	Cameroon	Côte d'Ivoire[2]	DRC[3]	Ethiopia[4]	Kenya	Mali[5]	Mozambique[6]	Nigeria[7]	Senegal[8]	Tanzania	Uganda[9]
PY4Q4	50% (2/4)	100% (12/12)	100% (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)
PY5Q2	67% (6/9)	100% (12/12)	100% (20/20)	50% (6/12)	100% (7/7)	100% (20/20)	100% (16/16)	100% (7/7)	100% (7/7)	31% (4/13)	100% (10/10)	100% (7/7)
PY5Q3	100% (9/9)	100% (12/12)	100% (20/20)	100% (12/12)	100% (8/8)	100% (20/20)	100% (16/16)	100% (3/3)	100% (7/7)	Data not collected	100% (10/10)	100% (7/7)
PY5Q4	100% (9/9)	100% (12/12)	0% (0/20)	100% (12/12)	100% (8/8)	100% (20/20)	100% (16/16)	Not applicable	100% (7/7)	61% (8/13)	100% (10/10)	100% (7/7)

[1] Five new facilities were added at the beginning of PY5. A consultant was hired to assist in developing and updating CQI plans in PY5 Quarter 2 and implement the plans in the remaining facilities.
[2] PY5 Quarter 4, CQI assessments and meetings were not conducted in this quarter at any facilities. In PY5 Quarter 4, San Pedro opened a new CHR, which led to a suspension of IPC activities, and MTaPS-trained IPC committee members relocated to other facilities.
[3] In PY5 Quarter 2, six facilities did not receive supportive supervision but DTCs were functional.
[4] In PY5 Quarter 2, as requested by the Ethiopia MOH and Addis Ababa City Administration Health Bureau, two hospitals were added; in Quarter 3, one additional facility was added.
[5] In PY5 Quarter 1, the Dermatology Hospital of Bamako had not begun implementing action plans. In Quarter 2, all facilities implemented CQI.
[6] In PY5 Quarter 3, four facilities were dropped due to budget constraints. MTaPS Mozambique completed implementation in June 2023; therefore Quarter 4 data is not relevant.
[7] In PY4 Quarter 4, the IPC team started implementation of its CQI plan in one facility, following the completion of capacity training for its IPC team.
[8] In PY5 Quarter 2, four remaining facilities conducted a self-evaluation. The six facilities that implemented standardized tools and the remaining two facilities were not evaluated for CQI. In PY5 Quarter 3, data was not collected at facilities and values could not be reported. Activities were focused on national IPC implementation. In PY5 Quarter 4, data could not be collected from five facilities.
[9] In PY5, the number of supported facilities was reduced to seven due to funding constraints and the need to scale down activities.

Annex Table 2.3. IP6. Percentage of MTaPS-supported facilities with functional IPC committees

Country												
Quarter	Bangladesh[1]	Cameroon	Côte d'Ivoire[2]	DRC[3]	Ethiopia[4]	Kenya	Mali	Mozambique[5]	Nigeria[6]	Senegal[7]	Tanzania	Uganda[8]
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)
PY5Q2	100% (9/9)	100% (12/12)	100% (20/20)	50% (6/12)	86% (6/7)	100% (20/20)	100% (16/16)	100% (7/7)	100% (7/7)	77% (10/13)	100% (10/10)	100% (7/7)
PY5Q3	100% (9/9)	100% (12/12)	100% (20/20)	100% (12/12)	100% (8/8)	100% (20/20)	100% (16/16)	100% (3/3)	100% (7/7)	Data not collected	100% (10/10)	100% (7/7)
PY5Q4	100% (9/9)	100% (12/12)	95% (19/20)	100% (12/12)	100% (8/8)	100% (20/20)	100% (16/16)	Not applicable	100% (7/7)	61% (8/13)	100% (10/10)	100% (7/7)

[1] Five new facilities were added at the beginning of PY5.
[2] In PY5 Quarter 4, San Pedro opened a new CHR, which led to a suspension of IPC activities, and MTaPS-trained IPC committee members relocated to other facilities.
[3] In PY5 Quarter 2, six facilities did not receive supportive supervision but DTCs were functional.
[4] In PY5 Quarter 2, as requested by the Ethiopia MOH and Addis Ababa City Administration Health Bureau, two hospitals were added; in Quarter 3, one additional facility was added.
[5] In PY5 Quarter 3, four facilities were dropped due to budget constraints. MTaPS Mozambique completed implementation in June 2023 therefore Quarter 4 data is not relevant.
[6] In PY4 Quarter 4, the IPC team started the implementation of its work plan in two facilities; following the completion of capacity training for the IPC teams, the remaining facilities followed in the subsequent quarter.
[7] In PY5 Quarter 1–Quarter 2, one facility had inadequate IPC capacity and a strategic plan was created in Quarter 2 to improve. Data for the two remaining facilities was not obtained. In PY5 Quarter 3, data was not collected at facilities and values could not be reported. Activities were focused on national IPC implementation. In PY5 Quarter 4, data could not be collected from five facilities.
[8] In PY5, the number of supported facilities was reduced to seven due to funding constraints and the need to scale down activities.

Annex Table 2.4. AS2. Percentage 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[3]	Côte d'Ivoire[4]	DRC	Ethiopia[5]	Kenya[6]	Mali[7]	Mozambique[8]	Nigeria	Senegal[9]	Tanzania	Uganda[10]
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)	N/A	100% (10/10)	100% (7/7)
PY5Q2	44% (4/9)	N/A	100% (12/12)	100% (20/20)	100% (12/12)	100% (7/7)	92% (22/24)	87% (14/16)	100% (7/7)	100% (7/7)	N/A	100% (10/10)	100% (7/7)
PY5Q3	100% (9/9)	60% (6/10)	92% (11/12)	95% (19/20)	100% (12/12)	100% (8/8)	92% (22/24)	100% (16/16)	100% (3/3)	100% (7/7)	N/A	100% (10/10)	100% (7/7)
PY5Q4	100% (9/9)	40% (4/10)	92% (11/12)	85% (17/20)	100% (12/12)	100% (8/8)	92% (22/24)	100% (16/16)	Not applicable	100% (7/7)	0% (0/13)	100% (10/10)	100% (7/7)

[1] Five facilities were added at the beginning of PY5. In PY5 Quarter 1, five facilities did not receive supportive supervision or training. In PY5 Quarter 2, six facilities received supportive supervision and training. During visits, it was found that facilities were not implementing AMS activities as needed due to a lack of technical expertise and training. The MTaPS team gave strong feedback on AMS activities at each facility at that time.

[2] Indicator-related activities began in PY4 Quarter 3; however, DTCs did not function as planned, and improvement and monitoring frameworks were not implemented in Quarter 4.. In PY5 Quarter 2, MTaPS was unable to conduct supervision visits and obtain activity data. In PY5 Quarter 3 and Quarter 4, MTaPS Burkina Faso developed CQI plans for all ten facilities however due to personnel and budget constraints, six hospitals in Quarter 3 and four hospitals in Quarter 4 implemented the plans where MTaPS provided supportive supervision.
[3] In PY5 Quarter 3, activity implementation was not optimal in Mbalmayo District Hospital because the trained personnel have been posted to different health facilities. PY5 Quarter 4 Mbalmayo Hospital AMS activities are no longer functional, as the MTaPS-trained hospital Director and DTC members were transferred to other facilities.
[4] In PY5 Quarter 1, six sites did not receive supportive supervision from the AMS team; thus, information for this indicator was not collected for the facilities. In PY5 Quarter 3, San Pedro opened a new CHR, which led to a suspension of the AMS committee activities. In PY5 Quarter 4, data reports did not come for three facilities.
[5] In PY4 Quarter 4, MTaPS identified gaps in AMS, including a lack in AMS committees' operationality; four of five hospitals established or reinstated their committees; however, improvement plans or frameworks had yet to be developed. In PY5 Quarter 2, as requested by the Ethiopia MOH and Addis Ababa City Administration Health Bureau, two hospitals were added; in Quarter 3, one additional facility was added.
[6] In PY5 Quarter 1, two community pharmacies were not implementing AMS activities for various underlying issues. One hospital was added to MTaPS and underwent preparatory work before activity implementation began. In PY5 Quarter 2–Quarter 4, all facilities have active AMS committees; however, two community pharmacies were not able to develop and implement plans due to the nature of AMS activities in a community pharmacy setting. Additional materials are under development to guide the process.
[7] In PY4 Quarter 4, MTaPS Mali implemented virtual supportive supervision visits. Four facilities did not attend; thus, no data was obtained for these facilities. In PY5 Quarter 1, three facilities did not have sufficient time to implement activities. In PY5 Quarter 2, MTaPS provided coaching sessions to the previously mentioned facilities, which increased performance; however, two facilities reported competing priorities in implementing AMS activities.
[8] In PY4 Quarter 4, a new IPC coordinator was hired and could only provide support to three HFs; the remaining facilities did not have supportive supervision and information could not be collected for this indicator. In PY5 Quarter 3, four facilities were dropped due to budget constraints. MTaPS Mozambique completed implementation in June 2023; therefore, Quarter 4 data is not relevant.
[9] In PY4, Senegal prioritized IPC activities. In PY5 Quarter 1, AMS activities experienced delays due to delayed MOH endorsement of trainings. AMS activities continued at the national level through PY5 Quarter 2 and Quarter 3; however, implementation of facility-level AMS activities, which finally started in July 2023 after approval of the STGs and training materials, have continued to experience challenges because of stakeholder support. In PY5 Quarter 4, due to budget, AMS activities only took place in 2 facilities out of 13. One facility has completed AMS training but no improvements seen yet, the second facility has not yet been trained.
[10] In PY5, the number of facilities was reduced to seven due to funding constraints and the need to scale down activities.

Annex Table 2.5. AS4. Percentage of MTaPS-supported facilities implementing CQI to improve AMS

	Country												
Quarter	Bangladesh[1]	Burkina Faso[2]	Cameroon[3]	Côte d'Ivoire[4]	DRC[5]	Ethiopia[6]	Kenya[7]	Mali[8]	Mozambique[9]	Nigeria[10]	Senegal[11]	Tanzania[12]	Uganda[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)	N/A	60% (6/10)	100% (7/7)
PY5Q2	44% (4/9)	N/A	100% (12/12)	100% (20/20)	33% (6/12)	100% (7/7)	92% (22/24)	87% (14/16)	0% (0/7)	100% (7/7)	N/A	70% (7/10)	100% (7/7)
PY5Q3	100% (9/9)	60% (6/10)	100% (12/12)	95% (19/20)	100% (12/12)	100% (8/8)	92% (22/24)	100% (16/16)	100% (3/3)	100% (7/7)	N/A	100% (10/10)	100% (7/7)
PY5Q4	100% (9/9)	40% (4/10)	92% (11/12)	85% (17/20)	100% (12/12)	100% (8/8)	92% (22/24)	100% (16/16)	Not applicable	100% (7/7)	7% (1/13)	100% (10/10)	100% (7/7)

[1] Five facilities were added at the beginning of PY5. In PY5 Quarter 1, five facilities did not receive supportive supervision or training. In PY5 Quarter 2, six facilities received supportive supervision and training. During visits it was found that facilities were not implementing AMS activities as needed due to a lack of technical expertise and training. The MTaPS team gave strong feedback on AMS activities at each facility at that time.

[2] In PY4, MTaPS Burkina Faso harmonized action plans for all hospitals. Indicator-related activities began in PY4 Quarter 3; DTCs did not function as planned, and improvement plans and monitoring frameworks were not implemented. In PY5 Quarter 2, MTaPS was unable to conduct supervision visits to collect activity data. In PY5 Quarter 3 and Quarter 4, MTaPS Burkina Faso developed CQI plans for all ten facilities after training on CQI at all supported facilities. However due to personnel and budget constraints, only six hospitals in Quarter 3 and four hospitals in Quarter 4 implemented the plans where MTaPS provided supportive supervision. [3] PY5 Quarter 4 Mbalmayo Hospital AMS activities are no longer functional, as the MTaPS-trained hospital Director and DTC members were transferred to other facilities.
[4] In PY5 Quarter 1, six sites did not receive supportive supervision from the AMS team; thus, information for this indicator was not collected for the facilities. In PY5 Quarter 3, San Pedro opened a new CHR, which led to a suspension of the AMS committee activities. In PY5 Quarter 4, data reports did not come for three facilities.
[5] In PY5 Quarter 2, supported facilities provided written reports on AMS activities; CQI activities were not included, and just six facilities received supervision visits to obtain this information.
[6] In PY4 Quarter 4, MTaPS identified gaps in AMS, including a lack in AMS committee operationality; four of five hospitals established or reinstated their committees, but improvement plans or frameworks had yet to be developed. In PY5 Quarter 2, as requested by the Ethiopia MOH and Addis Ababa City Administration Health Bureau, two hospitals were added; in Quarter 3 an additional facility was added.
[7] In PY5 Quarter 1, two community pharmacies did not implement AMS activities for various underlying issues. One hospital was added to MTaPS, which underwent preparatory work before activity implementation began. In PY5 Quarter 2–Quarter 4, all facilities have active AMS committees; however, two community pharmacies were not able to develop and implement plans due to the nature of AMS activities in a community pharmacy setting. Additional materials under development to guide the process.
[8] In PY4 Quarter 4, MTaPS Mali implemented virtual supportive supervision visits. Four facilities did not attend; thus, no progress/data was obtained for these facilities. In PY5 Quarter 1, three facilities reported that they did not have sufficient time to implement activities. In PY5 Quarter 2, MTaPS provided coaching sessions to these facilities, which increased performance; however, two facilities have reported competing priorities in implementing AMS activities.
[9] AMS site visits delayed for PY5; thus, no facility progress was documented in Quarter 1 and Quarter 2. In PY5 Quarter 3, four facilities were dropped due to budget constraints. MTaPS Mozambique completed implementation in June 2023; therefore, Quarter 4 data is not relevant.
[10] In PY4 Quarter 4, implementation of AMS CQI plans began in one facility, following the completion of capacity training.
[11] In PY4, Senegal prioritized IPC activities. In PY5 Quarter 1, AMS activities experienced delays due to delayed MOH endorsement of trainings. AMS activities continued at the national level through PY5 Quarter 2 and Quarter 3; however, implementation of facility-level AMS activities continued to experience challenges because of stakeholder support. In PY5 Quarter 4, due to budget, AMS activities only took place in 2 facilities out of the 13. One facility has completed AMS training, but no improvements have been seen yet; the second facility has not yet been trained.
[12] In PY5 Quarter 1, four facilities had slow uptake of MTCs for AMS CQI implementation. The Tanzania team conducted supportive supervision for MTCs and AMS CQI activities. Progress has been made in PY5 Quarter 2 and Quarter 3.
[13] In PY5, the number of facilities was reduced to seven due to funding constraints and the need to scale down activities.

PROGRESS ON WHO BENCHMARK ACTIONS (JEE SCORES)

Annex Table 2.6. Progress on MSC (P.3.1): benchmark actions completely or partially achieved cumulatively with MTaPS' support (as of September 2023)

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 2023													
Limited capacity—02 (4 actions)	25%	50%	75%	100%	75%	100%	50%	0%	50%	0%	50%	25%	50%
Developed capacity—03 (4 actions)	25%	75%	100%	75%	50%	100%	50%	75%	50%	50%	75%	100%	50%
Demonstrated capacity—04 (4 actions)	75%	25%	75%	100%	75%	100%	100%	100%	50%	75%	100%	75%	75%

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 2023													
Sustainable capacity—05 (5 actions)	20%	0%	0%	0%	40%	20%	60%	40%	20%	20%	40%	40%	20%

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): benchmark actions completely or partially achieved cumulatively with MTaPS' support (as of September 2023)

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 2023***													
Limited capacity—02 (4 actions)	80%	--	80%	100%	80%	80%	80%	100%	80%	60%	60%	80%	100%
Developed capacity—03 (4 actions)	83%	--	100%	100%	67%	100%	83%	100%	83%	100%	100%	100%	83%
Demonstrated capacity—04 (4 actions)	20%	--	60%	80%	0%	80%	80%	80%	20%	80%	60%	100%	40%
Sustainable capacity—05 (5 actions)	0%	--	100%	60%	0%	60%	40%	0%	20%	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).
* MTaPS does not implement IPC activities in Burkina Faso.
** Some of the benchmark actions were partially achieved, as they are a compound of two or more separate components.
*** Some actions are ongoing.

Annex Table 2.8. Progress on AMS (P.3.4): benchmark actions completely or partially achieved cumulatively with MTaPS' support (as of September 2023)

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 2023**													
Limited capacity—02 (4 actions)	50%	50%	100%	75%	100%	100%	75%	75%	75%	100%	75%	100%	50%
Developed capacity—03 (4 actions)	50%	50%	50%	83%	50%	67%	83%	50%	50%	50%	50%	67%	33%
Demonstrated capacity—04 (4 actions)	0%	14%	29%	29%	29%	29%	29%	29%	14%	29%	0%	43%	29%
Sustainable capacity—05 (5 actions)	0%	14%	14%	14%	0%	29%	0%	0%	14%	0%	0%	29%	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, FY23Q4

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	July–September 2023
	Bangladesh*	N/A
	Cameroon	N/A**
	Côte d'Ivoire	N/A**
	Kenya*	N/A
	Nigeria*	N/A
	Philippines	0***
	Rwanda	23
	Tanzania	N/A**
	Total	**23**
Sex	Male	14
	Female	9
	Unknown sex	0
Technical area**	Storage, handling, delivery, and waste management of COVID-19 vaccines	0
	Planning and organizing COVID-19 vaccination sessions	0
	AEFI monitoring for COVID-19 vaccination	23
	Recording and monitoring COVID-19 vaccination	0
	Communication with the community about COVID-19 vaccination	0
	Other	0

*COVID activities in Bangladesh, Kenya, and Nigeria were completed by the end of PY5 Quarter 3, therefore there is no data to report in PY5 Quarter 4 for these countries.
** No corresponding activity was planned in Cameroon, Côte d'Ivoire and Tanzania related to this indicator in PY5 Quarter 4.
*** In the Philippines, trainings of staff/volunteers were planned and already completed and reported by the end of PY5 Quarter 3. Therefore, there is no data to report in PY5 Quarter 4.

Annex Table 3.2. Number of COVID-19 vaccine MSC mechanisms that meet regularly (at least once a month) with MTaPS' support (COV 4. [0.8])

Portfolio/ disaggregation	Country	July–September 2023
	Bangladesh*	N/A
	Côte d'Ivoire**	N/A
	Kenya*	N/A
	Philippines**	N/A
	Rwanda**	N/A
	Total	**0**

*COVID activities in Bangladesh and Kenya were completed by the end of PY5 Quarter 3; therefore, there is no data to report in PY5 Quarter 4 for these countries.
**The activity corresponding to this indicator was not planned in this quarter in Côte d'Ivoire, Philippines, and Rwanda.

Annex Table 3.3. Number of health facilities where MTaPS provided support for IPC and/or WASH for COVID-19 (COV 5. [(CV.2.4-17])

Portfolio/ disaggregation	Country	July–September 2023
	Bangladesh*	N/A
	Côte d'Ivoire**	N/A
	Kenya*	N/A
	Total	**N/A**

*COVID activities have been completed in Bangladesh and Kenya by the end of PY5 Quarter 3. Therefore, there is no data to report in PY5 Quarter 4 for these countries.
**Activity corresponding to this indicator was not planned in Côte d'Ivoire in PY5 Quarter 4.

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	July–September 2023
	Bangladesh*	N/A
	Côte d'Ivoire**	N/A
	Kenya*	N/A
	Total	**N/A**
Sex	Male	N/A
	Female	N/A
	Unknown sex	N/A
Trainee Category	HCW	N/A
	Non-HCW	N/A

*COVID activities have been completed in Bangladesh and Kenya by the end of PY5 Quarter 3. Therefore, there is no data to report in PY5 Quarter 4 for these countries.
**Activity corresponding to this indicator was not planned in Côte d'Ivoire in PY5 Quarter 4.

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	July–September 2023
	Bangladesh*	N/A
	Cameroon	1
	Côte d'Ivoire**	N/A
	Kenya*	N/A
	Madagascar	5
	Philippines	0
	Rwanda	0
	Tanzania**	N/A
	Total	**6**
Technical area	Risk communication and community engagement	0
	Surveillance, rapid response teams, case investigation	0
	Laboratory systems	4
	Case management	0
	IPC	1
	Coordination and operations	1
	Vaccine introduction (incl., PV)	0

*COVID activities have been completed in Bangladesh and Kenya by the end of PY5 Quarter 3. Therefore, there is no data to report in PY5 Quarter 4 for these countries.
**Activity corresponding to this indicator was completed in Côte d'Ivoire and Tanzania by end of PY5 Quarter 3. Therefore, there is no data to report in PY5 Quarter 4.

Annex Table 3.6. Number of AEFI reports reviewed by the appropriate responsible bodies with US Government (USG) support among those submitted to country monitoring systems (COV1 [CV.1.5-9])

Portfolio/ Disaggregation	Country	July–September 2023
	Bangladesh*	N/A
	Côte d'Ivoire**	N/A
	Kenya*	N/A
	Nigeria*	N/A
	Rwanda**	N/A
	Tanzania	117
	Total	**117**
USG Support	Direct support	0
	Indirect support	117
Severity of event*	Minor	100
	Moderate	15
	Serious/severe**	2

*COVID activities have been completed in Bangladesh, Kenya, and Nigeria by the end of PY5 Quarter 3. Therefore, there is no data to report in PY5 Quarter 4 for these countries.
**Activities corresponding to this indicator were not planned in Côte d'Ivoire and Rwanda in PY5 Quarter 4.

Annex Table 3.7. Number of tools (e.g., reporting forms, checklists, and job aids) for planning and conducting safety monitoring developed, adapted, or disseminated with MTaPS' support (COV 3. [.7])

Portfolio/ disaggregation	Country	July–September 2023
	Bangladesh**	N/A
	Côte d'Ivoire*	N/A
	Kenya**	N/A
	Rwanda*	N/A
	Total	**0**
Technical area	Establishing surveillance systems	0
	Monitoring and responding to AEFIs	0
	Monitoring and responding to AEs of special interest	0
	Safety data management systems	0
	COVID-19 vaccine safety communication	0

*In Côte d'Ivoire and Rwanda, this activity is out of scope for this quarter.
**COVID activities have been completed in Bangladesh and Kenya by the end of PY5 Quarter 3.

Annex Table 3.8. Country has developed or adapted COVID-19 vaccine microplans with MTaPS' support (COV 8. [C.1])

Country	July–September 2023
Bangladesh*	N/A
Côte d'Ivoire*	N/A
Kenya*	N/A

*In Bangladesh, Côte d'Ivoire and Kenya, this activity is out of scope for this quarter.

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	July–September 2023
Bangladesh*	N/A
Côte d'Ivoire	No
Kenya*	N/A
Rwanda	Yes

*COVID activities were completed in Bangladesh and Kenya by the end of PY5 Quarter 3.

Annex Table 3.10. Country has developed or adapted vaccine tracking systems to track COVID-19 vaccine with MTaPS' support (COV 11 [C.4])

Country	July–September 2023
Côte d'Ivoire*	N/A
Kenya**	N/A
Philippines	Yes

* In Côte d'Ivoire, this activity is out of scope for this quarter.
** All COVID activities were completed in Kenya by the end of PY5 Quarter 3.

Annex Table 3.11. Number of vaccine doses delivered to designated in-country destinations with MTaPS' support (COV 13 [CV. 1.2-2])

Portfolio/ disaggregation	Country	July–September 2023
	Cameroon	67,439
	Total	**67,439**
Vaccine brand	Moderna	0
	Pfizer	0
	Astra Zeneca	0
	Janssen	52,349
	Other (Sinopharm)	15,090

Annex Table 3.12. 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	July–September 2023
	Cameroon	1,546
	Côte d'Ivoire	44
	Nigeria*	N/A
	Total	**1,590**
Cadre	Clinical	0
	Community/law	36
	Data management	50
	Supervision and logistics	1,504

*COVID activities were completed in Nigeria by the end of PY5 Quarter 3.

Annex Table 3.13. Number of vaccination sites supported by MTaPS during the reporting period (COV 15 [CV.1.4-5])

Portfolio/ disaggregation	Country	July–September 2023
	Cameroon	287
	Côte d'Ivoire	12
	Nigeria*	N/A
	Total	**299**
Type	Fixed site	0
	Community-based outreach vaccination sites	12
	Mobile team (or clinic) or transit team strategy	287
	Mass vaccination sites/campaigns	0

* COVID activities were completed in Nigeria by the end of PY5 Quarter 3.

Annex Table 3.14. 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	July–September 2023
	Nigeria*	N/A
	Cameroon	39,216
	Total	**39,216**
Vaccine Brand	Moderna	0
	Pfizer	0
	Astra Zeneca	0
	Janssen	31,752
	Other (Sinopharm)	7,464
Sex	Male	19,780
	Female	19,436
	Unknown sex	0

* COVID activities were completed in Nigeria by the end of PY5 Quarter 3.

Annex Table 3.15. Number of people who received a last recommended dose of primary series of an approved COVID-19 vaccine with MTaPS' direct support (COV 17 [CV. 1.4-7])

Portfolio/ disaggregation	Country	July–September 2023
	Nigeria*	N/A
	Cameroon	4,377
	Total	**4,377**
Vaccine Brand	Moderna	0
	Pfizer	0
	Astra Zeneca	0
	Janssen	0
	Other (Sinopharm)	4,377
Sex	Male	2,240
	Female	2,137
	Unknown sex	0

*COVID activities were completed in Nigeria by the end of PY5 Quarter 3.

Annex Table 3.16. 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 18 [CV. 1.4-8])

Portfolio/ disaggregation	Country	July–September 2023
	Nigeria	N/A
	Cameroon	23,846
	Total	**23,846**
Vaccine Brand	Moderna	0
	Pfizer	0
	Astra Zeneca	0
	Janssen	20,597
	Other (Sinopharm)	3,249
Sex	Male	12,153
	Female	11,693
	Unknown sex	0

Annex Table 3.17. Number of health workers trained in COVID-19 testing or specimen transport with USG support (CV.2.3-15)

Portfolio/ disaggregation	Country	July–September 2023
	Madagascar*	0
	Total	**0**
Sex	Male	0
	Female	0
	Unknown	0

*The training was planned but could not be conducted, as the proposal was not accepted by the Ministry of Health in Madagascar.

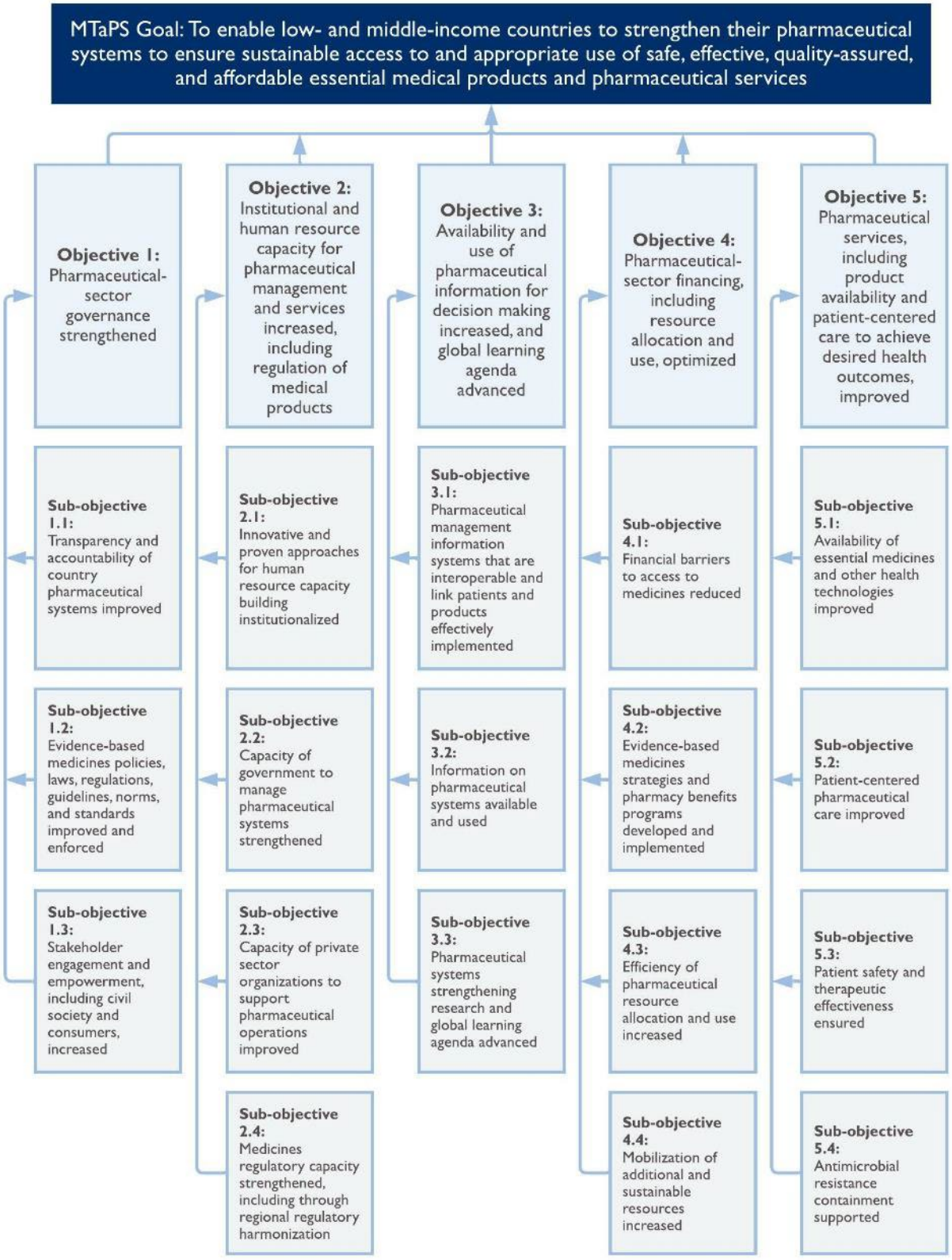
Annex Table 3.18. Number of facilities that received oxygen-related technical assistance within the reporting period (CV.2.5-24)

Portfolio/ disaggregation	Country	July–September 2023
	Philippines	1
	Total	**1**
Technical assistance	Clinical	0
	Engineering	0
	Other	1

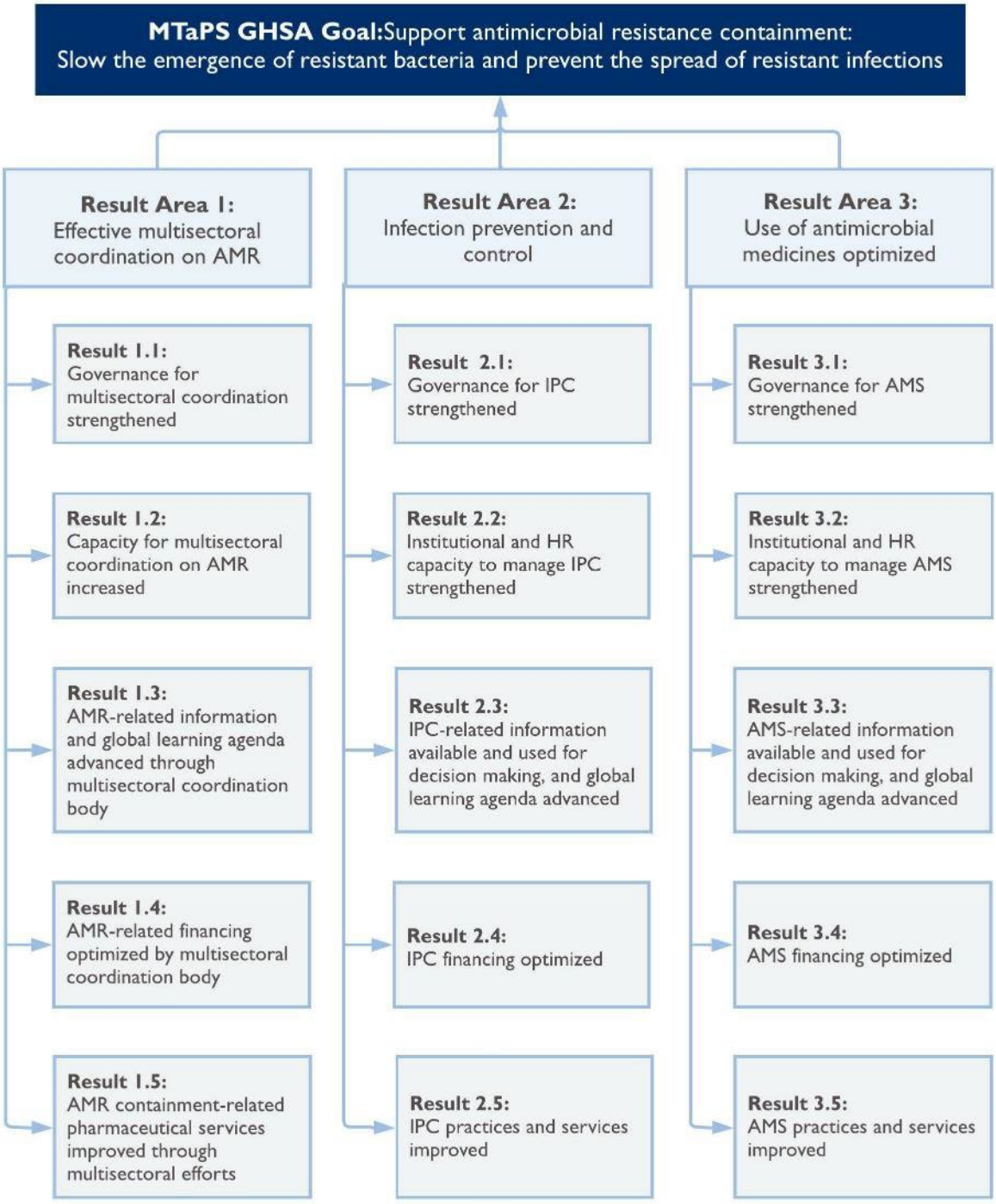
Annex Table 3.19 Number of times oxygen-related technical assistance was provided within the reporting period (CV.2.5-25)

Portfolio/ disaggregation	Country	July–September 2023
	Philippines	3
	Total	**3**
Technical assistance	Clinical	0
	Engineering	0
	Above site	3
	Other	0

ANNEX 4. MTAPS RESULTS FRAMEWORK



ANNEX 5. GHSA RESULTS FRAMEWORK



ANNEX 6. COVID-19 RESULTS FRAMEWORK

USAID Objective 1: Accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations

USAID Objective 2: Reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including to prevent, detect, and respond to pandemic threats

Result Area 4: Infection Prevention and Control

Result Area 6: Coordination and Operations

ANNEX 7. MNCH RESULTS FRAMEWORK