

# USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program

*Improved Access.  
Improved Services.  
Better Health Outcomes.*



Ministry of Health (MOH) and Regional Health Bureau heads celebrate the launch of the revised national IPC guidelines, October 2020. Photo credit: MTaPS

## MTaPS COUNTRY SUMMARY REPORT ETHIOPIA (2018–2023)

### About USAID MTaPS

The US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which are essential to establishing higher-performing health systems and achieving better health outcomes. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

Learn more at  
<https://www.mtapsprogram.org/>

### INTRODUCTION

The USAID MTaPS program enables low- and middle-income countries to strengthen their pharmaceutical systems, which are critical for ensuring access to and appropriate use of safe, effective, quality-assured, affordable medicines, vaccines, health technologies and products, and related pharmaceutical services to improve health. 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) increase availability and use of pharmaceutical information for decision making and advance the global learning agenda, (4) optimize pharmaceutical sector financing, including resource allocation and use, and (5) improve pharmaceutical services, including product availability and patient-centered care, to achieve desired health outcomes.

MTaPS employs a pharmaceutical system–strengthening (PSS) approach to identify and implement strategies and actions that achieve coordinated and sustainable improvements of a pharmaceutical system to make it more responsive and resilient for achieving better health outcomes. The MTaPS approach emphasizes locally led development, country ownership, and self-reliance to support countries on the pathway to sustainability.

At the country level, the MTaPS approach is adapted to the specific context, national health system–strengthening strategies, and USAID's vision and support. From 2018 to 2023, MTaPS provided technical assistance to the Ministry of Health (MOH) in Ethiopia to strengthen the country's pharmaceutical systems and services to improve AMR prevention and containment and COVID-19 response.



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## CHALLENGES

- Outdated national IPC guidelines
- Insufficient IPC practices at health facilities
- Inappropriate antibiotic prescribing practices
- Dispensing of antibiotics without prescription
- Lack of policy coordination between human and animal sectors on AMR response
- IPC and AMS not prioritized
- Lack of HCAI or AE surveillance systems
- Poor harmonization of HCAI prevention and control programs across health facilities

## COUNTRY CONTEXT

A 2016 World Health Organization (WHO) Joint External Evaluation (JEE v.1) found Ethiopia's antimicrobial resistance (AMR) capacities to be "limited" (a score of two out of five) for both antimicrobial stewardship (AMS) and infection prevention and control (IPC). In response to the 2016 JEE assessment, Ethiopia developed a national plan for AMR prevention and containment and released its third iteration of the plan in May of 2021. The Third Antimicrobial Resistance Prevention and Containment Strategic Plan 2021–2025 sharpened Ethiopia's One Health approach and defined the role of implementing stakeholders for AMR prevention and containment efforts in the country. Guided by the WHO JEE (v.2, 2018) and the WHO Benchmarks for IHR Capacities (2019), the country designed and implemented multifaceted interventions to strengthen multisectoral coordination (MSC), improve IPC, and optimize use of antimicrobials through promoting AMS, to strengthen Ethiopia's AMR response.

In 2021, overall pooled prevalence of multidrug resistance (MDR) in Ethiopia was found to be 70.5%.<sup>1</sup> This high MDR prevalence is suspected to be largely driven by health care–associated infections (HCAIs). A meta-analysis from 18 studies conducted in Ethiopia shows the pooled prevalence of HCAI was 16.96%.<sup>2</sup> Improved IPC practices are key for reducing HCAIs. In addition to the burden from HCAIs in Ethiopia, AMR is exacerbated by improper use of antibiotics. Inappropriate prescribing by physicians and nurses, poor pharmacy dispensing practices, and improper consumption of pharmaceuticals by end users are still widespread. For example, in Mizan-Aman town, antibiotics, including amoxicillin, ciprofloxacin, and metronidazole, are dispensed by 94.4% of drug stores without a prescription, despite regulatory restrictions regarding this practice.<sup>3</sup>

## STRATEGIC APPROACH

MTaPS implemented capacity-strengthening interventions in partnership with the Government of Ethiopia in support of USAID's Global Health Security Agenda (GHSA) objectives on AMR. This is consistent with the *US Government National Action Plan for Combating Antibiotic-Resistant Bacteria* (2020–2025). MTaPS interventions align with the goal of Ethiopia's Third Antimicrobial Resistance Prevention and Containment Strategic Plan: to ensure continuity of successful prevention, control and treatment of infectious diseases through evidence-based prevention and containment of antimicrobial resistance following multisectoral collaboration through a One Health approach. MTaPS' support to Ethiopia followed the One Health approach, which promotes MSC across the human health, animal health, and environmental health sectors and actively engages civil society, education, and other sectors to enhance collaboration and synergy in the fight against AMR.



## PARTNERS

- Africa One Health University Network (AFROHUN)
- Breakthrough Action (BA)
- Centers for Disease Control and Prevention (CDC), Ethiopia
- Core Group
- Ethiopia Agriculture Authority (EAA)
- Ethiopia Ministry of Agriculture (MOA)
- Ethiopia Ministry of Health (MOH)
- Ethiopian Environment Protection Authority (EEPA)
- Ethiopian Food and Drug Authority (EFDA)
- Ethiopian Health Insurance Agency (EHIA)
- Ethiopian Public Health Institute (EPHI)
- Food and Agriculture Organization (FAO)
- ICAP (originally known as the International Center for AIDS Care and Treatment Programs)
- Pharmaceuticals and Medical Equipment Directorate (PMED)
- USAID Global Health Supply Chain Program–Procurement and Supply Management (GHSC-PSM)
- USAID Infectious Disease Detection and Surveillance (IDDS) Project
- World Health Organization (WHO)
- World Organization for Animal Health (WOAH)

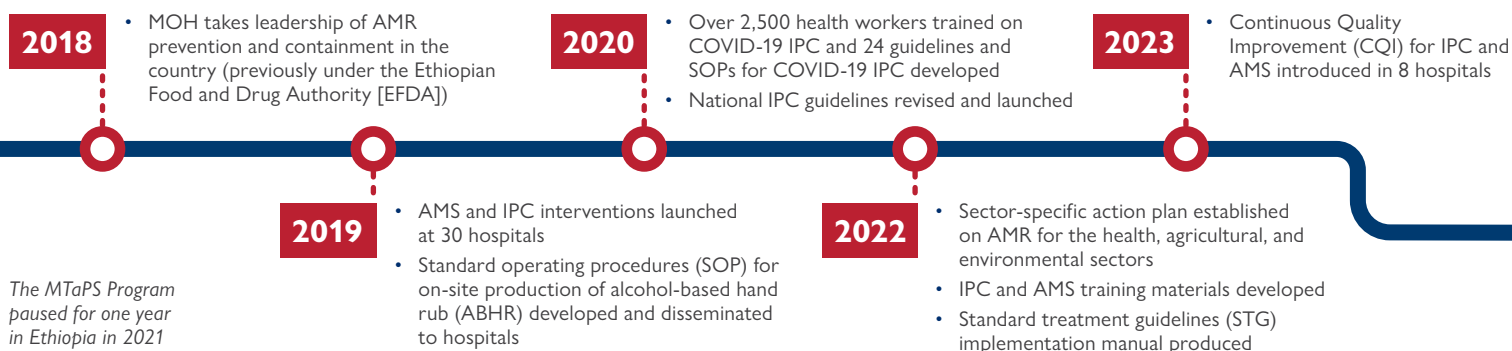
## ACHIEVEMENTS & RESULTS

As stated above, Ethiopia received a score of level 2 (limited capacity) for both IPC and AMS during the baseline JEE evaluation conducted in March 2016. The version of the JEE tool used for this evaluation did not have an MSC indicator. During its start-up period, MTaPS used the WHO Benchmarks for IHR Capacities tool (2019) to conduct a situational analysis, which showed that the country at that time had partially or fully addressed 2/17 (12%) benchmark actions in MSC, 3/21 (14%) actions in IPC and 4/24 (17%) actions in AMS. Over the life of the project, MTaPS collaborated with and provided technical assistance (TA) to national counterparts to fully or partially address benchmark actions as follows (as of September 2023):

- On MSC: 100% of actions for capacity levels 2, 3, and 4 and 20% for level 5
- On IPC: 80% of actions for level 2, 100% for level 3, 80% for level 4, and 60% for level 5
- On AMS: 100% for level 2, 67% for level 3, and 29% for level 4 and 5 actions

With national stakeholders' ongoing commitment and efforts, complemented by collaboration and support from MTaPS and other implementing partners, Ethiopia has now moved up toward level 4 (demonstrated) capacity in MSC, level 3 (developed) capacity in IPC, and level 4 in AMS.

### Key Achievements



### Key Results: Highlights

With support from MTaPS, the MOH took on national leadership on AMR strategy and plan of action. Working in collaboration with the MOH and other national, regional, and facility-level stakeholders, MTaPS supported Ethiopia in achieving the following key results:

#### Multisectoral Coordination



- National AMR secretariat with full-time staff established at the MOH; the AMR secretariat leads MSC for improved coordination of AMR activities across sectors.
- Ethiopia's Third Antimicrobial Resistance Prevention and Containment Strategic Plan revised and launched through a participatory and consultative process. The revised plan aligns with the WHO Global Action Plan on AMR and Ethiopia's Growth and Transformation Plans for health, agriculture, and the environment. The plan defines roles, responsibilities, and resources for all implementing partners and ensures progress monitoring through inclusion of a monitoring and evaluation framework.
- AMR governance structures established to oversee, monitor, and support implementation of the Third Antimicrobial Resistance Prevention and Containment Strategic Plan.
  - Structures include the National Inter-Ministerial Committee, the National AMR Advisory Committee (NAMRAC), and six multisectoral technical working groups (TWGs), including one for IPC and one for AMS.

**\$1M** USD award for One Health AMR containment efforts in Ethiopia from the UNDP AMR MPTF

- Sector-specific action plan established on AMR for the health, agricultural, and environmental sectors to guide implementation across sectors and strengthen MSC.
- Civil society organizations, including women and youth groups, reached through outreach and training to promote awareness and engagement in the fight against AMR.
- 1 million USD grant received from the United Nations Development Programme (UNDP) AMR Multi-Partner Trust Fund (MPTF), as a result of a concept note developed through a collaboration of MTaPS, MOH, MOA, EEPA, FAO, and WHO. This grant enables the health, agriculture, and environment sectors to implement an expanded set of AMR containment activities.



### Infection Prevention and Control

- IPC TWG established with a terms of reference. The TWG leads development of the national IPC implementation plan and monitors its implementation.
- National IPC guidelines updated and rolled out to standardize and strengthen IPC practice at all levels.
- IPC training package developed and implemented for continuing professional development (CPD). More than 600 health care providers trained on the module, including 120 as trainers.
- IPC e-Learning module developed based on the IPC training package. More than 275 health workers registered for the online course (as of November 2023).
- National Infection Prevention and Control Facility Level Assessment Tool (IPC-FLAT) developed based on the WHO Infection Prevention and Control Assessment Framework (IPCAF) tool. The MOH then incorporated the tool into Ethiopia's District Health Information System (DHIS2) to increase facility-level reporting on IPC. Routine monitoring of facility-level IPC institutionalized through standardized tools (IPC-FLAT, Hand Hygiene Self-Assessment Framework, Ward Infrastructure Survey), allowing the MOH and health facilities to pinpoint areas for IPC improvement.
- IPC interventions carried out in 30 hospitals to enhance IPC practices and improve patient safety, health outcomes, and reduce the spread of AMR. Using the IPCAF tool, 4 of these facilities conducted both baseline and follow-up assessments. The hospitals showed substantial improvement, with 1 hospital progressing from "inadequate" to the higher end of the basic level score, a second from the basic to the intermediate level, and the other 2 hospitals maintaining their IPC levels but improving their IPC score by 20–25%.
- CQI introduced in 8 health facilities, providing facilities with a tool to identify and address hand hygiene and other IPC gaps and challenges.
- IPC-FLAT (customized IPCAF) scores across 5 of the 8 MTaPS-supported hospitals improved from an average of 56.7% in 2022 to 75.2% in 2023. Higher facility IPC-FLAT scores indicate more advanced implementation of IPC, a key factor in reducing the prevalence of infectious disease.
- Hand hygiene compliance scores (measured by the WHO Hand Hygiene Observation Tool) across 5 of the 8 MTaPS-supported hospitals increased from an average of 45% in February 2023 to 70% in June 2023, an important step toward reducing the prevalence of HAIs in the facilities.

**8** hospitals actively implementing CQI programs for AMS and IPC, focused on optimizing use of antimicrobials in surgical prophylaxis and improving hand hygiene practices.

**49** champions trained on AMS. Training cascaded to 588 health care workers (173 female, 415 male) at 8 hospitals.

Use of recommended pre-surgery prophylactic antibiotic dose increased from

**11.2% to 61%**

Based on assessment findings at the 5 of the 8 hospitals where MTaPS supported the MOH in implementing AMS interventions at surgical wards from January to May 2023<sup>4</sup>



### Antimicrobial Stewardship

- National-level AMS TWG established with terms of reference. The TWG leads AMS implementation and monitoring countrywide.
- AMS interventions carried out in 30 hospitals to rationalize antibiotic use.
- AMS committees fully functional at 21 of the 30 MTaPS-supported health facilities with terms of reference; regular, documented meetings; and follow up on action plans. These committees lead AMS implementation and planning in the health facilities.



*We included the antimicrobial stewardship program as one of the operational standards in the Ethiopia Hospital Services Transformation Guidelines as well as in Health Center guidelines, so that AMS is one of the mandatory components that each and every hospital should require . . . to renew its license . . . that this is one of the biggest achievements we made so far.”*

**Mr. Yidnekachew Degefaw**

AMR Team Coordinator

Pharmaceuticals and Medical Equipment Directorate (PMED)/MOH

AMR Secretariat

- Essential medicines list (EML), STG for general hospitals, STG implementation guide, and AMS practical guide revised in alignment with the WHO access, watch, and reserve (AWaRe) classification of antibiotics. These documents have been rolled out to guide health facilities to support more rational use of antibiotics.
- Behavioral Change Communication Strategy for AMR Prevention and Containment developed and implemented to improve effectiveness of community awareness interventions by the health sector.
- AMS-related CQI program implemented in 8 hospitals to provide facilities with a tool for ongoing monitoring and improvement, especially related to use of antimicrobials in surgical prophylaxis.
- AMS training package developed and implemented for CPD. A total of 49 champions trained to provide training on the package. These trainers went on to train more than 640 health workers on AMS core components.
- AMS e-Learning module developed based on the AMS training package and rolled out via the MOH website. More than 240 participants are enrolled and taking the AMS online training course (as of November 2023).
- Antibiotic use indicator integrated into DHIS2 and made part of routine health facility reporting to improve monitoring of prescription practices. The indicator measures the percentage of patient encounters with the health care system that result in an antibiotic prescribed.
- After introducing AMS-based quality improvement interventions, data collected from 5 of the 8 MTaPS-supported hospitals indicated that the percentage of pre-surgery prophylactic antibiotic doses within the recommended range increased from 11.2% to 61%, a five-fold improvement, and optimal timing of the dose increased from 68% to 82.6%. The facilities demonstrated a significant antibiotic-related average cost saving of 51.8 Ethiopian birrs (about 1 US dollar) per patient.

### COVID-19 IPC Response

- National Preparedness and Response Plan and 24 guidelines and SOPs for COVID-19 developed to improve country preparedness and response at the national and health facility levels.
- In collaboration with the EPHI, COVID-19 IPC training materials developed and rolled out for health care workers. Using these materials, 447 trainers were trained on IPC for COVID-19. These trainers went on to train nearly 2,500 health professionals working in 122 isolation, quarantine, and treatment facilities.
- Based on IPC measures implemented since 2019 in the 25 MTaPS-supported hospitals and subsequent improvements, all 25 facilities designated as COVID-19 treatment centers are contributing to enhanced national response to COVID-19 pandemic.

 **25** MTaPS-supported hospitals

designated as COVID-19 treatment centers, demonstrating value of MTaPS' foundational IPC support which facilitated a rapid COVID-19 response by these hospitals

**~2,500**

health care workers trained on COVID-19 IPC



## Strengthening Hospital IPC During the COVID-19 Outbreak

To help hospitals strengthen their IPC measures during the COVID-19 outbreak, MTaPS developed and disseminated a standard operating procedure for on-site production of ABHR based on WHO guidance. As a result, 140 hospitals went on to produce their own ABHR—a key IPC commodity—to help protect their patients and staff.



Hospital staff learn how to produce alcohol-based hand rub for improved IPC. Photo credit: MTaPS Ethiopia

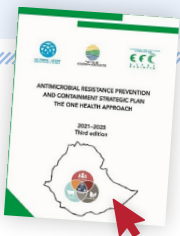




## FEATURED RESOURCES

- [Antimicrobial Resistance Prevention and Containment Strategic Plan, the One Health Approach, 2021–2025, Third Edition.](#)
- [Auditable Pharmaceutical Transactions and Services \(APTS\)—Systems Approach for Sustainably Improving Pharmaceutical Management in Ethiopia \(English\).](#)
- [Auditable Pharmaceutical Transactions and Services \(APTS\)—Systems Approach for Sustainably Improving Pharmaceutical Management in Ethiopia \(French\).](#)
- [EFDA, Ethiopian Essential Medicines List, Sixth Edition, September 2020.](#)
- [Ethiopia Multisectoral Health Security Bulletin, Fourth Edition.](#)
- [MOH-Ethiopia, Health Sector Transformation Plan II \(HSTP II\), 2020/21–2024/25, February 2021.](#)
- [Strengthening Antimicrobial Stewardship in Ethiopia](#)
- [Strengthening Infection Prevention and Control to Enhance Preparedness and Response for COVID-19 Emergencies in Ethiopia.](#)
- [Strengthening IPC at the National and Healthcare Facility Levels in Ethiopia.](#)
- [Strengthening Multisectoral Coordination for Combating Antimicrobial Resistance in Ethiopia](#)

The third strategic plan for AMR prevention and containment in Ethiopia (2021–2025), launched in May 2021.



## PATHWAY TO SUSTAINABILITY

MTaPS provides technical guidance and supports countries in establishing strategic direction and development of critical capacities on a pathway to sustainable and resilient pharmaceutical systems. Through its activities in country, MTAps strengthened the capacity of local governments and organizations (public, private and civil society) for improved, locally led, and more sustainable pharmaceutical service delivery, as highlighted below:

- Critical tools/documents, including the national One Health AMR strategy, guidelines, manuals, SOPs, assessment tools, EML, and training materials are readily available for MOH and its lower-level structures to continue implementing key AMR interventions at both the national and health facility levels.
- Working groups at the federal and health facility levels, including NAMRAC, AMR secretariat, AMS TWG, and IPC TWG, serve as foundational structures for continued implementation of the national AMR strategy.
- Training materials developed for face-to-face training on AMS and IPC are now adapted for online platforms and are available and accessible to all health workers. A CPD course on AMR, developed in collaboration with the Ethiopian Pharmaceutical Association (EPA) (a civil society organization) is currently being provided by the EPA regularly to pharmacy practitioners in the public and private sectors on a fee basis, ensuring sustainability of the training program.
- AMR and IPC are now included in the Ethiopian Health Sector Transformation Plan, Ethiopian Hospital Services Transformation Guideline, and other key policy documents. As a result, the health system is required to prioritize AMR and IPC implementation and follow-up.
- Because IPC and AMS indicators are included in the DHIS2, health facilities are required to include IPC and AMS in their routine reporting system. This makes information on IPC and AMS available for decision making and allows for rapid response to gaps, thereby boosting health system capacity to detect and respond to emergencies.
- 8 facilities have taken ownership of AMS and use CQI approaches to identify gaps and implement interventions.
- 5 of the 8 MTAps-supported hospitals have developed facility-specific medicines lists aligned with AWaRe to guide antibiotic procurement and use.
- The MOH is using MTAps-developed tools, training materials, and approaches to support the rollout to additional facilities of interventions implemented in the 8 MTAps-supported hospitals.

## RECOMMENDATIONS

- Continue strengthening central-level MSC platforms and strengthen decentralized and localized multisectoral/multidisciplinary capacity to speed up implementation of national AMR strategy and action plan and to ensure local ownership.
- Integrate AMS and IPC interventions into ongoing initiatives at additional health facilities (e.g., quality-of-care improvement programs, as MTAps did in the health facilities it supported) to mitigate any perceptions by health care workers of AMS and IPC activities creating additional burden on their time. Facilitate rollout of these initiatives.



## PEER REVIEWED PUBLICATIONS

- [Moving from assessments to implementation: promising practices for strengthening multisectoral antimicrobial resistance containment capacity](#)
- [Optimizing prophylactic antibiotic use among surgery patients in Ethiopian hospitals](#)
- [Strengthening multisectoral coordination on antimicrobial resistance: a landscape analysis of efforts in 11 countries](#)

- Strengthen the capacity of health facility IPC and AMS champions—already trained as trainers—to allow them to conduct onsite training and measure implementation progress without central-level support, and to enable them to cascade IPC and AMS practices to other health facilities within their catchment areas.
- Align procurement of antimicrobials with the national EML and STGs to ensure continuous availability of first-line and alternative antibiotics at health facilities, which is critical to aligning prescription practices with treatment protocols.
- Leverage the momentum for IPC created by the COVID-19 pandemic to further prioritize and implement IPC practices, raise IPC awareness, and enforce minimum IPC standards at both the national and health facility levels.

## FUTURE CONSIDERATIONS

- Prioritize investment in IPC infrastructure, human resource capacity at the health facility level, and governance systems.
- Mobilize resources from government and donors to address the gaps in IPC infrastructure, and supplies—currently a key bottleneck to enhancing IPC practices at hospitals.
- Support increased engagement of private-sector hospitals, clinics, and retail outlets in the fight against AMR.
- Strengthen regulatory enforcement bodies to monitor compliance with good practice standards.
- Support improved supply chain performance to ensure the uninterrupted flow of antimicrobials to service delivery points and patients/clients, including during emergencies or unanticipated shocks.
- Strengthen the capacity of frontline health and agriculture extension workers on IPC and rational use of antimicrobials.
- Support the environment sector in enhancing its role in AMR prevention and containment.
- Further engage civil society organizations to improve AMR awareness in the community.

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## RECOMMENDED CITATION

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