

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

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



MTaPS staff and the county AMR focal person make a joint supervision visit to the pharmacy at Naromoru Health Center, Nyeri County, January 2022. Photo credit: Dr. Oscar Agoro, County AMR focal person, Nyeri County

## Effective and Sustainable Governance Structures for Combating Antimicrobial Resistance at Health Facilities in Kenya

Technical Brief | June 2023 | Kenya

Strengthening Infection Prevention and Control and Antimicrobial Stewardship Committees at Supported Health Facilities

### Background

Antimicrobial resistance (AMR) is a major threat to human health worldwide. If no action is taken, it is estimated that drug-resistant infections will kill 10 million people annually by 2050.<sup>1</sup> Improving infection prevention and control (IPC) practices and implementing antimicrobial stewardship (AMS) to limit the overuse and misuse of antimicrobial medicines serve as some of the key interventions employed to contain AMR.

The US Agency for International Development (USAID) is working to address the threat of AMR, including

through the Global Health Security Agenda (GHSA), an international effort which brings together more than 70 countries and nongovernmental partners to collectively achieve the vision of a world safe and secure from global health threats posed by infectious diseases. The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2025) is a key implementer in USAID's support for the GHSA vision. In Kenya, MTaPS is supporting AMR containment to slow the emergence of resistant bacteria and prevent the spread of resistant infections. To achieve this goal,

<sup>1</sup> US Agency for International Development. One Health and Antimicrobial Resistance [Internet]. USAID. Available from: <https://www.usaid.gov/global-health/global-health-newsletter/antimicrobial-resistance>.

MTaPS supports three key intervention areas: multisectoral coordination (MSC), IPC, and AMS.

## Problem Statement

In a 2017 assessment using the World Health Organization (WHO) Joint External Evaluation (JEE) tool (version 1), Kenya demonstrated “developed capacity” (level 3 of 5) for IPC and “limited capacity” (level 2 of 5) for AMS. In response, Kenya developed the National Policy on Prevention and Containment of AMR (2017) and the National Action Plan on Prevention and Containment of AMR (NAP-AMR) (2017–2022).

Although this policy and plan represent Kenya’s commitment to containing AMR, executing the plan at the health facility level is challenging. The country’s health care facilities (HCF) did not have appropriate and coordinated IPC and AMS governance structures in place to steward IPC and AMS improvements. Weak coordination at the county level also hampered IPC and AMS implementation at facilities, as did a lack of core guidance documents: AMS implementation guidelines were not developed, and IPC guidelines were not readily available at facilities. Facility-level IPC and AMS activities were implemented largely on an ad hoc basis at the behest of vertical health programs. Monitoring and evaluation (M&E) systems for IPC and AMS were inadequately supported and coordinated.

## Technical Approach

Since beginning its work in Kenya in June 2019, MTaPS has employed a systems-strengthening approach to support improvements in IPC and AMS governance through establishment and strengthening of relevant governance structures in selected health facilities in four counties, starting with Nyeri and Kisumu and adding Murang’a and Kilifi counties in late 2020. MTaPS’ activities to strengthen IPC and AMS in implementation of Kenya’s 2017–2022 NAP-AMR are guided by the WHO JEE 2.0 tool (2018) and the WHO Benchmarks

for International Health Regulations (IHR) Capacities (2019) that categorize countries into 5 capacity levels ranging from 1 (no capacity) to 5 (sustainable capacity).<sup>2</sup> These tools are designed to help countries identify and implement recommended actions to make progress in key GHSA technical areas, including IPC and AMS.<sup>3</sup>

To support technical implementation and achievement of the WHO IPC and AMS benchmarks, MTaPS relies on WHO IPC- and AMS-related evidence-based guidance and tools. These include baseline and repeat IPC and AMS assessments at supported health facilities, continuous quality improvement (CQI) approaches, and multimodal strategies, including mentorship, training and education, guideline and policy development, data generation and utilization, feedback, provision of Standard Operating Procedures, job aids, and other communication strategies with early engagement of stakeholders and beneficiaries. MTaPS followed the WHO-recommended multimodal strategies, which include supporting system change needed to enable IPC and AMS practices (such as infrastructure, equipment, supplies); training to improve health worker knowledge; monitoring and feedback; communication to promote implementation of new and innovative approaches; and facilitating a culture of safety with the involvement of facility management, IPC/AMS champions, or role models.<sup>4</sup> To make progress with its IPC and AMS goals, MTaPS integrated WHO water, sanitation, and hygiene (WASH) and occupational safety and health (OSH) tools and approaches into its IPC interventions. Moreover, MTaPS sought to foster integrated approaches to containing AMR by promoting the AMS agenda in joint medicine and therapeutics committees (MTC)/AMS committees and building strong synergies between the IPC and MTC/AMS committees.

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<sup>2</sup> International Health Regulations (IHR) (2005), an instrument of international law that is legally binding in 196 countries, establishes rights and obligations for countries related to reporting, surveillance, and response to public health events, with the aim of protecting public health globally. IHR covers 19 technical areas, including AMR.

<sup>3</sup> The benchmark activities and levels for MSC, IPC, and AMS are detailed at <https://ihrbenchmark.who.int/document/3-antimicrobial-resistance>. See Benchmarks 3.1, 3.3, and 3.4.

<sup>4</sup> WHO multimodal improvement strategy. [https://cdn.who.int/media/docs/default-source/integrated-health-services-\(ihs\)/infection-prevention-and-control/core-components/ipc-cc-mis.pdf](https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/infection-prevention-and-control/core-components/ipc-cc-mis.pdf).

Through advocacy and the introduction of IPC and AMS approaches and tools, including CQI, the MTaPS approach empowers health care workers and facility management with knowledge and processes for AMR containment and motivates them to take action. At the same time, MTaPS works with facility management to enable the establishment of IPC and MTC/AMS committees and allow them to take steps to improve IPC and AMS outcomes.

## Stakeholder Engagement

In strengthening governance structures for IPC and AMR at the facility level, MTaPS collaborates with and empowers the Ministry of Health (MOH), county health departments, other GHSA partners (e.g., USAID Infectious Disease Detection and Surveillance [IDDS]), the WHO, US government implementing partners, US Centers for Disease Control and Prevention (CDC), the Fleming Fund, the University of Nairobi, health professional associations (such as the Pharmaceutical Society of Kenya and the National Nurses Association of Kenya), and health facilities.

### Facility-level MTC/AMS Committees and IPC Committees

**Role:** The IPC and MTC/AMS committees play a key stewardship role at the health facility level, engaging in advocacy, planning, guidance, monitoring, and cascading of IPC and AMS practices. The committees are engaged in implementation of county IPC and AMS work plans at the facility level. Through the National Monitoring and Evaluation framework (2022), monitoring data collected at the health facility level is transmitted up to the county and national levels.

**MTC/AMS committee membership:** Ideally chaired or led by the facility's AMS/AMR focal point, facility MTC/AMS committee members include HCF personnel with an infectious disease or pharmacy background or expertise and include physicians, nurses, IPC personnel, disease surveillance personnel, and laboratory personnel.

**IPC committee membership:** Chaired by a senior clinician with background knowledge on IPC and with direct access to the senior management and hospital administrator, IPC committee members represent HCF staff from across the facility, and generally include a microbiologist, physician/medical officer, nursing officer, pharmacist, housekeeping manager, medical laboratory technologist, kitchen supervisor/caterers, laundry service manager, maintenance manager/medical engineer, supplies officer, public health officer, occupational health and safety focal person, quality improvement focal person, mortician, hospital administrator, and staff from other relevant medical disciplines.

In IPC, MTaPS collaborated with the MOH and other partners in the development of the national IPC M&E framework and national indicators, review of the national IPC policy and strategic plan, and review of standard operating procedures and guidelines for the implementation of AMS and IPC at the health facility level.

MTaPS also collaborated with stakeholders in the development of county IPC plans which inform IPC interventions at health facilities in MTaPS' four focus counties. In AMS, MTaPS collaborated with GHSA partners, especially USAID IDDS, to support the integration of diagnostic stewardship into the AMS program at shared focus facilities: Nyeri County Referral Hospital (CRH), Murang'a CRH, and Malindi Sub-County Hospital. MTaPS also relied on strong partnerships to foster capacity strengthening of health care workers throughout the country: a collaboration with University of Nairobi included pre-service training focused on AMS; through linkages with health professional associations, MTaPS supported relicensure-linked continuing professional development in-service AMS and IPC training courses.

## Intervention

From 2019 to 2022, MTaPS worked with county health leadership and advocated to health facility management teams for establishment and/or strengthening of IPC and MTC/AMS governance structures at the facility level, through capacity strengthening, technical guidance, and mentorship of committee members and focal persons, as follows:

- Supported establishment of IPC committees in 20 MTaPS-supported HCFs and MTC/AMS committees in 22 facilities across the four MTaPS' target counties to lead facility-level interventions to address AMR by improving IPC and optimizing use of antimicrobials. At many facilities, some committee members sat on both the IPC and MTC/AMS committees, which promoted synergies and collaboration in implementation of IPC and AMS activities.
- Worked with these IPC and AMS committees to help them understand their role and take ownership.
- Lobbied county and facility leadership for formal appointment of facility-level IPC and AMS committees. This included expansion of the responsibility of the MTCs to act as MTC/AMS



committees and promote optimal use of antimicrobials. Oriented the MTC/AMS committees on their roles and helped develop distinct roles for committee members.

- Conducted 2–3-day training sessions for supported facilities, with a focus on how to establish and operationalize MTC/AMS committees then subsequently provided the committees with in-depth knowledge on MTC and AMS principles and interventions.
- Supported introduction of the CQI approach as a tool to improve IPC outcomes at 20 HCFs (16 public hospitals, 2 private hospitals, and 2 faith-based hospitals) and AMS outcomes at 24 sites (17 public hospitals, 2 private hospitals, 2 faith-based hospitals, 2 retail pharmacies, and 1 National Teaching and Referral Hospital).

### Introducing CQI

MTaPS undertook the following steps to introduce CQI as a tool to empower HCFs to achieve improved IPC and AMS outcomes:

- Baseline assessment to assess existing strengths and gaps
- Training of committee members and other health care workers as IPC/AMS training of trainers/champions on technical areas and CQI principles such as Monitoring, Training, and Planning and Plan-Do-Study-Act approaches
- Support for IPC and AMS/MTC teams to utilize the CQI approach
- Development of CQI action plans
- Support for implementation of action plans
- Supportive supervisions and mentorship of health facility staff on interventions to improve IPC and AMS practices
- M&E of CQI action plans
- Review of targets based on M&E results
- Providing IPC/AMS committees with tools and knowledge to advocate for IPC/AMS policies and resources

- Provided guidelines (such as the national IPC guidelines, national AMS guidelines) and tools (such as job aids, standard operating procedures, checklists, and AMS audit tools) to the facility-level committees for implementation.
- With the county and sometimes the national MOH IPC and AMS representatives, carried out supportive supervision visits to monitor implementation progress and strengthen committee capacity; facilitated involvement of county and hospital management in supervision visits to bolster buy-in, related support, and sustainability for IPC and AMS interventions.

- Supported documentation and dissemination of best practices within each supported facility, between supported facilities, in other non-supported facilities, at county level, and in national-level forums, in addition to presenting at health conferences.
- Worked with committees to foster engagement in IPC of other hospital staff, such as morticians, cleaners, waste management workers, and specialists working in procedures involving aerosols.
- Conducted training and capacity strengthening of staff in the focus facilities in the use of new data collection tools and fostered implementation of the AMR/IPC M&E system. The tool collects data for indicators on patient and health worker safety, IPC, and AMR (including AMS-specific indicators on antimicrobial consumption). These indicators are then entered into the Kenya Health Information System (KHIS), the national health information reporting platform.

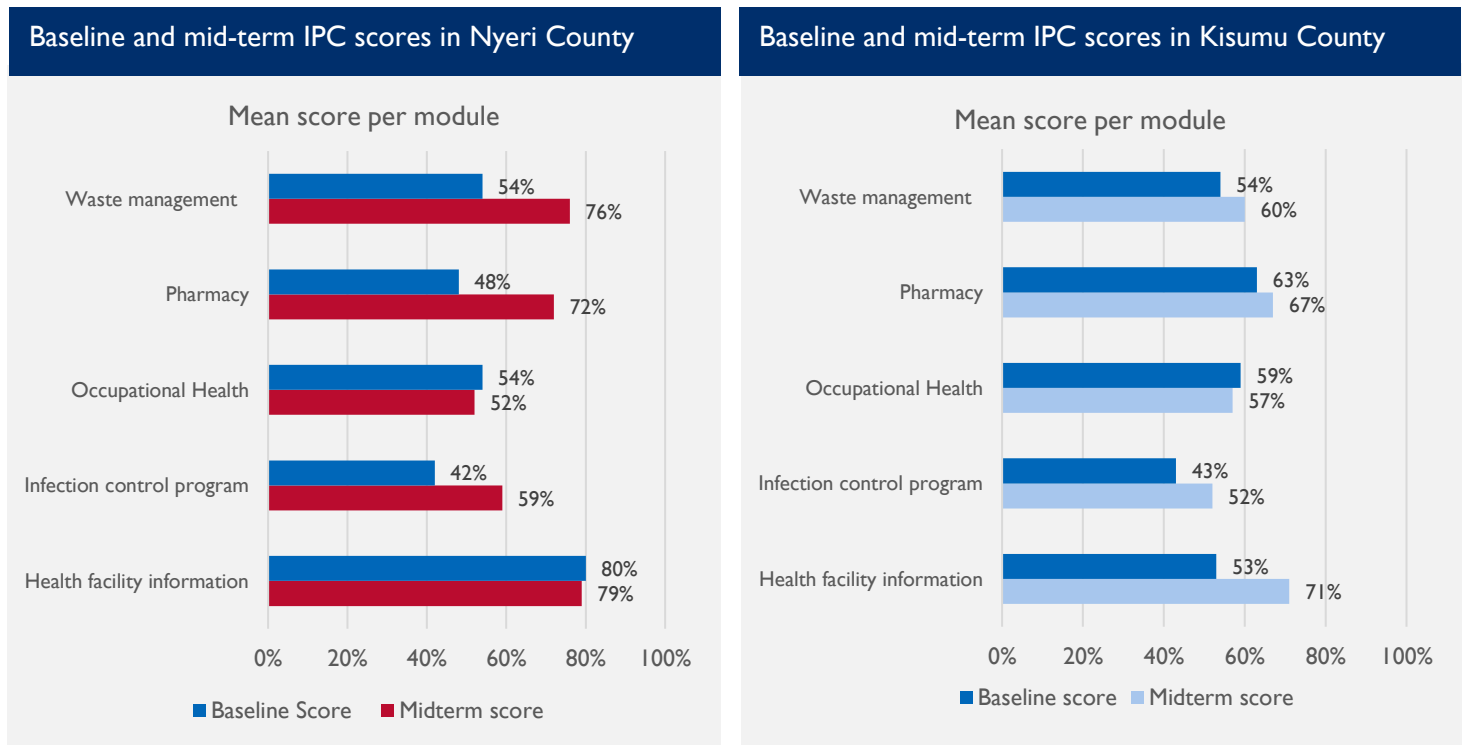
## Results and Achievements

Following MTAps' technical support, 22 facility-level MTC/AMS committees are operational and driving AMS activities on the ground, as evidenced through results from their mid-term assessments and activity reports. IPC committees are in place and operational at 20 facilities, and 24 facilities are actively implementing CQI to strengthen IPC and AMS through a series of ongoing activities, including data collection, data analysis, feedback to health care staff, and appropriate interventions such as periodic hand hygiene compliance audits. Facilities are now engaged in continuous sensitization of health care workers on the importance and application of CQI in improving health systems and have begun sharing results of IPC and AMS CQI initiatives with county and national stakeholders. The facilities with IPC committees have demonstrated improvements in hand hygiene compliance, waste management, and routine use of standardized tools to monitor implementation of IPC interventions.

With governance structures in place, the MTAps-supported facilities improved IPC practices, demonstrated through the IPC assessments conducted, trends monitored over time, and activity reports. In baseline and midterm assessments in MTAps-supported facilities in Kisumu and Nyeri counties, all 8 facilities in each county demonstrated improvements in IPC.

In Nyeri county, mean scores across facilities improved for 3/5 of modules assessed (waste management, pharmacy, infection control program) with very small decreases in health facility information and occupational health. Kisumu county saw increases in 4/5 of these

modules (hand hygiene and injection safety, waste management, health facility information) with a small decrease in occupational health (figure 1). The facilities used these scores to shape their interventions moving forward.



**Figure 1. Mean IPC assessment scores by module in Nyeri and Kisumu counties**

With the MTC/AMS committees in place, most of the facilities are now monitoring their antimicrobial consumption and showing results in curbing inappropriate use of antimicrobials. Facilities are taking more initiative to inform all health care workers about the appropriate use of antimicrobials and have introduced training on the use of antimicrobials and on IPC for all new staff. Health care workers are documenting their CQI successes.

An IPC monitoring system is in place to allow data collected at the facility level to be automatically transmitted to the national level; national rollout of the monitoring system is ongoing. MTaPS and county-level IPC and AMS structures have provided assistance to enable facility committees from all MTaPS focus counties to begin sharing information about their approaches and successes with their peers. They share

this information during continuing medical education and across facilities within each county via WhatsApp groups and other communication channels. Additionally, some facilities have learned to package their successes and present them at national forums and conferences and to publish in journals. At supportive supervision visits, hospital management is invited to see the demonstrable successes; this has increased hospital management’s support and provision of resources—for both IPC and AMS. Some of the facility improvement funds generated at health facilities are now reinvested in improving the facilities’ AMS and IPC programs.<sup>5</sup> Additionally, some hospitals have successfully solicited local donor support for provision of IPC supplies to strengthen their facility IPC programs.

<sup>5</sup> Facilities contribute a portion of patients’ fees for medical services to a county improvement fund account. Thanks to advocacy from MTaPS, counties have put legislation in place to allow for improvement funds to be transferred from the county to the facilities for facility-level improvements.



With MTaPS technical support, Maragua sub-county hospital IPC committee members developed proposals, and Afrimarc, a private company, responded by funding some IPC supplies, as shown in the photo above. December 15, 2021. Photo credit: Maragua sub-county hospital staff



Color-coded pedal action bins donated by Afrimarc for segregation of health care waste in Maragua sub-county hospital in response to MTaPS-supported Maragua IPC committee's funding proposal. Photo credit: Maragua sub-county hospital staff

## Lessons Learned

- **Put local committees in the driver's seat, so they can learn by doing.** Strong governance structures/committees are key for enabling, driving, and sustaining the IPC and AMS agenda at the facility level. MTaPS worked through IPC and MTC/AMS committees under strong leadership from facility management and with support from counties. In conducting assessments, integrating WASH and OSH, and using CQI, the committees took the lead, supported by MTaPS. This developed their confidence and expertise. MTaPS also ensured formal appointment of focal IPC and AMS persons in each county and health facility to lead planning and execution of MTaPS-supported activities.

*“One of the key drivers in sustaining change is building capacity for and ownership by local communities to plan, do, study progress, and act on results. This can only be achieved through operational governance and leadership structures such as the IPC and AMS committees that will continue to exist beyond project cycles. Implementing partners such as MTaPS act as catalysts to set the work in motion.”*

—Dr. Evelyn Wesangula  
National AMR focal person 2015–2022

- **Link core elements of IPC and AMS to registration or accreditation requirements.** In Kenya, IPC core components are now integrated in the Kenya Quality Model for Health (KQMH), the government's standards for health care. These components are also part of the joint inspection checklist for regulatory bodies (Kenya Medical Practitioners and Dentists Council, Kenya Medical Laboratory Technicians and Technologists Board, the Nursing Council of Kenya, the Pharmacy and Poisons Board, Kenya Clinical Officers Council), used to assess the status of health facilities pre-registration and during subsequent inspection visits, and they are part of the health care professional association courses which provide credits required for professional license renewal. Some components of CQI, a key pillar of MTaPS' support at the facility level, are linked to accreditation and certification requirements as outlined in the KQMH.
- **Integrate IPC and AMS governance structures into existing structures to achieve sustainability.** Integrating responsibility for AMS into the already-existing facility MTCs made the AMS governance function sustainable, this was shown through the progress identified during monitoring activities by MTaPS. In smaller facilities, such as at Naromoru health center, AMS and IPC committees were tightly integrated with one another or even made into a single body, to minimize the stress on limited human resources and

to foster synergies between AMR and IPC. The governance structures have been owned by health facility management for continued financial and administrative support.

- **Provide “enablers” to facilities so they can do the work themselves.** By providing health facilities with budgetary allocation for IPC and AMS through the inclusion of these activities into the hospital and county budgets, policy documents, tools, and training and by encouraging them to find solutions to problems they identify, building their confidence, and providing them the space to do so, counties and hospital management can enable facilities themselves to take initiative and overcome challenges to IPC and AMS. This approach motivates facilities, allows them to understand the reasoning behind the interventions they implement, and contributes to sustainable results over the long term.
- **Address new IPC challenges by leveraging existing IPC governance bodies and capacity.** With the onset of COVID-19, the MOH and MTaPS were able to tap into the established IPC governance structures to implement COVID-19 mitigation strategies. During the Ebola virus disease (EVD) outbreak in neighboring countries, the existing trainers, IPC champions, and IPC committees were promptly mobilized and supported in setting up emergency response units and facilities. National MOH IPC training materials previously developed by MTaPS support in collaboration with other partners were easily adapted to respond to the EVD outbreak.

- **Engage top management.** MTaPS support for health facilities was initiated with top county-level engagement for buy-in. The county leadership was engaged throughout the implementation. At the facility level, county IPC/AMS staff and hospital management took part in all supportive supervision visits. This resulted in county and hospital managers appreciating and understanding the successes of the IPC committees’ work/the facility’s IPC interventions, which has contributed to increased management support and resource allocation for IPC.

## Sustainability

As a result of the MTaPS approach—which focuses on system strengthening, integration and institutionalization, co-creation, co-implementation, and empowerment of counterparts—the IPC and MTC/AMS committees are embedded in their home institutions. They are encouraged to take initiative in development and implementation of interventions and are empowered to achieve positive change. Through introduction of CQI, MTaPS provided facilities with a tool to identify gaps in IPC and AMS and to take internal steps to address them. MTaPS built a foundation for sustainability by advocating and integrating IPC and AMS functions into policy guidelines, strategic documents, work plans, and costing/budgeting processes, such as the work plans of the county AMR and IPC bodies and the County Integrated Development Plans. By providing committee members with tools for management and implementation, MTaPS has helped motivate the IPC and AMS committees to step into sustainable governance roles. As MTaPS phases out activities, the committees are well-prepared to continue implementation beyond the life of the program.

## Conclusions

Through its systems-strengthening approach, consisting of transfer of evidence-based tools, approaches, and competencies, MTaPS has succeeded in enabling the establishment of integrated, sustainable governance structures for IPC and AMR at the health facility level in Kenya. IPC interventions have also been embedded in OSH and WASH programs, as well as in the KQMH framework.

Facility-level IPC and MTC/AMS committees have feedback loops in place. Thanks to the monitoring and supportive supervision systems, IPC and AMS issues in facilities are identified, addressed, and used to inform policy review and formulation at the county and national levels. The MOH and health care workers have recognized the positive results of the committee-supported IPC and AMS interventions in terms of patient care and resource use.

MTaPS' focus is now on documentation and sharing of achievements, challenges, and gaps across facilities; fostering learning across facility committees and their respective counties; and providing a foundation to enable the future scale-up of IPC and AMS work to additional facilities.

Moving forward, there is a need to bolster advocacy efforts and mobilize additional resources to ensure that IPC and AMS programs can be undertaken and sustained at the health facility level. Strengthening M&E systems will be critical for generating real-time data to inform decision making and to strengthen AMR programs.

Over the long term, ongoing use of CQI approaches is expected to contribute to change in individual practice and institutional culture, toward increased compliance with IPC standards and improvements in patient safety and workplace risk reduction.



## References

Joint External Evaluation tool. International Health Regulations (2005), second edition. Geneva. 2018  
<https://www.who.int/publications/i/item/9789240051980>.

MTaPS. Technical Brief: Advancing the Global Health Security Agenda. Available from: [https://www.mtapsprogram.org/wp-content/uploads/2021/03/MTaPS-GHSA\\_AMR-PROGRAM-TECHNICAL-UPDATE\\_Nov-2020.pdf](https://www.mtapsprogram.org/wp-content/uploads/2021/03/MTaPS-GHSA_AMR-PROGRAM-TECHNICAL-UPDATE_Nov-2020.pdf).

MTaPS. A Technical Guide to Implementing Facility-Level Antimicrobial Stewardship Programs in MTaPS Program Countries. Available from: <https://www.mtapsprogram.org/wp-content/uploads/2021/03/USAID-MTaPS-Mini-guide-for-facility-AMS-program.pdf>.

MTaPS. A Technical Guide to IPC Facility Program Assessment and Development of IPC Improvement Plans. Available from: <https://www.mtapsprogram.org/wp-content/uploads/2021/03/USAID-MTaPS-IPC-Assmt-and-Improvement-mini-guide.pdf>.

MTaPS. A Technical Guide to Implementing a Continuous Quality Improvement Approach to Strengthen Infection Prevention and Control Programs at Health Facilities in MTaPS Program Countries. Available from: <https://www.mtapsprogram.org/wp-content/uploads/2021/03/USAID-MTaPS-CQI-for-IPC-guide.pdf>.

World Health Organization. Joint External Evaluation of IHR Core Capacities of the Republic of Kenya. Geneva: World Health Organization; 2017. Available from: <https://extranet.who.int/sph/jee-report-kenya-2017>.

World Health Organization. WHO Benchmarks for International Health Regulations (IHR) Capacities Geneva. 2019. Available from: <https://www.who.int/publications/i/item/9789241515429>.

World Health Organization. Kenya National Action Plan on Antimicrobial Resistance: Review of Progress in the Human Health Sector. 2022. Available from: <https://www.who.int/publications/i/item/9789240062689>.

## Acknowledgements

Thank you to the staff from MTaPS Kenya for their support in the development of this technical brief.

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## About USAID MTaPS:

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2025) 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.



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*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.*