

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

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Participants gather for the first multisectoral stakeholder IPC workshop in Nigeria, March 2021. Photo credit: Kabir Abdullahi, MTaPS

Strengthening Infection Prevention and Control in Nigeria

Technical Brief | May 2023 | Nigeria

Building IPC governance and capacity at the national and health care facility levels

Background

Infection prevention and control (IPC) is key to preventing the transmission of infections, reducing antibiotic consumption, and stemming the development of drug resistant pathogens. The US Agency for International Development (USAID) works to address the threat of antimicrobial resistance (AMR) 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. As part of its overall work to support the GHSA, MTaPS is supporting Nigeria in strengthening IPC at the national and health care–facility levels.

Problem Statement/Challenge

In a 2017 assessment using the World Health Organization’s (WHO) Joint External Evaluation (JEE, version 1) tool, Nigeria demonstrated limited capacity (level 2 of 5) for all AMR-related indicators, including antimicrobial stewardship (AMS) and IPC.

Following the assessment, the country took action to step up its AMR response. This included the establishment of several coordinating bodies for partner engagement on IPC and other AMR issues at the national level, including an AMR technical working group (TWG) which included an IPC subcommittee. Nigeria also developed a National Action Plan (NAP) for AMR (2017–2022) and a National One Health Strategic Plan (2019–2023). These documents called for IPC measures to be implemented at both the national and health care–facility levels.

When MTaPS began its work in Nigeria in 2021, most IPC capacity in the country remained limited to disease-specific contexts, such as tuberculosis or in response to outbreaks like Ebola, and the country faced a variety of challenges and gaps in IPC implementation, across five major areas: governance, human resources, information, finance, and IPC supplies and infrastructure.

At the national level, the IPC team was not functioning the way it should, the AMR TWG subcommittee for IPC did not yet have terms of reference (TOR), the animal health sector lacked an IPC policy and plan, and the NAP-AMR was not operationalized. Health care facilities did not have IPC teams in place and local IPC subcommittees lacked TORs. No facility-level IPC assessments had been conducted. Health workers lacked knowledge and understanding of IPC and had minimal access to IPC job aids, guidelines, and risk communications plans. Health facilities also commonly found themselves without necessary personal protective equipment and IPC consumables, and inadequate water, sanitation, and hygiene (WASH) infrastructure.

Technical Approach

MTaPS’ activities to strengthen IPC in Nigeria are guided by the country’s NAP-AMR, One Health Strategy, and the WHO JEE 2.0 tool (2018), as well as the WHO Benchmarks for International Health Regulations (IHR) Capacities (2019).¹ These tools are designed to help countries identify and implement recommended actions to make progress in key GHSA technical areas, including IPC. The JEE and WHO benchmarks categorize countries into 5 capacity levels ranging from 1 (no capacity) to 5 (sustainable capacity).²

To support technical implementation and achievement of the WHO IPC benchmarks, MTaPS relies on WHO IPC-related evidence-based guidance and tools. These include baseline and repeat IPC assessments at supported health facilities, continuous quality improvement (CQI) approaches, and multimodal strategies with continuous engagement of stakeholders and beneficiaries. MTaPS followed the WHO-recommended multimodal strategies of supporting system change needed to enable IPC practices (such as infrastructure, equipment, and 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 champions, or role models.³ To help facilities achieve their IPC and AMS goals, MTaPS integrated the WHO WASH tool and approaches into its IPC interventions.

“Nigeria is a really good example of how we are taking our GHSA work to the subnational levels, going beyond the central activities, moving into the states, moving into the counties, moving into the peripheries, and in other words, decentralizing this work . . . it’s very important for AMR containment and even for pandemic preparedness to have localized health security actions.”

Mohan Joshi, Principal Technical Advisor, Global Health Security Agenda, MTaPS Program

¹ 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.

² 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.

³ World Health Organization. Improving Hand Hygiene Through a Multimodal Strategy.

[https://cdn.who.int/media/docs/default-source/integrated-health-services-\(ihs\)/ipc/resource-considerations-for-investing-in-hand-hygiene/ipc_mmis_onepager_standing_alone.pdf?sfvrsn=634a6d84_5](https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/ipc/resource-considerations-for-investing-in-hand-hygiene/ipc_mmis_onepager_standing_alone.pdf?sfvrsn=634a6d84_5).

Intervention

MTaPS focused on developing the national governance structure for IPC and supporting Nigeria in implementing sustainable IPC programs at selected health care facilities in two states.

Strengthening governance and capacity for IPC at the national level

- Supported the establishment and strengthening of national governance structures, including the AMR TWG secretariat and the national IPC subcommittee under the NCDC. Supported the governance bodies in developing TORs, holding regular meetings, and developing an annual work plan.
- Helped country partners operationalize and implement IPC in the NAP-AMR and National One Health Strategy, conducted a review of NAP-AMR implementation, supported the national IPC pillar of the NCDC to develop the National IPC Policy.
- Co-developed IPC training modules with AMR TWG secretariat.

Introducing IPC interventions at the facility level

- In collaboration with the AMR TWG secretariat and linked with the State MOH (SMOH) and State IPC focal person, who serve as state-level gatekeepers, piloted IPC activities first in three facilities in Enugu state in the southeast of the country and later expanded to four facilities in Kebbi state in the northwest. In Enugu, MTaPS began IPC activities in public facilities. However, several issues—ranging from low usage of the government facilities' secondary hospital services, lack of lab capacity, minimal support for the interventions on the part of hospital management, and the presence of viable private health facilities in the state—led MTaPS to migrate two of the pilots to private, fee-for-service, faith-based facilities.
- In each state, supported establishment of a state IPC committee. Trained state IPC committee members on management and leadership.

Identifying IPC gaps

- Assessed state-level IPC capacity in Kebbi and Enugu states using the WHO Infection Prevention and Control Assessment Tool 2 (IPCAT2).
- Conducted assessments using the Infection Prevention and Control Assessment Framework (IPCAF) and Hand Hygiene Self-Assessment Framework.

Building human resource and institutional capacity for IPC at the facility level

- Provided facilities with training and support for introduction of CQI for IPC and AMS activities. The CQI approach included the Plan, Do, Study, Act cycle to allow facilities to identify gaps in their IPC system and design simple ways to address the gaps, implement small-scale planned activities and measure progress. Using CQI, for example, the Mother of Christ Specialist Hospital developed a three-bucket trolley to help facilitate implementation of the standard cleaning and disinfecting techniques introduced through MTaPS-supported trainings.
- Trained the facility-level IPC committees/teams on the WHO assessment tools to enable them to conduct future self-assessment and develop implementation plans.
- Supported step-down training on IPC practices led by the previously trained IPC team members for over 320 staff from across the pilot facilities on hand hygiene, respiratory hygiene, waste management, and environmental cleaning.
- Adapted its training approach to work within the human resources constraints of each facility. Table 1 shows the advantages and disadvantages of the onsite facility-based training model and the offsite training model, which brought together participants from several facilities.
- In collaboration with the state MOH, hospital management board, and management at individual health care facilities, supported launch of both state and facility IPC committees and development of facility-level IPC plans, which integrated a CQI approach.
- Worked in tandem with national and state IPC staff to provide monitoring and in-person mentoring focused on strengthening the capacity of the facility IPC focal person to understand the gaps that exist and provide support in implementing their IPC improvement plans.

Dissemination of IPC guidelines and job aids

- Supported dissemination of NAP-AMR and IPC guidelines to supported facilities.
- Developed and disseminated behavior change communications materials on IPC for use at the facility level. This included job aids on the WHO five moments of hand hygiene, injection safety, waste segregation, standard precautions, and sharps disposal.

Table I. Comparison of MTaPS' training models

	Facility-based training	Offsite training
Description	Several weeks, partial day; conducted for a single private facility, onsite, low-dose, high-frequency trainings	One week, full day; conducted for several public facilities at once, high-dose, low-frequency trainings
Selection criteria	Used for most private facilities with limited staff strength and less flexible, higher workload	Used for most government-owned, public facilities who tend to have better staff strength and more flexible, varied workload
Advantages	<ul style="list-style-type: none"> Allowed more people to be trained per facility Workdays were not completely disrupted, as they could be split between early morning trainings and afternoon work commitments Management generally more supportive of onsite training Less effect on continuity of care (less disruption in staffing is easier, especially in facilities with fewer staff) 	<ul style="list-style-type: none"> More people from different facilities could be trained per state simultaneously Facilitated sharing of experiences and scenarios across facilities Lower costs Full day training made it easier for some participants to concentrate Better participant retention
Disadvantages	<ul style="list-style-type: none"> Staff may be pulled away from training if emergencies occur Partial-day trainings meant that the training extended over several weeks Higher costs for facilitators and refreshments Participant retention appeared to decrease after the first five days 	<ul style="list-style-type: none"> Staff offsite for full days may interrupt service delivery Management (especially in private health facilities) may be unsupportive of staff being offsite for a full week



MTaPS-trained health care workers at Mother of Christ Specialist Hospital, Enugu State, demonstrate proper hand washing techniques for their peers. May 25, 2022. Photo credit: Chinemerem Onwuliri, MTaPS

“Focusing on ‘low-hanging fruits’ like improving environmental cleaning and waste management practices in our facility has been a good entry point to showcase the value of the IPC program supported by MTaPS, and will help get more management funding and commitment, needed to scale up IPC actions from our high-risk wards, gradually, to the rest of the hospital”

Dr. Teslim Lawal, Chairman, Medical Advisory Committee and IPC Focal Person, Federal Medical Center, Birnin Kebbi

Results and Achievements

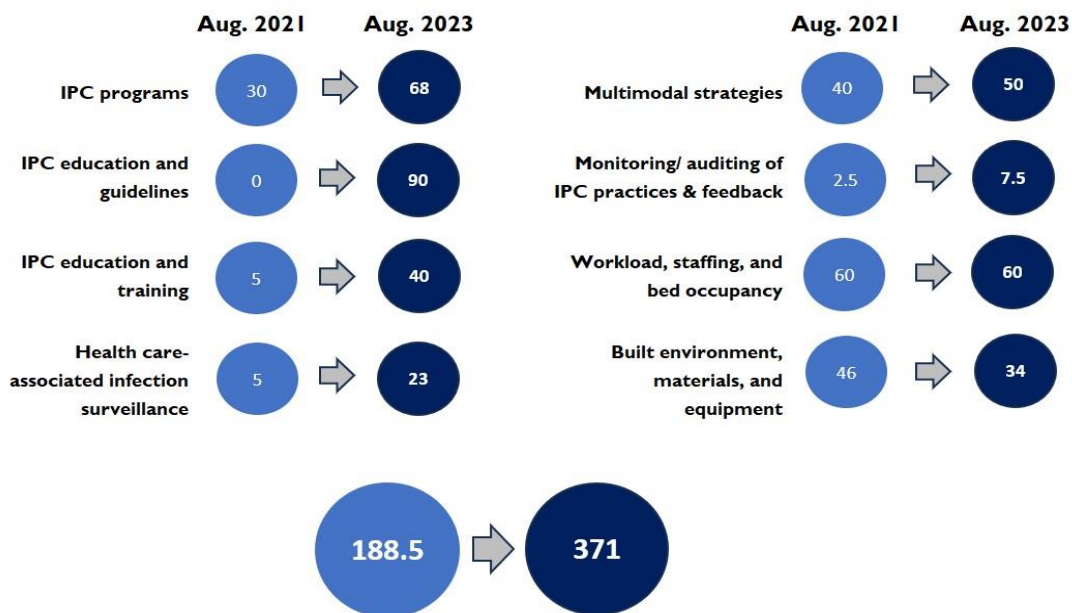
With MTaPS support, the AMR TWG secretariat has updated the national IPC policy and national IPC standard operating procedures (SOP) for facility-level use and has supported the completion of the national IPC strategic plan. At the state and facility levels, MTaPS supported the development of an IPC plan for Enugu state in collaboration with NCDC, established IPC committees, strengthened IPC in 7 health care facilities in Enugu and Kebbi states, and improved the capacity of more than 320 health care providers to implement IPC guidelines and improvement plans.

Before beginning IPC interventions, MTaPS supported baseline IPCAF and hand hygiene assessments in all participating facilities in the two states. Some of the facilities have since conducted their own follow-up self-assessments to gauge their progress and guide further implementation. Figure 1 shows progress from baseline (August 2021) to mid-term (August 2023) self-assessment at one of the MTaPS-supported facilities, Enugu State University Teaching Hospital (ESUTH), Parklane.

Lessons Learned

In strengthening IPC in Nigeria, MTaPS and its partners gained experience that may be valuable for future work in Nigeria and for application of similar approaches in other countries.

- **Training health care workers on IPC contributes to increased adoption of IPC practices.** Before the training, health care workers did not understand the risks of not following IPC practices and did not have the tools to improve IPC. Once trained on IPC, health care workers came to value IPC and knew how to implement IPC interventions. As a result, they demonstrated improved IPC behaviors and enhanced IPC practice in facilities.
- **Structure of training of health care workers can be adapted to meet the facility’s needs and available resources.** MTaPS trained through two models: offsite, full-day, 5-day maximum training sessions (used for several public facilities) and onsite training sessions for 2–3 hours per day for a minimum of 10 days (for participants from a single private facility). Both the shorter, less frequent, full-time format and the longer, more frequent, part-time format proved effective, based on the improved IPC knowledge the participants demonstrated in post-training testing.
- **Strategic composition of facility-based IPC teams engages health care workers across units and departments and eases the recruitment of champions and IPC link personnel.** Having a mixed and well-balanced team enables committee stability and longevity: first, it allows different health professionals to contribute their own expertise to the administration of IPC in the facility. Second, it enhances the reach of the IPC team within the facility



*Scores per component are out of 100 total score is out of 800.

Figure 1. IPC Core Component Scores, ESUTH (IPCAF baseline and mid-term self-assessment)

to various units, professions, and departments on the team. A diversity of team members also helps mitigate the effect of “brain drain” on committee activities: if committee members leave the facility, other committee members can step in to temporarily cover their tasks and help get a newly appointed member up to speed.

- **Strong health facility leadership buy-in and participation enhances adoption of IPC practices.** As seen with the management of faith-based health facilities and some public facilities, strong leadership promotes health facility buy-in, access to more resources for IPC, and improved IPC team vibrancy and plan implementation.
- **Advocacy and frequent engagement with stakeholders at all levels is critical to helping align and scale IPC policies and practices from the national level to the states and facilities.** For example, ensuring that facility management is well informed of the importance of IPC has contributed to their increased commitment to fund IPC materials and infrastructure. In addition, regular engagement between the national (AMR TWG) and the state MOH, as well as the Hospital Management Boards and State AMR TWG where they exist, ensures that adequate attention and required resources are channeled to IPC programming in the states and their health care facilities.

Pathway to Sustainability

MTaPS’ systems approach has included collaboration with government partners to introduce and strengthen structures and introduce tools at both the national and subnational levels to sustainably support implementation of IPC interventions. At the national level, Nigeria now has a National IPC Strategic Plan and National IPC Guidelines in place. Enugu and Kebbi states both have state IPC plans, which help strengthen the capacity of the State MOH to support IPC implementation at the facility level. Supported facilities in the states each have their own IPC implementation plans in place. They have each inaugurated a supervisory IPC committee and an implementing IPC team, which have received training in IPC and management skills improvement, to allow them to lead improvement plan implementation and benefit from MTAps’ mentorship support. These bodies now have both the tools and the capacity needed to continue to shape development and implementation of IPC policies in the country.

Through advocacy, MTAps has ensured that IPC teams were integrated into the official facility structure as ad hoc committees, often with budgeted funds. For example, Federal Medical Centre Birnin in Kebbi received budgetary allocations for its IPC programs. Facility-level teams have received training on the WHO assessment tools (IPCAF and Hand Hygiene tools) to allow them to conduct future self-assessments and develop new implementation plans. Health care workers are trained on IPC tools, and a system is in place to allow for continued peer training. Each of the participating facilities has learned how to implement CQI plans, which has empowered them with a sustainable process to identify gaps and design, implement, and monitor new IPC interventions to meet the needs of their patients. The IPC curricula used by MTAps for training, practice in implementing these interventions, and the job aids to support implementation of IPC interventions are ready for rollout to additional facilities.

Conclusions

With support from MTAps, the Government of Nigeria has established national bodies and policies for IPC and has implemented the policies at the human health facility level. They have put systems in place for implementing these policies and have piloted health care facility-level IPC in seven facilities across two states. These states and pilot facilities are empowered with tools and know-how and have gained an appreciation of the importance of the risks of AMR and the need for IPC. Using the tools developed for IPC in health care facilities and based on the experience of the initial pilot implementation, over the remainder of the project lifetime, MTAps will support Enugu and Kebbi states to roll out the IPC approaches to additional facilities; to support the national and state AMR TWG secretariats to monitor progress; and to ensure compliance with national guidelines, SOPs, and facility plans in supported facilities. As a next step, the Government of Nigeria is well positioned to support the rollout of facility-level IPC to additional states and can increase its commitment to strengthening IPC beyond the human health sector.

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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.