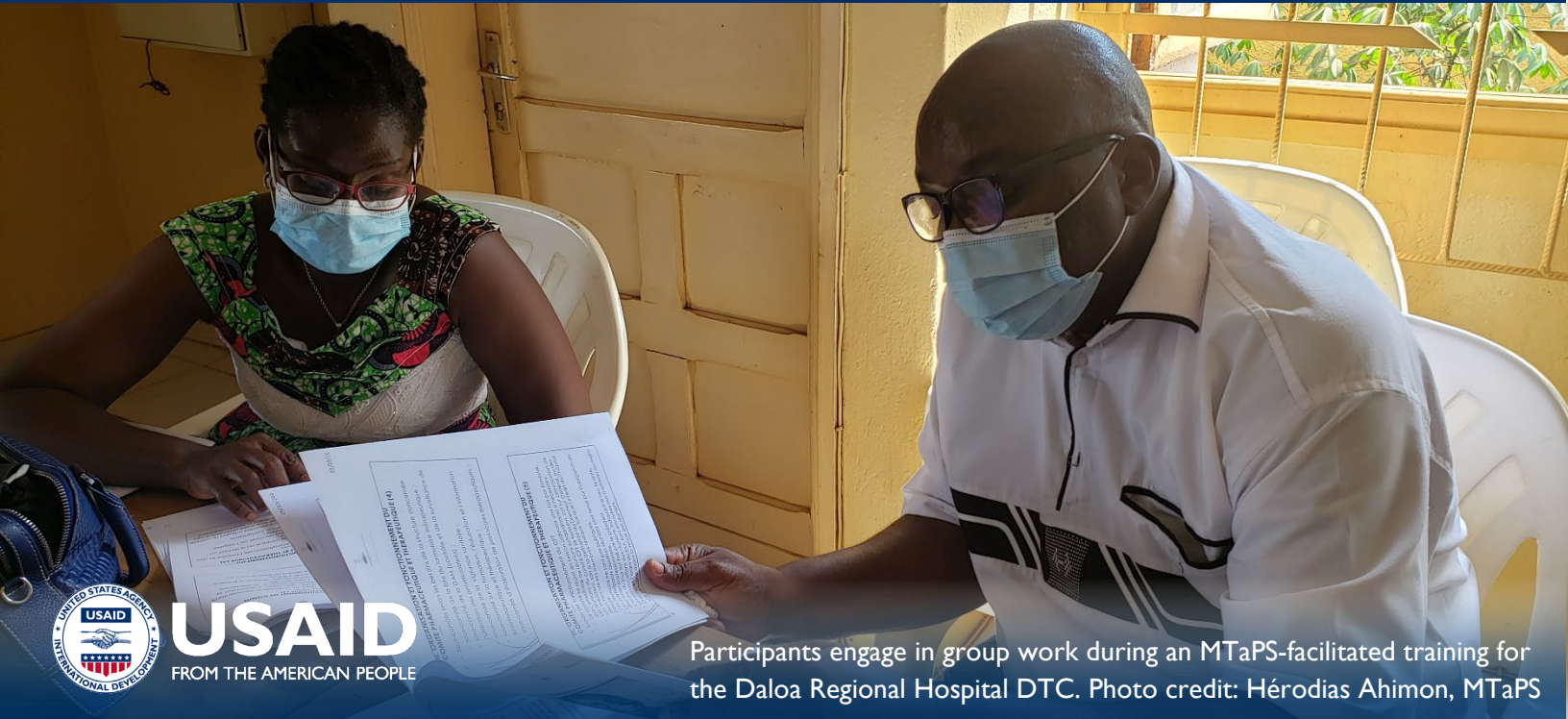


USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTAPS) PROGRAM

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Participants engage in group work during an MTaPS-facilitated training for the Daloa Regional Hospital DTC. Photo credit: Hérodias Ahimon, MTaPS

Advancing Antimicrobial Stewardship in Côte d'Ivoire

Technical Brief | October 2023 | Côte d'Ivoire

Strengthening drug and therapeutics committees in health care facilities

Background

The US Agency for International Development (USAID) is working through its implementing partners to address the threat of antimicrobial resistance (AMR) with support from the Global Health Security Agenda (GHSA), an international effort by 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 (2018–2024) is a key implementer in USAID's support for the GHSA vision. MTaPS began its support within Côte d'Ivoire from late 2018, focusing on

addressing gaps in multisectoral coordination, infection prevention and control (IPC), and antimicrobial stewardship (AMS) to prevent and contain AMR in both the animal and human health sectors.

Problem Statement

The World Health Organization (WHO) has called AMR one of the top 10 threats to public health worldwide. If no action is taken, by 2050, an estimated 4 million people could die from AMR annually in Africa alone.¹ Côte d'Ivoire, like many other countries, is

¹ <https://www.afro.who.int/ResistAMR>.

grappling with high rates of health care–associated infections (HCAI) and AMR.² A 2020 surveillance report on antibiotic resistance in Enterobacteriaceae—types of bacteria that cause many common HCAs—revealed a high level of resistance.³ Despite the alarming AMR situation in the country, sufficient measures are not yet in place to address the issue. In a 2016 Joint External Evaluation (JEE) (using Version 1.0 of the JEE tool), Côte d'Ivoire received the minimum score (1 on a scale of 1–5) in all the AMR technical areas, including AMS.

To address these issues, in 2021, Côte d'Ivoire developed a national AMS plan. This plan calls for drug and therapeutics committees (DTC) to play a key role in combating AMR in regional and local health facilities. The role of DTCs is to help the health care facility improve and regulate medicine use with the goals of promoting drug safety; eliminating needless cost; reducing overuse and misuse of medicines, including antimicrobials, through appropriate prescribing and dispensing; and ensuring that patients can get the drugs they need. When they function as intended, DTCs can play a key role in preventing and containing AMR. However, only some of the Côte d'Ivoire's health care facilities have DTCs, and many of those are not functioning optimally. The existing DTCs often suffer from weak ownership by health facilities and absence of support from facility management and national leadership; insufficient financial resources; lack of appropriate staff skills, experience, and dedication; insufficient understanding of the DTC mandate; irregular participation of DTC staff in meetings; and staff turnover.

Technical Approach

MTaPS' work to strengthen DTCs in Côte d'Ivoire uses the WHO's AMS practical toolkit and the WHO–Management Sciences for Health (MSH) practical guide for DTCs.^{4,5} MTaPS' approach includes partnering with

the AMS multisectoral technical committee (MTC), one of the six MTCs under the AMR Technical Working Group (TWG), which is the highest technical governance body overseeing the operationalization of the country's national action plan on AMR.⁶ MTaPS supports the AMS MTC in leading capacity strengthening of the facility-level DTCs through provision of assessment and improvement tools, policy documents, and training, as well as by fostering linkages with regional health authorities to establish ongoing collaboration and support for the DTCs.

Stakeholder Engagement

In strengthening the functionality of Côte d'Ivoire's DTCs and improving implementation of AMS, MTaPS collaborated closely with the country's AMR TWG to develop and build capacity of the DTCs. MTaPS worked with the AMS MTC to conduct supportive supervision of the DTCs. MTaPS also coordinated DTC-strengthening activities with a broad group of national stakeholders, including the Institut Pasteur de Côte d'Ivoire, the Ivorian Pharmaceutical regulation authority (IPRA), the Directorate of Pharmaceutical Activities (DPA), the Directorate of Proximity and Hospital Medicine, the Directorate of Veterinary Services, regional health directorates, and the five technical ministries (Ministry of Health, Ministry of Animal and Fishery Resources, Ministry of Agriculture and Rural Development, Ministry of Environment and Sustainable Development, and Ministry of Higher Education and Scientific Research). Through consultations with the national One Health Platform, MTaPS avoided duplication and enhanced synergies for AMS. To promote information exchange, MTaPS helped country partners engage with the Food and Agriculture Organization (FAO), the WHO, Breakthrough Action, the US Centers for Disease Control and Prevention, Africa One Health University Network, and the French biotechnology firm bioMérieux. For example, for the

² Côte d'Ivoire NAP-AMR, 2021–2025 (French). Available from: <https://www.who.int/publications/m/item/C%C3%B4te-d'Ivoire-national-multisectoral-action-plan-against-antimicrobial-resistance-2021-2025>.

³ Rapport d'activité du CNR antibiotique 2020.

⁴ WHO. Antimicrobial stewardship programmes in health-care facilities in low- and middle-income countries. A practical

toolkit. 2019. Available from:

<https://www.who.int/publications/i/item/9789241515481>.

⁵ WHO. Drug and therapeutics committees: a practical guide. [Published in collaboration with MSH.] 2003. Available from: <https://apps.who.int/iris/handle/10665/68553>.

⁶ Côte d'Ivoire NAP-AMR, 2021–2025 (French).

development of the national AMS Guidelines, the FAO helped collect information on international guidelines.

Intervention

Laying the groundwork: At the national level, MTaPS provided technical assistance to strengthen the AMR TWG, which Côte d'Ivoire established in 2016. MTaPS helped finalize the terms of reference and guidance manual for the AMR TWG and its IPC and AMS subcommittees, supported the AMR TWG in assessing the country's AMS policies and regulatory framework, and helped develop and validate AMS policy and guidelines and revise the national action plan on AMR. These documents would guide the work of the facility-level DTCs.

Establishing and strengthening DTCs: In close collaboration with the national counterparts, MTaPS selected a total of 20 health care facilities from within the AMR secretariat's AMR surveillance network, where the secretariat implements an AMR action package which includes IPC and AMS, as well as AMR surveillance in laboratories. In collaboration with the AMR TWG, in 2019–20 MTaPS helped pilot DTC-strengthening activities in 2 university teaching hospitals (the University Hospital of Cocody and the University Hospital of Bouaké). Following the pilot, in 2021, the AMR TWG and MTaPS expanded the DTC-strengthening activities for AMS to an additional 8 health facilities (2 university teaching hospitals, 4 regional hospitals, and 2 private clinics), and, in 2022, expanded again to an additional 10 facilities (8 regional hospitals and 2 private clinics), for a total of 20 facilities. Of these 20, 6 facilities had no DTCs before MTaPS technical assistance began. The capital city of Abidjan is home to 7 of these facilities, and the remaining 13 are located across 13 of the country's health regions (figure 1).

To build DTC capacity, MTaPS undertook the following steps in collaboration with the AMR TWG:

- Developed a DTC evaluation and supervision sheet for continually assessing and improving functionality of DTCs as a tool to assess the functionality of the DTCs in each facility. This tool was adapted from the WHO practical guide for DTCs, the WHO AMS toolkit, and a DTC assessment and supervision tool developed by the USAID Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program in Congo.

- At the 20 supported facilities, conducted baseline assessments (between 2019 and 2022) of DTC

Figure 1. Health regions supported by MTaPS



functionality and capacity to implement AMS activities, based on criteria including number of meetings, average number of DTC members who attended the meetings, availability of treatment protocols, pharmacovigilance, sensitization of prescribers, and continuous education activities to improve antimicrobial prescriptions.

- Supported DTCs in implementing activities by providing them with tools (self-assessment tool and template for activity reporting) and supportive documents, including policies and guidelines.
- Developed training materials, including 16 modules, based on the country AMS policy and guidelines. Organized competency-based training for the 20 DTCs using those 16 AMS modules. Trainers included AMS MTC members, regional pharmacists, and the group of Leadership Development Program Plus (LDP+) facilitators established earlier through the USAID Leadership Management and Governance project. The LDP+ facilitators also supported the DTCs in developing facility-level action plans.
- Introduced continuous quality improvement (CQI) methodology to the target facilities, to help them

identify AMS issues and take action to address the issues. Supported development of CQI activity plans for AMS improvement in each facility.

- Conducted supportive supervision visits to help DTCs to support their CQI activity implementation and capacity strengthening and to follow up on implementation of their activity plans after training courses. Following MTaPS' training on the AMS modules, the AMS MTC, regional directorates, DPA, IPRA, and MTaPS jointly conducted supportive supervision visits to a total of 16 of the 20 supported health facilities (16 in 2022 and 16 in 2023) to monitor CQI and AMS plan implementation and assess DTC functionality and capacity to implement AMS activities.

recent follow-up, as compared with the baseline assessment. Follow-up assessment scores showed that 8 facilities moved from basic capacity (0–25 points) to intermediate capacity (26–45 points); 1 increased from basic to advanced capacity (46–55 points); 6 remained at basic capacity (including 4 which demonstrated increased scores within that level; and 2 which demonstrated an increase in capacity score but remained at intermediate level). One facility demonstrated a decrease from intermediate to basic level, largely as a result of leadership issues within the facility's DTC (figure 2).

Results and Achievements

As a result of support from MTaPS and commitment from country and district partners and the target facilities, Of the DTCs at the 20 MTaPS-supported facilities (16 referral hospitals and 4 private clinics), 16 have functional DTCs, each with an action plan. DTCs at 2 of the MTaPS-supported facilities are currently not functional (CHR of San Pedro and CHU of Cocody), due to internal management changes in the facility. More than 350 health care professionals, including 260 DTC members, have received in-person training on AMS.

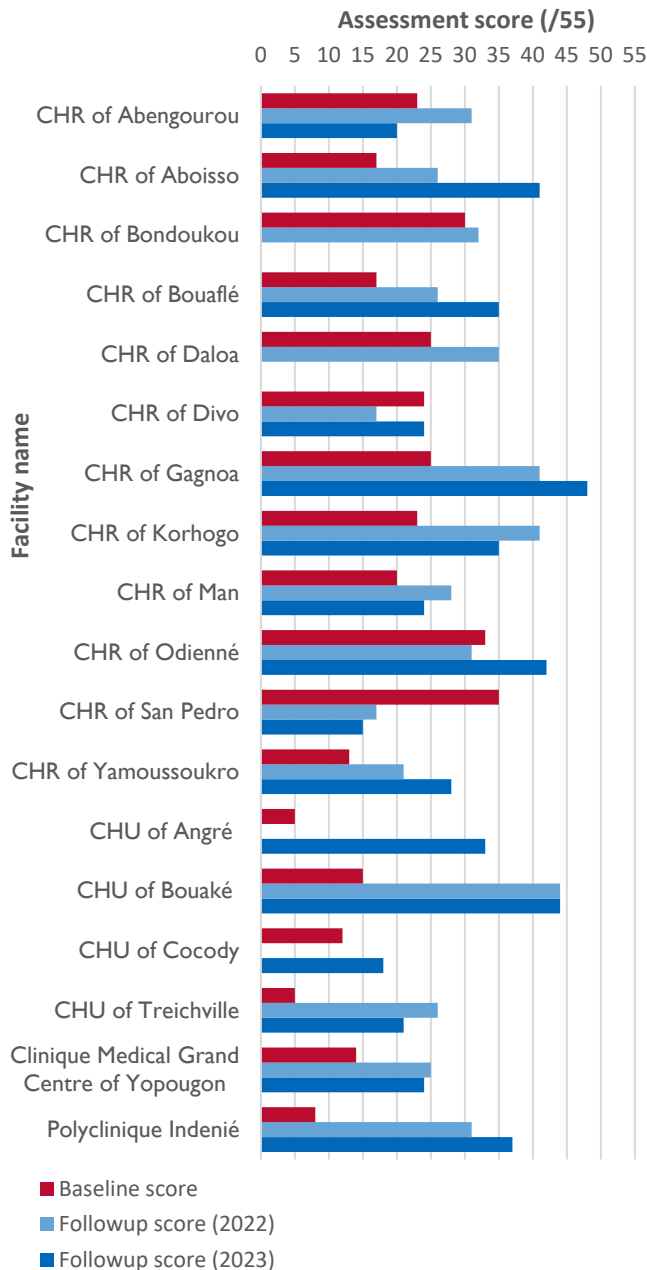
“Although our DTC was functional at the start of the program, the capacity building allowed our DTC ‘dynamization’ and [allowed us] to better understand rational use of antimicrobials . . . The action plan developed as part of the CQI allows us to work on the gaps observed in the use of antimicrobials in our facility. After the DTC capacity building, the Regional Hospital of Gagnoa was able to conduct its first prescription audit, in the pediatric service.

Despite the challenges that remain, the committee is resolutely committed to improving the quality of care through better use of antimicrobials at the Gagnoa CHR.”

*Dr. Martial Kossounou Meisan,
DTC member and AMS Team Lead, Regional
Hospital of Gagnoa*

Of the 16 facilities which received follow-up assessments, 13 (81.2%) demonstrated improvement in DTC functionality and AMS capacity on their most

Figure 2. DTC functionality and AMS capacity scores (/55) in the 18 MTaPS-supported facilities where follow-up assessments were conducted*



Baseline assessment years: *2019 **2021 ***2022
 CHR = Centre Hospitalier Régional (Regional Hospital).
 CHU = Centre Hospitalier Universitaire (University Hospital).

Lessons Learned

- **Leadership, member commitment, administrative support and funding for activities are key to ensuring the functionality of DTCs.** MTaPS helped revise the ministerial decree to strengthen the regulatory framework by defining clear mandates for DTCs, improving their

coordination and anchoring them to an institution. Although a ministerial decree is in place calling for DTCs at health care facilities, practice demonstrates that in health facilities where either facility management or DTC members do not demonstrate a strong commitment, DTCs generally function poorly if at all. In some of the MTaPS-supported health care facilities which lacked managerial commitment, the hospital’s leadership team addressed this by creating the position of DTC team deputy. To motivate DTC members, MTaPS provided them with copies of the necessary supporting documents (including policies, guidelines, self-assessment tool, template for activity reporting, and the WHO’s DTC guide and AMS toolkit), introduced CQI to empower the DTCs to make improvements in their facilities, and met with regional health authorities and facility managers to gain support for CQI.

- **Engaging with regional health directors and pharmacists builds support for DTCs and enhances their involvement in DTC monitoring.** MTaPS briefed the regional health authorities and regional pharmacists about DTC work and ensured that they took part in meetings to review DTC monitoring indicators during the supportive supervision process. MTaPS also included the authorities and pharmacists in training-of-trainers sessions and other DTC-related events. This helped enhance their understanding of the DTCs’ mandate and improved their monitoring of DTCs.
- **Providing focused monitoring of the activities of each DTC improved functionality of DTCs.** To support the revitalization of DTCs, the AMS MTC designated members as focal points responsible for closely monitoring activities of a specific DTC. This resulted in regular focused monitoring of DTCs, which contributed to improved functionality of the less-functional DTCs.
- **Training on AMS strengthened the capacity of DTC members.** Training DTCs enabled DTC members to improve their knowledge on the functioning of a DTC and on AMS. The addition of five sessions on antibiotics to the training improved their knowledge of the rational use of antibiotics. This made them valuable resources recognized within their facilities and built their prestige amongst their peers.

- **Collaboration with partners to address implementation challenges can lead to unexpected positive impacts.** Because MTaPS' training modules for Côte d'Ivoire were focused on AMS and DTCs, when target facilities demonstrated a need for training on rational use of antibiotics, MTaPS engaged with the AMS MTC, the department of infectious and tropical diseases of the university teaching hospital of Treichville (Abidjan), and French biotech company bioMérieux to develop training modules on rational use of antibiotics, which included a case study on antibiogram interpretation. MTaPS and the AMR TWG prepared trainers on the modules and supported pilot training at two of the target facilities (Centre Hospitalier Universitaire d'Angré and Centre Hospitalier Régional of Bondoukou). This allowed MTaPS and the AMS MTC to strengthen the capacity of DTC members and other health care professionals on crucial AMR containment issues that would not have otherwise been addressed under the MTaPS scope, and it established a framework for dialogue between the AMS stakeholders within each facility (the laboratory, the prescribers, and the DTC).

Pathway to Sustainability

Since the start of its DTC work, MTaPS has taken steps to promote sustainability. As a result, a pool of 18 master trainers and 36 regional trainers on AMS are now in place and able to conduct further training for DTC members and other health care workers. Facilities have integrated AMS activities in their annual action plans. Three facilities that have received MTaPS' support have been capacitated as sites of excellence and are prepared to share their experience and best practice as the AMR TWG seeks to strengthen other DTCs in the country. As a result of advocacy by MTaPS and the national AMR TWG, facilities have garnered private funding to support some of the DTC activities. For example, following AMR focal point discussions with bioMérieux and several laboratories and pharmaceutical agencies based in Côte d'Ivoire, these stakeholders have directly funded some DTC activities. Moving forward, DTC sustainability could be enhanced by inclusion in the national health information system (DHIS2) of indicators for monitoring DTC activities and establishing effective monitoring, accountability, and a reporting

mechanism for DTCs. To further promote sustainability, a workshop is planned in 2023 to help the AMR TWG raise funds for AMS interventions.

Conclusions

The DTCs in the 20 supported facilities are now active stewards for AMR containment, working at the facility level to implement policies and activities aligned with the policy documents of the AMR TWG. Over its remaining lifetime, MTaPS will provide technical support to country partners in continuing to monitor AMS programs at the national and facility levels using the adapted WHO tool and will support continued DTC strengthening. Over the longer term, Côte d'Ivoire will need continued domestic and international technical and funding support to strengthen DTCs in additional facilities and further strengthen the capacity of regional trainers and regional focal points in planning, implementing, and reporting on AMS activities at the facility level. More work also remains to be done on strengthening multisectoral governance structures for IPC and AMS at both the national and facility levels and strengthening the framework for facility-level collaboration between the IPC committees, DTCs, other committees, and the laboratories.

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About USAID MTA PS:

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.



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