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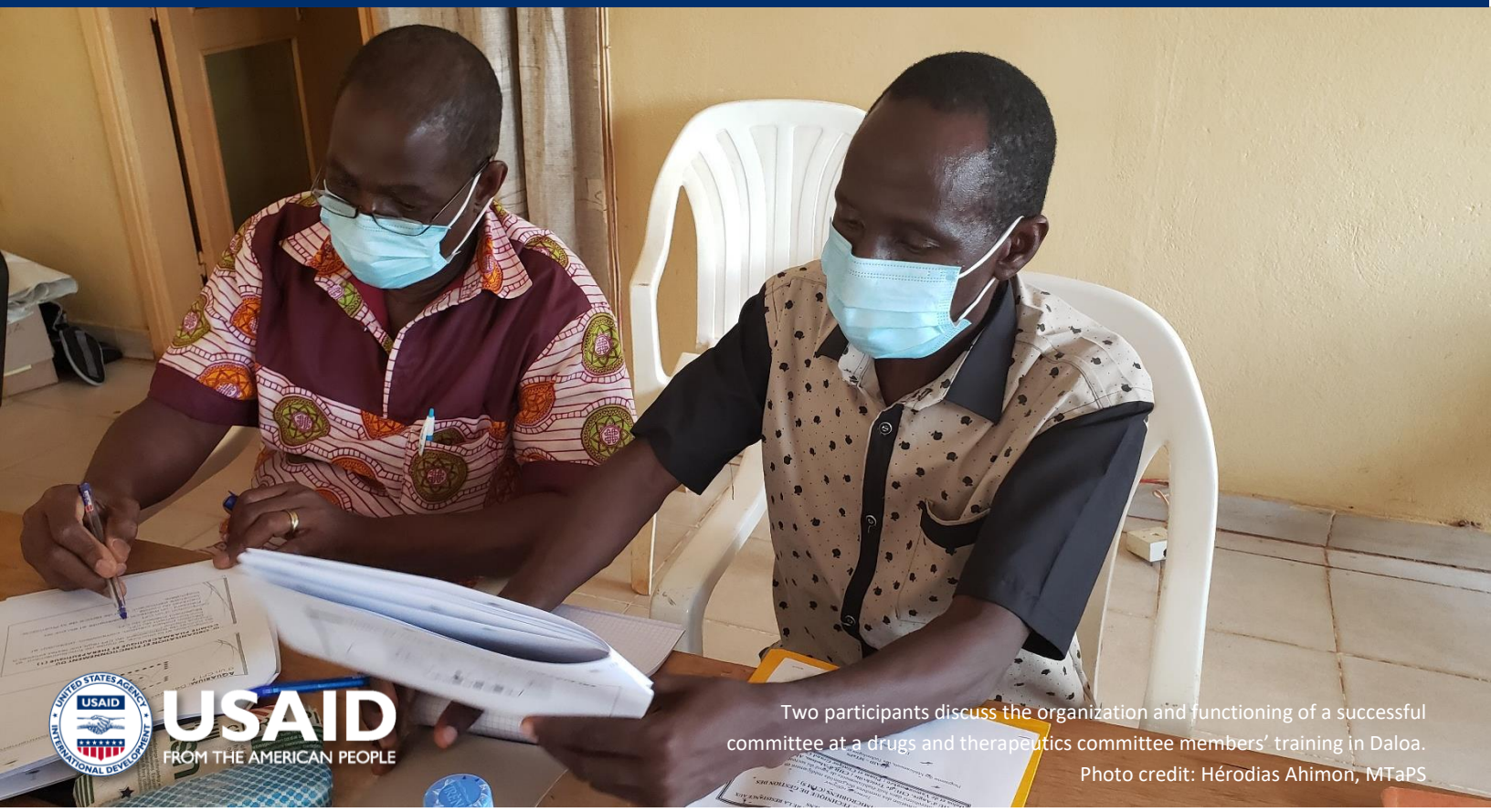

Two participants discuss the organization and functioning of a successful committee at a drugs and therapeutics committee members' training in Daloa.
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Advancing Global Health Security through Multisectoral Coordination

Technical Brief | August 2022 | Côte d'Ivoire/Ivory Coast

Background

Funded by the US Agency for International Development (USAID), the global, five-year (2018–2023) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program enables low- and middle-income countries to strengthen their pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines and medicine-related pharmaceutical services.

The Global Health Security Agenda (GHSA) December 2016 Joint External Evaluation (JEE) assessment confirmed that antimicrobial resistance (AMR) is a major threat in Côte d'Ivoire, with the country receiving the minimum score in all four evaluation areas, including health care-associated infection (HCAI) prevention and control and antimicrobial stewardship (AMS) activities. The GHSA-related goal of MTaPS Côte d'Ivoire is to support sustained AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections by building the capacity of in-country stakeholders through a system-strengthening approach.

Problem Statement/Challenge

AMR and HCAI transmission are major problems in Côte d'Ivoire. According to the Institute Pasteur of Côte d'Ivoire (IPCI), between 2014 and 2016, within the Observatoire des résistances des microorganismes aux anti-infectieux en Côte d'Ivoire (ORMICI) framework, the pathogens most responsible for HCAI are *Entero-bacteriaceae* (49%), coagulase-negative staphylococci (16%), and *Pseudomonas aeruginosa* (13%).[1]

Modern living and industrial development pose risks for AMR. Human activities, e.g., animal breeding farms or effluents discharged from industrial activities, can contaminate humans directly (by contact) or indirectly (through food, water, etc.) Given the interconnection of sectors (human, animal, environment, and agriculture), a multisectoral approach is key to combating AMR.

However, decision makers, health care workers, and the public are not well aware of the risks. Drug resistance in humans is increasing because of the irrational use of antimicrobials in humans and food-production animals. Yet, widespread poor water, sanitation, and hygiene practices enable the spread of infectious diseases, thereby promoting increased use of antibiotics. Reduction in use is critical to limit the emergence and spread of antibiotic-resistant bacteria.[2]

The 2016 JEE showed that, although progress in establishing IHR laws and policies had been made, gaps still existed in preventing, detecting, and responding to public health emergencies. MTaPS supported actions to address the gaps in multisectoral coordination (MSC), infection prevention and control (IPC), and AMS, but further action was needed.

Stakeholder Engagement

MTaPS worked with national stakeholders and other partners, including other USAID and US Centers for Disease Control (CDC) implementing partners. National stakeholders included the IPCI, national drug regulatory authority, Directorate of Pharmaceutical Activities, Directorate of Proximity and Hospital Medicine, Directorate of Veterinary Services, and the five technical ministries (Ministries of Health, Animal and Fishery Resources, Agriculture and Rural Development, Environment and Sustainable Development, and Higher Education and Scientific Research).Through consultations with the national One Health Platform (OHP), MTaPS avoided duplication and enhanced synergies. Collaboration was pursued with the Food and Agriculture Organization (FAO) WHO, Breakthrough Action (BA), CDC, Africa One Health University Network (AFROHUN), and bioMerieux. The AMR Secretariat initiated activity cost-sharing with FAO, BA and bioMerieux, making it possible to remain cost-effective for certain MSC activities and AMS (e.g., training of drugs and therapeutics committees [DTCs]). Through these partnerships, activities took place within the allocated budget.

Technical Approach

The GHSA supports AMR containment through its AMR Action Package. MTaPS' sub-objective 5.4 focuses on AMR containment. This includes advancing the AMR component of the GHSA by building and strengthening multisectoral coalitions, improving IPC, and promoting AMS.

The JEE and WHO benchmarks categorize country capacity into five levels based on completion of benchmark actions. Côte d'Ivoire scored 1 for P.3.3. (IPC is in place) and P.3.4. (Optimize the use of antimicrobial medicines in human health and agriculture, i.e., AMS) in the 2016 JEE. There was no baseline score for P.3.1. (Effective MSC on AMR) as the JEE tool then did not have this indicator, but it was included in the 2018 JEE2.

Through its year 1, 2, and 3 work plans, MTaPS Côte d'Ivoire supported 29 WHO benchmark actions, including 9 for MSC/AMR, 12 for IPC, and 8 for AMS.[3] These activities contributed to progress in all three MTaPS GHSA mandate areas. Some year 4 actions

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[1] National Action Plan on AMR, 2019-2020, Cote d'Ivoire, January 2020

[2] ReAct. Addressing the antibiotic resistance threat: the role of water, sanitation, and hygiene. Feb. 2018. https://www.reactgroup.org/wp-content/uploads/2018/02/ReAct-Factsheet_AntibioticResistance-WASH-and-Children-Feb-2018.pdf

[3] FY19 MTaPS Cote d'Ivoire Work Plan_Approved.docx; MTaPS GHSA Cote d'Ivoire Work Plan FY19-FY20 with Updated M&E 8.18.2020 CLEAN.docx; MTaPS GHSA Cote d'Ivoire Work Plan FY2021.11.18.2020_Clean.docx

sustain previous achievements, while new ones further improve capacities.

MTaPS' strategic approach specifies the need for a clear strategy to ensure access to and appropriate use of quality-assured antimicrobials in the human and animal health sectors and to prevent the spread of resistant infections in health care settings. To address challenges to the rational use of antimicrobials and to prevent HCAIs, the country needs a multi-year plan to strengthen AMS and IPC with structures that enforce and monitor compliance with regulations, policies, and guidelines. Such enforcement will need to address the issue of antibiotics continuing to be freely sold and used without prescription. Policies to address prescription practices counter to national or international guidelines must be developed.

Following the 2016 JEE, the Government of Cote d'Ivoire, through a decree in April 2019, formalized the OHP as a national MSC mechanism to address public health threats, including AMR. A technical working group (TWG) for AMR was established and linked to the OHP through a national coordinating body called the Multisectoral Coordination Group (MCG), which also has multisectoral technical committees that serve as AMR operational bodies. MTaPS helped finalize the terms of reference and guidance manual for MCG and its subcommittees. Then, MTaPS helped identify government entities that would be tasked with improving AMR prevention, detection, and surveillance and rationalizing antimicrobial use. MTaPS helped describe their roles and responsibilities as part of a coordinated response across sectors. All the bodies are multisectoral with members from the five technical ministries (Ministries of Health, Animal and Fishery Resources, Agriculture and Rural Development, Environment and Sustainable Development, and Higher Education and Scientific Research).

To address challenges to the rational use of antimicrobials and prevention of HCAIs, MTaPS worked closely with WHO, USAID implementers, CDC, and FAO, particularly in governance strengthening. MTaPS worked with these partners to develop and validate over 15 reference documents, including the AMR governance manual; national AMR policy; 2019–2020 multisectoral national action plan for AMR (NAP-AMR) (currently being revised); and IPC/AMS policy documents and guidelines. They were then used with other WHO supporting documents to develop and validate training modules on IPC and AMS.

MTaPS continued to target facilities hosting sentinel sites to develop complementary activity packages with the CDC.[4] MTaPS worked closely with AFROHUN which was leading the OHW-Next Generation project to facilitate e-learning and build capacities of health care professionals. To increase public awareness, MTaPS collaborated with Breakthrough Action, USAID's flagship program for social and behavioral change.

At the health-facility level, MTaPS helped the AMR-TWG set up a continuous quality improvement (CQI) process in 22 health facilities for IPC and AMS. The health facilities included 4 university teaching hospitals, 12 regional hospitals, 4 private clinics in human health, and 2 veterinary clinics. The process began with a pilot in two human health facilities in two health regions, the University Hospital of Cocody and the University Hospital of Bouake, with activities that included:

- Evaluation of the capacities and functionality of local AMR committees (IPC committees and DTCs)
- IPC baseline assessment by using the WHO IPCAF in the 22 health facilities
- Supply of IPC/AMS toolkits
- Implementation of a CQI process according to the phases of the CQI approach: plan, do, study, and act
- Onsite competency-based training of IPC committees and DTC members
- Supervision and onsite coaching to monitor implementation of IPC and AMS interventions at these sentinel sites
- Repeated IPCAF evaluations conducted by local IPC staff

After the trainings of the IPC committees and DTCs, a supervision visit monitored progress. The program then

[4] Sentinel sites are health facilities from which data are gathered and the resulting analysis is used to inform programs. Surveillance is done in these facilities to support scaling up interventions in the future.

expanded to 20 more health facilities, of which 2 were animal health care facilities.[5]

Results and Achievements

The IPC baseline assessment (using the WHO IPCAF) showed that of the 20 human health facilities supported by MTaPS, none scored inadequate, seven (35%) scored basic, 12 (60%) scored intermediate, and 1 scored advanced (table 1).

Table 1: IPCAF baseline scores (possible score of 800) of the 20 human hospitals

IPC Level: Basic	IPC Level: Intermediate	IPC Level: Advanced
CHU Bouake (395)	CHU Cocody (402.5)	PISAM (660)
CHR Aboisso (380)	CHU Angré (572.5)	
CHR Daloa (312.5)	CHU Treichville (507.5)	
CHR San Pedro (317.5)	Clinique Grand Centre de Yopougon (580.5)	
CHR Gagnoa (377.5)	CHR d'Abengourou (452.5)	
CHR Man (367.5)	CHR Yamoussoukro (590)	
CHR Bouafle (310)	CHR Divo (473)	
	CHR Korhogo (450)	
	CHR Bondoukou (447.5)	
	CHR Odienné (417.5)	
	Polyclinique International Indenie (570)	
	Clinique Centrale d'Abobo (415)	

Additionally, the DTCs' baseline assessments highlighted that:

- Although 12 regional hospitals have DTCs, they did not have the same functionality levels.
- 30% (6/20) of facilities assessed in the human sector did not have a DTC.
- 100% of veterinary clinics (2/2) did not have a management of veterinary medicines unit (MVMU), the equivalent of DTCs for the animal sector. The two MVMUs were established.
- One of the four university teaching hospitals has a DTC (CHU of Bouake) created by management, but the last meeting was over a year before the assessment.
- There were no functional DTCs at three university teaching hospitals in Abidjan. Although two previously had DTCs, they have not met for about 10 years, and one of the two DTCs has very poor functionality, so it is essentially nonexistent.
- None of the private clinics have existing DTCs. One had a DTC, but activities stopped 10 years ago.
- MTaPS supported the AMR-TWG through the health facilities' leadership teams to establish six new DTCs in the human sector (6/20) and revitalize the one with very poor functionality.
- Of the 20 DTCs in the human sector, 3 were at the intermediate and 17 at the basic levels.

Following the December 2019 assessment, MTaPS helped functionalize the DTCs. In September 2020, MTaPS helped AMR-TWG train DTC members on AMS and set up a CQI. The first supervision at CHU de Bouake in July 2021 showed major progress compared to the baseline (15/55 vs 40/55). The facility's management appointed new members, so that each service of the hospital has at least one committee representative. Progress included regular meetings (from 0 in 2019 to 8 in September 2020-July 2021), display of the list of products with restricted access, training and awareness activities on pharmacovigilance and appropriate use of antibiotics, computerization of the pharmacy to better monitor drug consumption, and support from the pharmacology department on studies of the use of drugs at the facility. A second supervision is planned for September 2022.

Application

Several important lessons emerged from MTaPS' work in Cote d'Ivoire:

- Engaging the three main sectors (human, animal, and environment) from the start facilitated implementation of the AMR-NAP in a One Health spirit.
- Using the WHO benchmarks as a reference tool in developing, implementing, and reporting AMR activities was key to capacity-appropriate progress.

[5] Centre antirabique de Cocody and Veterinary Clinic of Regional Directorate of the Ministry of Animal Health

- Early AMR results indicated that MTaPS support was instrumental in engaging other partners in supporting in-country AMR initiatives.
- Focusing support to fewer health facilities would have facilitated follow-up with closer monitoring as implementing AMS is a new strategy in the country.

Also, challenges can be opportunities. The AMS-TWG developed training modules for healthcare professional focused on antibiotics rational use. But the topic was unplanned as MTaPS modules focus on AMS and DTCs. As the new modules required trainers with knowledge in prescribing antibiotics, MTaPS worked with the AMR-TWG and bioMerieux to design trainings on antibiotics rational use with a case study session on antibiogram interpretation after a pilot in CHU d'Angre and CHR of Bondoukou. The trainings helped reach more healthcare professionals (including non-DTCs members).

Pathway to Sustainability

MTaPS took early steps to promote sustainability by:

- Establishing a pool of 36 regional trainers on IPC, 18 IPC regional focal points and AMS focal points in 18 intervention regions
- Promoting ownership of IPC tools, including the WHO Scorecard (COVID-19 and Ebola) and WHO IPCAF (GHSA), Hand Hygiene Self-Assessment Framework, and Water and Sanitation for Health Facility Improvement Tool by local actors (trainers and regional IPC focal points) conducting IPC activities
- Integrating IPC indicators into DHIS2
- Integrating IPC and AMS activities in the annual action plans of assisted facilities
- Strong advisory support from the government to the national IPC and AMS focal points and from the national IPC and AMS focal points to the facilities

Recommendations and Way Forward

Progress in Cote d'Ivoire is likely to require additional support for:

- Strong MS governance structures and functions on IPC and AMS at the national and facility levels
- Improving functions of IPC committees and DTCs at facility level
- Uploading existing IPC and AMS modules for e-learning
- Local staff (regional trainers on IPC and AMS, regional focal points) in planning, implementing, and reporting IPC and AMR activities at facility level
- Strengthening the collaborative framework between the IPC committees, DTCs, other committees, and laboratories in the health facilities

In addition to any references listed, in preparing this technical brief, the MTaPS team drew on internal project documents, including work plans, activity reports, terms of reference, and meeting minutes.

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Authors

This publication was written by Herodias Ahimon, MTaPS Cote d'Ivoire, Ange Fulgence Ouffoué, MTaPS Cote d'Ivoire, and Antoine Ndiaye, MTaPS Cote d'Ivoire.

For more information, please contact memory@msh.org

About USAID MTaPS

The Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2023) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems.