

Integrating Data Systems in Côte d'Ivoire Will Improve Health System Performance

In Côte d'Ivoire in 2004, the national health strategic plan was not aligned to a monitoring and evaluation framework; health providers could not reliably track clients from one service to another; health districts could not measure disease trends; and national policy makers could not know health service quality or coverage.

In part, this situation was due to non-standardized data collection tools and the lack of checks on data quality and completeness. It was also due to fragmented data management systems that served one aspect of healthcare but not the full spectrum of health services. Of particular concern, data on HIV care, treatment, and client outcomes were not collected at health facilities—meaning clients often lapsed in treatment and some HIV-positive individuals were never identified.

Fast-forward to 2019. MEASURE Evaluation, funded by the United States Agency for International Development (USAID) and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), has been working for 15 years and will soon end. Côte d'Ivoire now has a national health data management system—DHIS 2—deployed and used nationwide and an electronic logistics management and supply chain system (eLMIS) used by clients of the new public health pharmacy. This achievement is the culmination of many steps taken by Côte d'Ivoire.

Steps taken

Prior to 2014, MEASURE Evaluation assisted the Ministry of Health (MOH) to develop standardized paper-based data collection tools, improving the existing SIGVISION data platform. The project also supported the country to develop the first electronic longitudinal HIV patient data management tool (Système d'Information de Gestion pour le VIH [SIGVIH])—an electronic medical record.

Soon, however, increased data volume overwhelmed SIGVISION and SIGVIH, and the MOH wanted to deploy new open source software that would feature interoperable applications. DHIS 2 was chosen as the primary national health information system platform, replacing SIGVISION.

Those first two steps addressed the information generation machinery of the health information system. But the project also developed or revised governance documents to set standards and policy for system management. These included



Côte d'Ivoire 2018 PRISM Evaluation team after conducting the assessment at the Regional Health Office of Agnéby Tiassa Mé (August 20, 2018). From left to right: Daouda Koné (Office of Information and Health Data, MOH), Jeanne Chauffour (M&E Officer, MEASURE Evaluation), Dr. Léontine Gnassou (Côte d'Ivoire Chief of Party, MEASURE Evaluation), Dr. Simon Angaman N'Guetta (Head of Epidemiological Surveillance, Regional Health Office of Agnéby Tiassa Mé).

data management procedure manuals, standards of data quality and use, and software user training manuals—not just for DHIS 2, but also for a new electronic logistics information system, eLMIS, and a new electronic HIV patient information system to replace SIGVIH: the Système d'Information et de Gestion, Dossier Electronique du Patient—version 2 (SIGDEP 2).

SIGDEP 2, DHIS 2, and eLMIS were configured to be interoperable. Governed under uniform standards, these three integrated platforms allowed for easy data exchange among them and could be adjusted and updated as needed.

MEASURE Evaluation also added a layer of geographic data—of crucial importance in locating where HIV is frequently transmitted so that care and treatment access can be improved. The project assessed HIV program effectiveness using a geographic information system-focused HIV triangulation method to analyze routine clinical data combined with population survey data. This rich information informed recommendations for HIV program location and performance improvement.

Next steps

In 2018, the project developed and tested a server version of SIGDEP 2 to improve its functioning, which was not yet optimal. This version is being implemented in 2019 in one region and is expected to enhance SIGDEP 2's capability to facilitate data exchange with DHIS 2, enabling HIV data to be readily visible at the central level.

Once implemented, the server version of SIGDEP 2 will feature new PEPFAR indicators, in addition to providing a listing of patients lost to follow-up, allowing patients to be tracked and brought back into the system. These PEPFAR indicators are required in the HIV reports due at the start of the next health indicator review cycle, which the MOH has scheduled every three years. MEASURE Evaluation will provide continued technical assistance in its final year, ensuring that these indicators are taken into account to meet PEPFAR revised information needs.

In addition, the project will provide training and coaching for district health teams to conduct integrated data quality assessments at facility and district levels—also involving HIV implementing partner personnel and cost sharing for the task and building a cadre of trained personnel to sustain these gains once the project is officially closed. Celebrations of the progress made are scheduled for July 2019 in Abidjan, the MOH has announced.