

Improving Data Quality through Implementation of Centers of Excellence in the Democratic Republic of the Congo

In the Democratic Republic of the Congo (DRC), malaria is the principal cause of morbidity and mortality, accounting for more than 40 percent of all outpatient visits and for 19 percent of deaths among children under age five. Only 30 percent of the population has access to health services.¹

Given that most people in the DRC live in high-transmission zones, estimates are that the DRC accounts for 11 percent of all malaria cases in sub-Saharan Africa. Persistent problems with data quality at the service delivery level in the DRC impede the country's ability to make evidence-informed decisions for improved malaria response. To reduce malaria-related illness and death, the United States President's Malaria Initiative (PMI), which supports nine malaria-endemic provinces in the DRC, sought a way to improve data collection, analysis, and use to fight malaria.

MEASURE Evaluation, funded by the United States Agency for International Development (USAID) and PMI, was asked to organize an activity to address data quality issues. The MEASURE Evaluation DRC team considered that others had tried a top-down approach to improve data quality and instead, in 2016, elected to pilot an approach from the other end of the health infrastructure—the service delivery point. Thus began an effort to develop centers of excellence (COEs) to model good data quality practices and to see what this approach might yield.

Process

MEASURE Evaluation worked with the National Malaria Control Program (NMCP), the National Health Information System Division (DSNIS), and the Division of Provincial Health (DPS). Together, they identified these criteria for selecting health facilities for the COE intervention: (1) facilities with easy access to the health zone central office, to allow for better follow-up; (2) facilities with good attendance, to ensure management of large data sets; (3) infrastructure adequate to facilitate data management and data archiving; and (4) qualified staff for successful implementation of the COE and subsequent trainings and follow-up supervision.

After an assessment, two centers were selected in Kinshasa and two in Lubumbashi, in Haut Katanga. The project developed training materials, a plan to document results, and a knowledge-sharing plan to disseminate lessons learned and best practices. All COEs received a computer kit (laptop, printer, external hard disk, and modem for Internet connection), data management tools, and equipment (furniture and solar kits). These materials enabled COEs to input data directly in the DHIS 2 software platform.

After training and equipping COEs, MEASURE Evaluation provided supervision and coaching visits, to enable providers to better manage data, and technical and financial support for data validation meetings. We identified bottlenecks, and suggested how to resolve challenges. Because many staff had little experience with computers, we did a quick training on computer use. Health providers in the COEs in Kinshasa received smartphones and training on the application of short message service (SMS) for data, which allows transfer of malaria data to DHIS 2 by phone.

A joint visit with PMI was conducted in 2017 to assess the COE implementation process. A major challenge was the ongoing civil conflict, thwarting implementation in some parts of the country. Electricity outages were an issue in almost all COEs, interrupting the use of computers.

¹ United States President's Malaria Initiative (PMI), retrieved from https://www.pmi.gov/docs/default-source/default-document-library/country-profiles/drc_profile.pdf?sfvrsn=20

As the COE effort continued, MEASURE Evaluation conducted a routine data quality assessment (RDQA) of the centers, comparing those results with baseline data to determine if data quality had improved. Monthly supervision visits continued from the health zones and quarterly provincial visits were also conducted to assess the capacity of COEs. In collaboration with the provincial teams, MEASURE Evaluation supported RDQA visits to all COEs, to ensure the improvement of data quality and use.

In November 2017, a team from PMI visited the COEs in Haut Katanga and Kinshasa, to assess their progress. The visit gave PMI an opportunity to understand the work of COEs and provide objective, constructive feedback on the approach. The COE staff discussed their view of the strengths and weaknesses of the method and approach used for COEs and a planned scale-up.

Perhaps inevitably, inequality exists between COEs and other facilities in the health zones, as COEs evolve and their performance improves. In response, it became important for MEASURE Evaluation and PMI to explore scaling up the COE model to other facilities. By 2018, scale-up plans were under way so that every health facility in a health zone would become a COE. “When we organize a meeting, it motivates the COEs, because they are proud of their data and what the data are telling them,” says Olivier Kakesa, chief of party for MEASURE Evaluation/DRC and activity lead for the COE effort.

“What motivates me is that providers now understand. They have never used a computer or DHIS 2 and you teach them to use their data,” says Johanna Karemere, a senior associate for monitoring and evaluation. “They never could use technology, so this is exciting to them. It’s rare for nurses to use technology and it makes me happy.”

Results

Among the original 20 COEs supported by MEASURE Evaluation between 2016 and 2018, timeliness of data increased from 32 percent to 98 percent, and completeness increased from 60 percent to 100 percent. The strides in timeliness and completeness in the nine PMI provinces provide decision makers with a clearer picture of the health system and service delivery needs. This allows provincial teams to make important and timely data-driven decisions that influence patient care and health outcomes.

The COEs are the only primary health facilities in DRC to use DHIS 2. This shift has reduced the workload at the health zone level and minimized data transcription errors. The improved data completeness and timeliness for health zones was realized, because all COEs encoded monthly data from their own facilities as well as for satellite facilities located in their health areas.

Similarly, health zones that have COEs entering their own data in DHIS 2 also found that they had more time and capacity to devote to data review and data quality improvement. A staff member from the Lubumbashi health zone remarked, “With the advent of data entry from the centers of excellence, the health zone team is currently devoting time to monitoring the reporting rate and the quality of the data encoded by the service providers, as well as the preparation of feedback and the launch of the data correction process... The workload is no longer as large, because most of the problematic data was detected and corrected at the health facilities.”

Scaling

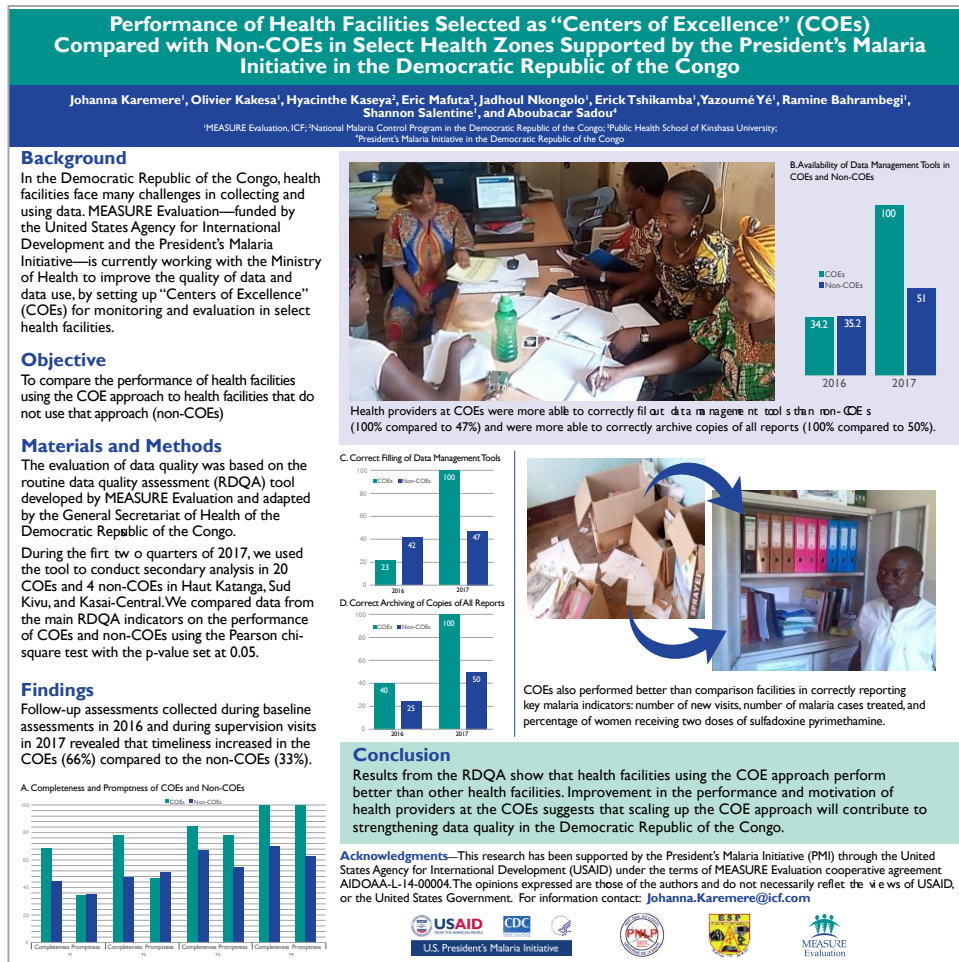
MEASURE Evaluation supported the addition of 57 COEs—24 in Haut Katanga, 20 in Kasai Central, and 13 in Sud Kivu, bringing the total to 79. The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has since taken over the support of two of them. The new USAID/DRC Integrated Health Program (IHP) has asked for information about MEASURE Evaluation’s COE implementation process, because it’s interested in establishing COEs in the 16 DRC provinces under its management.

In October 2017, a cross-fertilization workshop was organized in Lubumbashi, where MEASURE Evaluation and NMCP staff from the DRC, Mali, Madagascar, and Liberia shared best practices and lessons learned. During this workshop, participants discussed the COE approach, best practices, and

challenges. The Madagascar team remained in Lubumbashi for another week to learn more about the COEs, and plans to implement this model in Madagascar.

The DRC national health strategy for 2018–2020 incorporates the COE approach. MEASURE Evaluation is planning to evaluate the COE approach, to better document its results. The Global Fund is looking at some of the COEs in DRC and considering replicating the approach. That would be significant for the DRC, because the Global Fund supports 16 of the country’s 26 provinces.

This poster describing the COE approach and preliminary results in DRC was accepted for presentation at the 2018 meeting of the American Society of Tropical Medicine and Hygiene (ASTMH).



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