

Background

A strong tuberculosis (TB) monitoring and evaluation (M&E) and surveillance system is a vital tool for countries to reach global goals to end TB. The United States Agency for International Development (USAID) leads the U.S. Government's global efforts to end TB. USAID's Global Accelerator to End TB is the Agency's programmatic approach to fight TB. Under the Accelerator, USAID funds the TB Data, Impact Assessment and Communications Hub (TB DIAH) project, which developed a TB Data-to-Action Continuum (D2AC) Toolkit to measure countries' progress and guide efforts to improve their TB M&E and surveillance systems. The D2AC allows national TB programs (NTPs) to precisely gauge barriers to data use and assess the decision-making capabilities of different actors across their health systems. The purpose of a D2AC workshop is to guide the evaluation of data use capabilities to routinely monitor and improve data use attributes associated with TB program management and service delivery at subnational and national levels. The D2AC Toolkit is designed to closely examine NTP capabilities in five domains: (1) Data Collection and Reporting, (2) Data Analysis and Use, (3) Leadership, Governance, and Accountability, (4) Capacity Building, and (5) Information and Communications Technology (ICT). The objective is to use the findings from the application of the D2AC Toolkit to evaluate TB M&E and surveillance systems by: (1) assessing decision-making capabilities of different actors, (2) precisely gauging the barriers to data use, (3) helping NTPs select appropriate interventions in the context of their health systems, (4) developing an implementation plan to apply in the future, and (5) using implementation recommendations for strategic planning purposes and decision making.

Design Method

Ghana and Nigeria were selected as the field test locations for the D2AC workshop. The workshops were held in March 2022 in Accra and April 2022 in Abuja. Twenty-six participants attended in Accra, and 41 in Abuja, representing all levels of the countries' health system and other TB stakeholder groups. The D2AC team applied a mixed methods approach conducted in three parts with the support of the D2AC Toolkit: (1) participants first completed the D2AC Toolkit's data collection instrument individually and then in groups; (2) participants provided evidence and justification in the data collection instrument for the response options selected; and (3) in groups, participants identified priority actions for post-workshop implementation. A semi-structured questionnaire and focus group discussion method were implemented during the assessment. The D2AC team facilitated the workshop with the use of slides and handouts, and there were several break-out group activities and report-backs. Quantitative data from the 32 (26 individual and 6 group) and 42 (34 individual and 8 group) responses from the Ghana and Nigeria data collection instruments, respectively, were automatically generated using the D2AC Analysis Tool. The qualitative data—observations, comments, and questions submitted in the 32 (Ghana) and 42 (Nigeria) instruments and brought up in group discussions and report-backs—were transcribed and analyzed.

Figure 1. The five continuum levels of the D2AC scale



Results

In Ghana, the overall D2AC assessment score from the aggregate group responses was 3.18 (out of 5), putting Ghana at an "established" level according to the D2AC (see Figure 1). The country performed best in Data Collection and Reporting, (score of 3.68) and Leadership, Governance, and Accountability (score of 3.78) and had the lowest score in ICT (score of 1.83). In Nigeria, the overall D2AC assessment score from the aggregate group responses was 3.45 (out of 5), putting Nigeria at an "established" level according to the D2AC (see Figure 1). The country performed best in Data Collection and Reporting (score of 3.88) and Leadership, Governance, and Accountability (score of 3.88) and had the lowest score in ICT (score of 2.59).

Priority recommendations were developed in small groups. They were then combined in plenary to develop a joint implementation plan and were validated by workshop participants. The Ghana recommendations were: improve data quality, integrate data quality metrics in program review, develop standards for TB data management, develop training on advanced data analytics, resolve data management software synchronization challenges, regularly orient staff on new tools and forms, implement a hardware needs assessment, allocate funds to procure hardware and essential TB diagnosis and screening equipment, and develop nationally documented specifications and requirements for all hardware needs. The Nigeria recommendations were: improve the harmonization of data collection and reporting processes and move toward electronic tools at all levels, develop standard operating procedures and build capacity on data collection and reporting, increase supportive supervisions and peer-to-peer mentoring, build sustainable solutions to existing initiatives that are facing challenges, hold regular M&E meetings, provide consistent pre-service training, implement data quality assessments, and procure hardware at all levels.

Conclusions

D2AC assessments shed light on the perceived weaknesses of the Ghana and Nigeria TB systems, primarily in the domain of ICT where hardware, network and connectivity, and ICT business infrastructure received the lowest average scores. The assessments also revealed issues around physical resources, equipment, and infrastructure. Other challenges included those related to human resources such as issues in organizational structure and function, skill and knowledge development, data management and use practices, functionalities, and capabilities. Data integration, specifically within data exchange and interoperability, data use guidance, and analytics and data visualization (in Ghana) and data access and sharing (in Nigeria) received scores lower than 3 out of 5, categorizing them as "defined" stages of the continuum (see Figure 1). The D2AC assessments also showed the areas of the D2AC scale that were performing the strongest, including data practices such as data reporting (Ghana and Nigeria), data access and sharing (Ghana), data quality (Nigeria), and data dissemination and communication (Nigeria). Monitoring, evaluation, and learning (MEL) also received high scores (above 4 out of 5) in both countries, securing their designation in the "institutionalized" stage of the continuum (see Figure 1).

Despite progress toward ending TB worldwide, combating TB remains a high priority in Ghana and Nigeria, especially in the COVID-19 era where TB case notification, screening, and contact tracing were severely impacted. Findings provide evidence of areas needing programmatic interventions and can inform policymakers, donors, and program managers who want to design and implement responsive programs and interventions that strengthen and improve data use capabilities for evidence-based decision making to provide targeted and data informed high-quality services for all TB patients and their families.

References

- Data-to-Action Continuum website: <https://www.tbdiiah.org/assessments/d2ac/>
 Chauffour, J., Silver, M., Boone, D., Alebachew Wagaw, Z. (2022). TB Data-to-Action Continuum in Ghana: Report. Chapel Hill, NC, USA: TB DIAH, University of North Carolina [LINK](#)
 Chauffour, J., Hassan, A. O., Kuye, J., Ohikhuai, C., Udah, D. (2022). TB Data-to-Action Continuum in Nigeria: Report. Chapel Hill, NC, USA: TB DIAH, University of North Carolina [LINK](#)