



TB DIAH

Tuberculosis Data, Impact Assessment and Communications Hub

Annual Report Year 4



Contents

Abbreviations	3
Executive Summary	5
Introduction	8
Building Momentum Toward USAID’s 2030 Goals	10
TB DIAH Workstreams	12
Highlights of Year 4 Core-Funded Work.....	16
Intermediate Result 1:	16
TB Data Hub.....	16
Data-to-Action Continuum (D2AC)	17
Quality of TB Services Assessment (QTSA).....	18
Intermediate Result 2:	20
Performance-Based M&E Framework (PBMEF).....	20
Assessment of Data Collection, Reporting, and Analysis Capacity (ARC).....	21
Surveillance and TB M&E Strengthening Plan (STEP)	21
Intermediate Result 3:.....	22
TB DIAH Knowledge Hub.....	22
NTP Website Activity	23
TB Data Special Interest Group (SIG).....	24
TB DIAH Presence at the Union World Conference on Lung Health 2022	24
e-Learning Courses.....	26
Highlights of Year 4 Core-Funded Support to Missions	27
Cambodia TB M&E Training Curriculum Activity.....	27
DRC QTSA, DQR, and TB M&E TOT	27
EE Regional Activities	27
Haiti TB M&E Workshop	28
Kyrgyz Republic.....	28
Nigeria D2AC, Automated Partners Performance Reporting.....	28
Highlights of Year 4 Mission-Funded Work.....	30
Afghanistan QTSA.....	30
Cambodia Technical Assistance	30
DRC TB M&E and Surveillance System Strengthening.....	31
Kyrgyz Republic Technical Assistance.....	31
Strengthening Use of TB M&E and Surveillance Data in Nigeria	32
Progress Toward Results	34
Output Results.....	34

Outcome Results	36
Impact Results	37
Lessons Learned	38
Promising Practices in Activity Implementation.....	38
Challenges and Lessons Learned During Activity Implementation	39
Management.....	41
USAID Engagement	41
Project Coordination.....	41
Staffing	42
Revision of the MEL Plan	42
Lessons Learned.....	43
Challenges Encountered.....	43
Next Steps.....	44
TB DIAH Finance Year 4	45
Appendix 1. Country Pages	46
Afghanistan.....	47
Cambodia	49
Democratic Republic of the Congo.....	51
Eastern Europe-Eurasia Region	53
Kyrgyz Republic.....	55
Nigeria.....	57
Appendix 2. Year 4 Results	59
Table 2. Results by Output Indicator	59
Table 3. Results by Impact Indicator	75
Appendix 3. Publicly Available Year 4 Key Deliverables.....	77
Appendix 4. TB DIAH Staff	82

Abbreviations

AFIAT	Assistance for Families and Indigent Afghans to Thrive
ARC	Assessment of Data Collection, Reporting, and Analysis Capacity
CENAT	National Center for Tuberculosis and Leprosy Control
COE	Center of Excellence
COMMIT	Community Mobilization Initiatives to End Tuberculosis
CQI	continuous quality improvement
D2AC	Data-to-Action Continuum
DHIS2	District Health Information Software, version 2
DQA	Data Quality Assessment
DQR	Data Quality Review
DRC	Democratic Republic of the Congo
DR-TB	drug-resistant TB
DS-TB	drug-susceptible TB
EE	Eastern Europe and Eurasia
EMR	electronic medical record
FAQ	frequently asked questions
HIS	health information system
IHVN	Institute of Human Virology of Nigeria
IP	implementing partner
IR	intermediate result
KM	knowledge management
LON	Local Organizations Network
LTBI	latent TB infection
M&E	monitoring and evaluation
MEL	monitoring, evaluation, and learning
MESSA	M&E and Surveillance Systems Assessment
MIS	management information system
MOH	Ministry of Health
MOU	memorandum of understanding
NCDC	National Centre for Disease Control
NCTDC	National Center for Tuberculosis and Disease Control

NCTLD	National Center for Tuberculosis and Lung Disease
NETIMS	National Electronic Tuberculosis Information Management System
NGO	non-governmental organizations
NSP	National Strategic Plan
NTBLCP	National Tuberculosis and Leprosy Control Programme
NTP	National Tuberculosis Program
PBMEF	Performance-Based Monitoring and Evaluation Framework
PLHIV	people living with HIV
PNLT	Programme National de Lutte contre la Tuberculose
POSAF	Pont Santé Afrique
QTSA	Quality of Tuberculosis Services Assessment
SIG	Special Interest Group
STAR	Sustaining Technical and Analytical Resources
STEP	Surveillance and TB M&E Strengthening Plan
TA	technical assistance
TB	tuberculosis
TB DIAH	Tuberculosis Data, Impact Assessment and Communications Hub
TBCI	Tuberculosis Contact Investigation
TOT	training of trainers
TSR	TB Situation Room
TWG	Technical Working Group
UHI	Urban Health Initiative
UNC	University of North Carolina at Chapel Hill
USAID	United States Agency for International Development
WHO	World Health Organization

Executive Summary

Despite being curable, tuberculosis (TB) remains a leading cause of death from infectious disease worldwide. And the COVID-19 pandemic derailed years of declining death rates, which increased from 1.4 million in 2019 to 1.6 million in 2021.¹ In the face of these challenges, collecting, analyzing, reporting, and using data to inform decisions in countries with high TB burdens are more important than ever.

The TB Data, Impact Assessment and Communications Hub (TB DIAH) project works to help address these TB data needs. TB DIAH is a five-year cooperative agreement funded by the United States Agency for International Development (USAID) and associated with USAID’s Global Accelerator to End TB, a business model focused on performance-based measures for combating TB.

In the fourth year of the TB DIAH project, the project began to expand its implementation efforts, using the numerous tools and resources developed in the early years of the project. TB DIAH’s intermediate results (IRs) and select related accomplishments in Year 4 are detailed below, and more fully throughout the document.

1

Intermediate Result 1

Strengthened collection, analysis, and use of routine health and TB data

- Deepened and expanded the functionality and utility of the **Data Hub**, including the launch of several interactive data dashboards and a Data Explorer which allows users to design and visualize the World Health Organization’s (WHO) or Stop TB Partnership’s TB data according to their interests, and the addition of TB Roadmap data collection forms. Existing features were also improved, including the addition of graphics displays of all 10 Performance-Based Monitoring and Evaluation Framework (PBMEF) core indicators on each Country Dashboard and a “no data” message when data are not available. The team worked with TB DIAH’s communications team to streamline the landing page of the Hub and to strengthen the connections between the Data Hub and the Knowledge Hub so that users can more easily find a tool, the data it generates, explanatory resources, and related reports. Finally, the team provided significant user support and engagement opportunities for Data Hub users, including hosting user testing and multiple presentations of the Hub’s features to the TB Data Special Interest Group (SIG) as well as a webinar introducing the Data Hub to a general audience.
- The **Data-to-Action Continuum (D2AC) Toolkit** and its digital counterpart were tested and used in Ghana and Nigeria, and implemented in Bangladesh and the Kyrgyz Republic. Data quality, and skills and knowledge development, were the highest priority subdomains in Ghana, the Kyrgyz Republic, and Nigeria, followed by data integration and exchange, and analysis and visualization.

¹ <https://www.reuters.com/business/healthcare-pharmaceuticals/tuberculosis-deaths-rose-during-pandemic-reversing-years-decline-who-2022-10-27/>

- Implemented the **Quality of TB Services Assessment (QTSA)** in the Democratic Republic of the Congo (DRC) and Vietnam, working closely with the National Tuberculosis Programs (NTPs) in each country. In the DRC, the teams visited 227 TB health facilities, where they administered at least six survey tools at each facility. At a data review meeting held with stakeholders, these data were used in development of the DRC’s Global Fund application. The technical report from the implementation of the QTSA in Year 3 in Afghanistan was also completed with the involvement of staff from two TB projects based in the country. Additionally, the global QTSA tools were updated to reflect updates from the WHO and the impact of COVID-19. The final versions will be published in project year 5.
- Collaborated with **Cambodia’s** National Center for Tuberculosis and Leprosy Control (CENAT) to develop a TB monitoring and evaluation (M&E) training curriculum that served as the basis for a global TB M&E training curriculum, and will be used at TB M&E training of trainers (TOT) workshops for NTP M&E officers.
- In addition to the QTSA work described above, administered a Data Quality Review (DQR) tool in the **DRC**, and conducted national-level and provincial-level TB M&E TOT with the National TB Program, Programme National de Lutte contre la Tuberculose (PNLT).
- Established a regional Center of Excellence (COE) for **Eastern Europe**, based in Georgia. TB DIAH cohosted a founding event with Georgia’s National Centre for Disease Control (NCDC) and National Center for Tuberculosis and Disease Control (NCTDC) in May 2022 and a TB M&E and surveillance regional consultative meeting in July 2022. A regional training workshop on TB M&E and surveillance capacity strengthening held in November 2022 included representatives from the five EE regional member countries (Armenia, Azerbaijan, Georgia, Moldova, and Ukraine) as well as five Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) and staff from USAID/Washington, WHO/Europe, and the Global Fund. TB DIAH developed a COE Design Guide and a Georgian-based agency is developing the COE virtual platform, to be completed in the summer of 2023.
- Conducted a TB M&E workshop in Washington, DC for representatives from **Haiti’s** National TB Program (PNLT) and USAID/Haiti.

Intermediate Result 2

Improved design and implementation of M&E frameworks and information gathering processes, including tools, methodologies, and technical guidance to meet users’ needs

- Worked with USAID/Washington and TB Data SIG members to complete a crosswalk aligning **PBMEF** indicators with the data and reporting requirements in the anticipated “End Tuberculosis Now Act” of 2021.
- Developed a MEL plan template and guidance document to support future submissions.

- **Finalized all Assessments of Data Collection, Reporting, and Analysis Capacity (ARC)** reports for 23 USAID TB priority countries. Completed an assessment for Haiti, and introduced the tool to Eastern European and Eurasian countries at a workshop in Georgia.
- Began development of the **Surveillance and TB M&E Strengthening Plan (STEP)** tool, piloted in the Kyrgyz Republic.



Intermediate Result 3

Strengthened reporting and communication, as well as methods, tools, and approaches improved and applied to address communication gaps

- Relunched the **TB DIAH Knowledge Hub** (formerly referred to as the Communications Repository) to better complement and integrate with the Data Hub and more fully reflect the scope of the project’s work. Created new pages for the Center of Excellence, NTP website work, ARC, M&E and Surveillance Systems Assessment (MESSA), and STEP. The project overview page and PBMEF pages were updated, and a capacity strengthening section hosting TB DIAH and industry capacity strengthening tools was launched.
- In the Kyrgyz Republic and Nigeria, TB DIAH completed landscape assessments to generate recommendations for improvements to those countries’ **NTP websites**. In Nigeria, TB DIAH also began work on the relaunch of a new website for the NTP.
- Hosted 13 **TB Data SIG** meetings, including two PBMEF Technical Working Group (TWG) meetings.
- Conducted a variety of outreach efforts, including two webinars (one introducing the Data Hub, and one detailing the work done on the COE), four quarterly digests, participation in the Union World Conference on Lung Health 2022, and regular social media posting.
- Developed two **e-Learning courses** for frontline workers: “TB Contact Investigation” (available in English, French, and Portuguese and being translated into Russian currently) and “Finding TB Cases among People Living with HIV (PLHIV).” The PLHIV course will be publicly available in Y5Q1.

In Year 5, TB DIAH will continue its support of USAID as the agency works to achieve its newly-released 2030 global TB targets. We will continue to refine our existing resources, with particular focus on the TB Data Hub, PBMEF, and STEP, and will make a concerted push to get the word out about the many tools and resources developed by the project to support USAID and its partners in their efforts to end TB.

Introduction

Tuberculosis (TB) is the 13th leading cause of death—and the second leading cause from a single infectious disease, after COVID-19—worldwide, according to the World Health Organization (WHO). Ensuring that countries with the highest burden of TB can collect, assess, analyze, report, and use data to inform country-level decisions to end TB remains a top priority.

The TB Data, Impact Assessment and Communications Hub (TB DIAH) is a five-year cooperative agreement funded by the United States Agency for International Development (USAID) with a ceiling of almost US\$36 million that began on September 24, 2018. The project is led by the Carolina Population Center at the University of North Carolina at Chapel Hill (UNC), in partnership with John Snow, Inc. (JSI).

TB DIAH is part of USAID’s Global Accelerator to End TB. The Global Accelerator focuses on locally generated solutions to meet the needs of people and their communities for TB diagnosis, treatment, and prevention; to address stigma and discrimination; and to engage communities, the private sector, and civil society, including faith-based partners. TB DIAH’s role within the Global Accelerator is focused on data.

The objectives of TB DIAH are (1) to ensure optimal demand for and analysis of both routine and nonroutine TB data for decision making, (2) to support the appropriate use of such information for performance management, and (3) to inform the interventions and policies of national governments, ministries of health (MOHs), National TB Programs (NTPs), USAID, and other stakeholders. To achieve these overall project objectives, the award stipulates three intermediate results (IRs):

1**Intermediate Result 1**

Strengthened collection, analysis, and use of routine health and TB data

2**Intermediate Result 2**

Improved design and implementation of M&E frameworks and information gathering processes, including tools, methodologies, and technical guidance to meet users’ needs

3**Intermediate Result 3**

Strengthened reporting and communication, as well as methods, tools, and approaches improved and applied to address communication gaps

This report focuses on TB DIAH’s work and accomplishments in its fourth project year: January 1, 2022–March 31, 2023.

During the first three years of the project, TB DIAH laid the foundation for achieving these IRs by developing TB monitoring and evaluation (M&E) tools and resources to be refined and widely used by stakeholders working with TB prevention, treatment, and elimination data. In Year 4, the project focused on rolling out these products, as well as their implementation, testing, and refinement. Select indicators in the **Performance-Based Monitoring and Evaluation Framework (PBMEF)**, completed in Year 3, were updated to reflect anticipated legislation from the US Congress impacting reporting requirements for USAID-funded TB programs. The **Data-to-Action Continuum (D2AC)** was launched as a digital tool accessible to individual users. Tools for facilitating USAID's **roadmap** process were developed and used for data calls. The Data Hub expanded its available resources to include an interactive **Data Explorer** that allows users to quickly generate their own charts and tables of TB data collated from the WHO's website. The **Eastern European and Eurasian (EE) Center of Excellence (COE)** in TB M&E and surveillance was launched and held a meeting bringing together representatives from over a dozen countries in the region for a collaborative learning event. **Quality of TB Services Assessments (QTSAs)** were implemented in both the Democratic Republic of the Congo (DRC) and Vietnam, and enhanced data visualizations were developed to help improve the accessibility of the findings. Additionally, TB DIAH facilitated the **Assessment of Data Collection, Reporting, and Analysis Capacity (ARC)** with the 24 TB priority countries. That information was then used to develop the M&E investment in each Mission's roadmap.

Simultaneously, we worked directly with the USAID Missions from which we received mission funds to develop customized workplans to respond to their M&E needs, which were also informed by the ARC findings.

TB DIAH continued its work in Cambodia, DRC, Kyrgyz Republic, Nigeria, and the EE regional office and has been asked to expand its work in Kyrgyz Republic and Uzbekistan during Year 5. Institutional and individual capacity strengthening has been the focus in Cambodia, which has allowed the NTP to finalize an M&E plan, create an e-learning website for NTP staff across the country, based on the PBMEF and analyzing data at different levels of government. The project's work in Nigeria focused on supporting a USAID Mission request to strengthen the quality and use of data from the Local Organization Network (LON) and to create TB Data situation rooms at the national and state level. The DRC Mission started with a Q TSA, adding in a Data Quality Review (DQR) component. The data were collected, data review meetings were held, and the information informed planning. The Kyrgyz Republic workplans focused on operations research, M&E plan development, and support to the NTP and the bilateral Cure Tuberculosis Project. Work in the EE region saw the launch of the COE in TB M&E in Georgia and national reviews through a M&E and Surveillance Systems Assessment (MESSA) process culminating in a regional conference centered around using the PBMEF, updated WHO guidelines, and country sharing among the five EE countries and five Central Asian countries. Implementation of these country plans was supplemented with core funding and support from HQ staff. The country workplans are each unique to their contexts but have in common the strengthening of TB M&E and surveillance systems by improving integration and enhancing access to existing TB data platforms and strengthening M&E capacity of staff involved in the collection, analysis, and use of TB data.

Travel was less challenging in project year four and the data showed the impact of COVID-19 on TB programming. During Year 4, the project gained momentum and increased the synergies between core-funded and mission-funded activities.

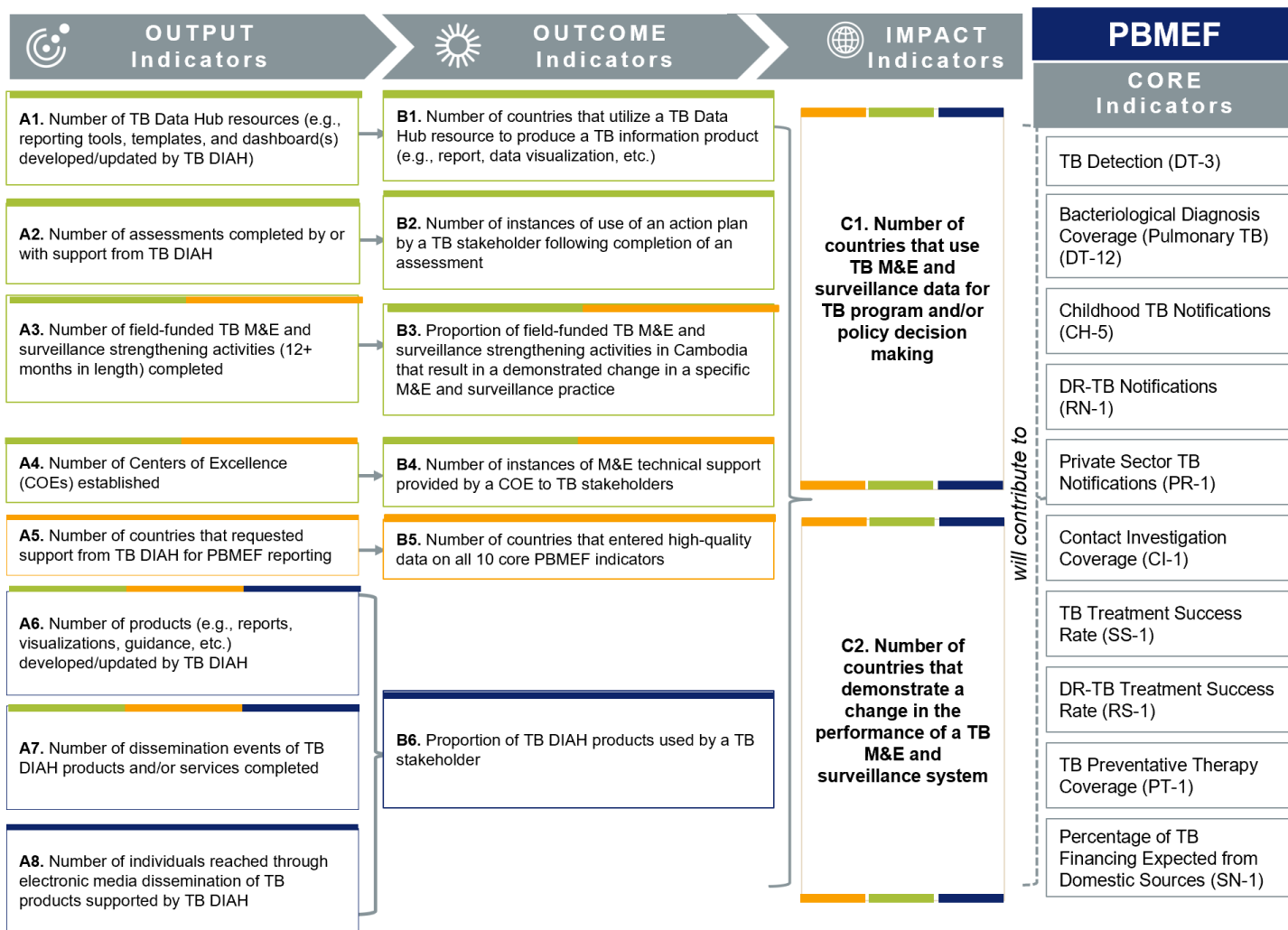


Figure 1. TB DIAH Results

Building Momentum Toward USAID’s 2030 Goals

The TB DIAH project’s launch and early trajectory was greatly impacted by the global outbreak of COVID-19. For the first 24 months of the project, our ability to travel and support our country partners, or even just to gather as a project team, was severely restricted. In Year 3, the grip of COVID-19 started to loosen, and our team began to meet and travel in support of the implementation and refinement of the key tools and resources developed in the project’s early years.

In Year 4, TB DIAH was able to truly begin to unleash its built-up capacity and turn its energy toward a tremendous uptick in the number of assessments, trainings, and dissemination events it conducted. The resulting momentum of the project as it heads into Year 5 has positioned TB DIAH to be a

significant contributor to the targets of USAID’s 2023–2030 Global Tuberculosis Strategy, along with targets for innovation and investment, including:

- 90% of incident TB cases diagnosed and initiated on treatment;
- 90% for drug-susceptible TB (DS-TB) treatment success rate;
- 90% for drug-resistant TB (DR-TB) treatment success rate; and
- 30 million on TB preventative treatment.

The project’s work facilitates USAID’s goals in several key ways:

- 1) The PBMEF has established a consistently defined and collected list of core and extended indicators that each country can use to measure progress toward USAID’s goals—and that USAID can use to identify areas for improvement, innovation, or investment.
- 2) The assessments developed by the project—including the ARC, Capacity Assessment Tool, D2AC, DQR, MESSA, QTSA, and Surveillance and TB M&E Strengthening Plan (STEP)—can be used by countries to drill down into TB data M&E and surveillance efforts to better reach their targets. From assessing the capacity of a country to collect the required TB data, to determining the quality of the TB services rendered, to developing costed plans for surveillance system improvement, the TB DIAH suite of assessments offers a multifaceted perspective on a country’s TB situation.
- 3) Capacity strengthening curricula, through both in-person trainings and online e-learning, are helping ensure that countries’ national TB programs, and their partners, have the skills they need to conduct the TB M&E and surveillance work required to reach USAID’s TB targets. And the Knowledge Repository offers a deep well of explainer documents, industry research, and capacity strengthening resources.
- 4) Finally, the TB Data Hub provides NTPs, USAID, and their partners easy access to TB data collated from multiple sources, combined with visualization and analysis tools, to ensure the gathered data can be used to measure and track program performance and inform programming and investment decisions.

Contribution to USAID’s 2030 Goals



Look for this text box throughout this document for descriptions of how TB DIAH’s activities contribute to USAID’s 2030 global TB targets.

TB DIAH Workstreams

Y1	Y2	Y3	Y4
TB Data Hub (IR 1)			
<ul style="list-style-type: none"> ✓ TB Data Hub designed, produced, and launched 	<ul style="list-style-type: none"> ✓ Updated specification document ✓ Data analytics for Year 2 ✓ TB Data Hub version 2.0 prototype ✓ Prevention indicator data entry tool and questionnaire ✓ TB Roadmap data entry tool 	<ul style="list-style-type: none"> ✓ Developed modules for in-country users to enter data and see their data displayed ✓ Collated data input by users from 23 priority countries for the PBMEF, ARC assessment, and prevention indicator data ✓ Provided ad hoc technical assistance (TA) and shared an informational brief and video ✓ Solicited feedback from expert groups to improve user experience and functionality ✓ Collected data analytics for Year 3 	<ul style="list-style-type: none"> ✓ Launched: <ul style="list-style-type: none"> – Data Explorer – TB and COVID-19 dashboard – DR-TB dashboard – TBCI dashboard ✓ TB Roadmap data collection forms added to the site
Country Engagement (IR 1)			
<ul style="list-style-type: none"> ✓ Prepared promotional materials for USAID rollout of TB DIAH 	<ul style="list-style-type: none"> ✓ Created eight country-focused workplans in six countries ✓ Developed a COE strategy to be rolled out in Year 3 	<ul style="list-style-type: none"> ✓ Provided TA and conducted assessments to strengthen collection, analysis, and use of routine health and TB data in Afghanistan, Cambodia, DRC, the EE region, Kyrgyz Republic, and Nigeria 	<ul style="list-style-type: none"> ✓ Established the EE regional COE ✓ Haiti assessment and discussions

Y1	Y2	Y3	Y4
		<ul style="list-style-type: none"> ✓ Selected Georgia to serve as the pilot COE country in the EE region 	
Assessment Tools (IRs 1&2)			
<ul style="list-style-type: none"> ✓ Created MESSA Tool and protocol ✓ Began desk review of 23 countries' TB M&E and communications systems 	<ul style="list-style-type: none"> ✓ Created a prevention indicator tool and supported USAID to input and analyze findings ✓ Completed summary MESSA profiles for 23 priority countries ✓ Developed ARC tool concept note and draft tool ✓ Established a dedicated QTSA webpage on the TB DIAH repository ✓ Drafted TB Data-to-Action (D2AC) Continuum for USAID review 	<ul style="list-style-type: none"> ✓ Finalized and rolled out ARC tool on the TB Data Hub for missions to complete data entry ✓ Developed 22 ARC reports and shared them with countries for review and feedback ✓ Completed the QTSA Implementation Guide and developed COVID-19 modules to complement the QTSA ✓ Conducted QTSA data collection in Afghanistan, Kyrgyz Republic, and DRC and worked on reports presenting the findings ✓ Pretested the D2AC Toolkit (data collection tool and data analysis tool) with the D2AC Advisory Group ✓ Published a peer-reviewed article about D2AC literature review in the Journal of Global Health 	<ul style="list-style-type: none"> ✓ QTSA Explorer launched ✓ Field testing and implementation of D2AC in four countries ✓ Digital D2AC tool launched ✓ Vietnam QTSA data collection training ✓ Data visualizations of key indicators on TB Data Hub ✓ Finalized, field tested, and implemented the STEP ✓ Published peer-reviewed journal article on the development process of the D2AC in the Journal of Global Health Reports

Y1	Y2	Y3	Y4
PBMEF (IR 2)			
<ul style="list-style-type: none"> ✓ Drafted, vetted, and created a two-tiered PBMEF 	<ul style="list-style-type: none"> ✓ Submitted a final draft of PBMEF after gaining consensus on indicators ✓ Drafted country implementation plan template 	<ul style="list-style-type: none"> ✓ Finalized and disseminated PBMEF framework and guide, an FAQ document, and a two-page overview ✓ Posted PBMEF on the TB DIAH Communications Repository website in English, Portuguese, and Russian, with drafts in French and Spanish ✓ Reviewed 62 monitoring, evaluation, and learning (MEL) plans submitted by implementing mechanisms to assess alignment with PBMEF indicators and best practices 	<ul style="list-style-type: none"> ✓ Aligned PBMEF indicators with data and reporting requirements in the anticipated “End Tuberculosis Now Act” ✓ Reviewed 65 MEL plans to ensure alignment with PBMEF indicators ✓ Developed MEL plan template and guidance document ✓ Completed ARC reports for 23 USAID TB priority countries <ul style="list-style-type: none"> – Completed an assessment for Haiti, and introduced the tool to Eastern European and Eurasian countries at a workshop in Georgia ✓ Developed and piloted the STEP tool
Communications (IR 3)			

Y1	Y2	Y3	Y4
<ul style="list-style-type: none"> ✓ Designed and launched www.tbdiiah.org for data and country-specific information and resources ✓ Established social media presence ✓ Published reports ✓ Published TB DIAH newsletter to a mailing list of >6,000 subscribers 	<ul style="list-style-type: none"> ✓ Updated website architecture and infrastructure ✓ Participated in 51st Union World Conference on Lung Health ✓ Completed analysis of TB data landscape to serve as a baselined of available resources ✓ Supported the USAID TB Communications teams in editing and 508-compliance review of the Prevention Indicator report to Congress ✓ Created and published TB DIAH Digest (four issues), success stories, and encouraged social media traffic to USAID’s website 	<ul style="list-style-type: none"> ✓ Published three TB DIAH Digest e-newsletters ✓ Served as TB Data SIG Secretariat ✓ Expanded the TB DIAH Communications Repository to include new webpages for the PBMEF and QTSA ✓ Conducted landscape analyses of 23 priority countries’ NTP websites ✓ Supported the 52nd Union World Conference on Lung Health submission and the project’s online presence 	<ul style="list-style-type: none"> ✓ Relunched the TB DIAH Knowledge Hub ✓ Created new pages for the COE, NTP website work, ARC, MESSA, and STEP ✓ Added capacity strengthening repository ✓ Updated the project overview and PBMEF pages ✓ Completed landscape assessments to inform NTP websites in Kyrgyz Republic and Nigeria ✓ Hosted 15 TB Data SIG meetings, including two PBMEF Technical Working Group (TWG) meetings ✓ Outreach including webinars, quarterly digests, conference participation, and regular social media posting ✓ Developed and translated two e-Learning courses for frontline workers

Highlights of Year 4 Core-Funded Work

In Year 4, TB DIAH progressed across all intermediate result areas through 12 core-funded activities and additional activities as requested by USAID.

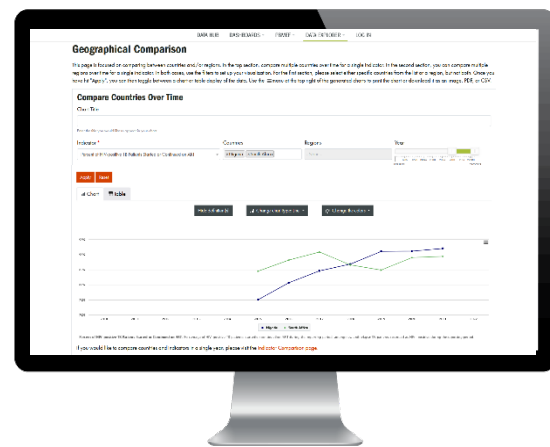
Intermediate Result 1: Strengthened collection, analysis, and use of routine health and TB data



TB Data Hub

In Year 4, TB DIAH continued to deepen and expand the utility of the TB Data Hub for users in TB priority countries. This year's improvements were made to ensure USAID missions, NTPs, USAID/Washington, and other relevant stakeholders can further harness, find, explore, analyze, visualize, and download national TB data.

Data display, exploration and visualization functionality was a key focus of the project's Year 4 work under IR 1. TB DIAH also created documentation of the process flow for new TB Data Hub graphics development and data acquisition to facilitate USAID/Washington's understanding of the process and ensure future sustainability.



The project also launched the Data Explorer, which allows users to build their own tables and visualizations of TB data generated from submissions by the NTPs to the WHO or the Stop TB Partnership (for United Nations General Assembly High-Level Meeting [UNHLM] targets). The COVID-19 Dashboard supports the visualization of the pandemic's ongoing impact on countries and the global TB response, and monitoring of the effects of the pandemic recovery measures on TB services. The TB Contact Investigation (TBCI) Dashboard displays data to facilitate monitoring of the cascade of CI indicators to support tracking of the yield of CI, prevent pre-treatment case loss, reduce the number of underreported and underdiagnosed TB cases, plan for program improvement, and conduct routine continuous quality improvement (CQI) to the CI activities. Additionally, the Drug-Resistant TB Dashboard helps users visualize the DR-TB situation in their country (or among the USAID TB priority countries) by posing a series of questions and providing charts that can help answer those questions.

Several improvements to existing features were made, including improvements to Country Dashboards, which now display all 10 PBMEF Core indicators as charts and a “no data” message for charts with no data for a given indicator. A new dashboard for subnational TB data was developed for use by the Kyrgyz Republic, with a user interface translated into Russian at the NTP's request. The TB

Data Hub’s landing page and overall site organization was refreshed to ensure smooth integration with www.TBDIAH.org and to streamline the user experience.

The team also improved TB Data Hub user support and engagement. Efforts included multiple presentations and user testing opportunities of the TB Data Hub for members of the TB Data Special Interest Group (SIG), an open invitation webinar introducing the TB Data Hub to 136 attendees, provision of technical support to TB Data Hub users who contact the project by email or via the website, updating the TB Data Hub frequently asked questions (FAQ) page to further assist users with navigation and common issues, and the creation of two videos and an instruction manual to help users navigate the TB Data Hub.

Additional work to improve the site utility included the development of an internal user analytics dashboard to better understand usage of the site by logged-in users, the creation of two cascade mock-ups for TBCI and Drug-Susceptible TB (DS-TB).

Finally, the project worked to support improved data collection and processing for USAID’s work planning process through the creation of Prevention and TB Roadmap data collection forms for collection of 2021 data in the TB Data Hub in 2022.

Contribution to USAID’s 2030 Goals



The TB Data Hub is a central data repository that integrates data from multiple sources to allow USAID and its partners to meet their strategic data needs and establish country data gathering, management, and governance structures required to monitor and evaluate the Agency’s progress toward 90-90-90 in USAID TB priority countries.



Data-to-Action Continuum (D2AC)

The cornerstone achievement of the D2AC team in Year 4 was the completion of both the D2AC Toolkit and its digital counterpart hosted on the TB Data Hub, and their testing and implementation in multiple countries. The toolkit includes the D2AC Data Collection Tool and the D2AC Data Analysis Tool featuring a “Priority Actions for Implementation” tab. It was field tested in Ghana and Nigeria and implemented in Bangladesh and the Kyrgyz Republic. Findings from Ghana, the Kyrgyz Republic, and Nigeria were shared with the TB Data SIG; technical reports from all of three countries were completed and posted on the relaunched [D2AC webpage](#); and the toolkit and findings were presented via e-poster at the Union World Conference on Lung Health 2022. The team also published the article, “Development and expert validation of a ‘Data-to-Action Continuum’ to measure and advance the data-use capabilities of national tuberculosis programs” in the Journal of Global Health Reports in December 2022, and began work on a short, animated video to introduce and contextualize the D2AC.

Contribution to USAID’s 2030 Goals



The D2AC measures a country’s progress toward an optimal TB M&E and surveillance system and can serve as a baseline for applying the PBMEF to monitor USAID’s TB Accelerator investments. The D2AC allows NTPs to precisely gauge the barriers to TB data collection, analysis and use; assess the data user’s needs; and select interventions appropriate for the context and maturity of the systems.



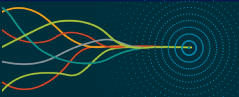
Quality of TB Services Assessment (QTSA)

After completion of QTSA global tool development in Year 3, the team focused on adapting and implementing the tools in the field in Year 4.

In the DRC, that work included provincial level training for data collection teams, followed by completion of the data collection process in 237 facilities in 9 provinces of DRC. The data from the six survey tools were cleaned, analyzed, and reported, and a QTSA/DQR Data Review Meeting was held in Q4. TB DIAH gathered technical staff to review and validate the survey data and finance staff to review financial and administrative systems and processes, and the report was in final review with USAID at the end of Year 4.


In Vietnam, the project worked with the NTP and a local consultant to tailor the QTSA study and sampling design to the local context, and with the NTP and UNC Vietnam to develop the terms of reference for the NTP’s engagement in the QTSA. The project developed the Vietnam QTSA protocol, established the QTSA TWG, and facilitated two QTSA TWG meetings, revising the protocol based on feedback, finalizing the list of trained data collectors, and developing the data management plan and data quality assurance plan. The meeting and subsequent discussions and work resulted in the finalized Vietnamese QTSA tools, which include two newly developed modules on health insurance reimbursement for TB services and latent TB infection (LTBI). These tools were field tested and modified based on the findings, and TB DIAH worked closely with the NTP and UNC Vietnam to plan and conduct the QTSA training workshop, which took place February 8–16, 2023, in Hanoi. Fifty data collectors and data collection team leaders were trained on the QTSA tools and data collection procedures. On the first day, 16 Provincial TB Focal Points, representing survey provinces, attended the workshop via Zoom.

The technical report from the implementation of the QTSA in Afghanistan was completed following review by USAID/Washington staff and staff from Assistance for Families and Indigent Afghans to Thrive (AFIAT) and the Urban Health Initiative (UHI), the two USAID-funded TB projects in Afghanistan which were involved in the implementation of the QTSA and also participated in the data review.

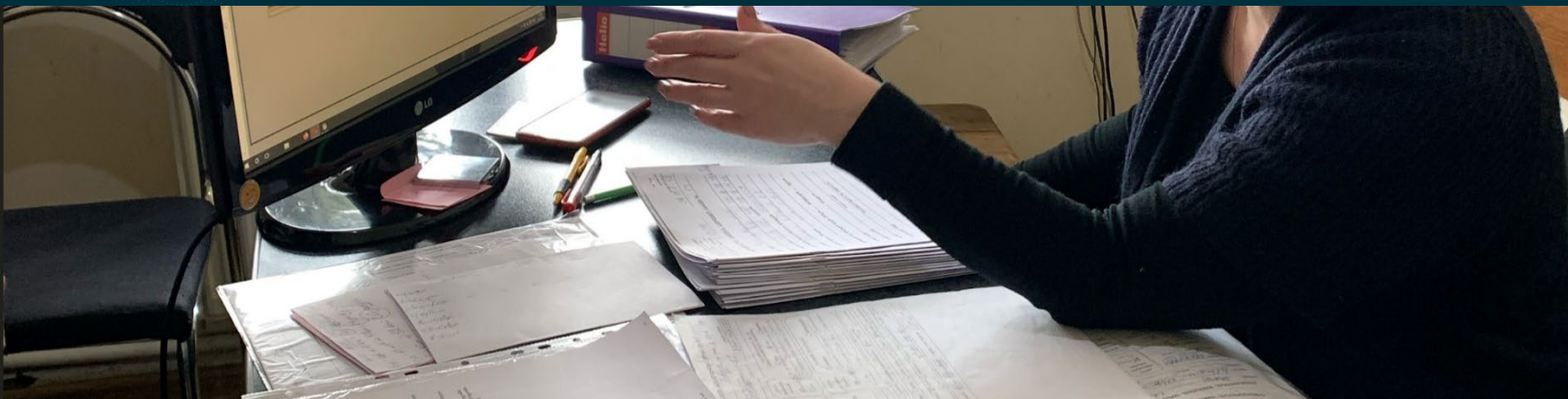


Beyond its work in the countries, the QTSA team revised the global QTSA tools to reflect updates received from the WHO and the impact of the COVID-19 pandemic on TB services. The team also completed a [QTSA Data Explorer on the TB DIAH Data Hub](#), which draws upon a database of selected QTSA data elements. Finally, the team prepared and presented two QTSA presentations at the Union World Conference on Lung Health 2022 and a QTSA poster at the Seventh Global Symposium on Health Systems Research.

Contribution to USAID’s 2030 Goals



The QTSA portfolio contributes to TB DIAH’s Intermediate Results 1 and 2 to ensure demand and analysis of TB data for decision making for performance management, and to inform national governments, ministries of health, NTPs, USAID, and other stakeholders’ interventions and policies. With its strong emphasis on person-centered care, data from the QTSA can be used to triangulate and complement data that will become available with the roll-out of the PBMEF and the End TB Now Act (ETNA).



Intermediate Result 2: Improved design and implementation of M&E frameworks and information gathering processes, including tools, methodologies, and technical guidance to meet users' needs



Performance-Based M&E Framework (PBMEF)

In Year 4 of the project, TB DIAH worked with USAID/Washington to draft a “crosswalk” aligning the data and reporting requirements mentioned in the “End Tuberculosis Now Act of 2021” with the PBMEF indicators. TB DIAH also reviewed 65 MEL plans submitted by IMs across 21 countries to ensure alignment with the core and extended indicators in the PBMEF. The revised categorization of the framework was shared for feedback, and TB DIAH developed a template and MEL guidance document to support missions and IPs with developing their MEL plans along with indicator reference sheets (IRS) for Core Plus, MEL national level, and MEL project-level indicators. In addition to presenting these changes to the TB Data SIG, TB DIAH also held two meetings with the SIG PBMEF TWG to finalize the revised categorization of the PBMEF and the MEL guidance document.

A TB Situation Room (TSR) concept was implemented in Nigeria, in partnership with USAID/Washington, USAID/Nigeria, and the NTP, and a TSR implementation and management guidance document is in development.

Contribution to USAID’s 2030 Goals



The PBMEF is part of USAID’s efforts to ensure effective accountability of investments in TB at global, regional, and country levels to accelerate progress to end the TB epidemic. The framework streamlines and prioritizes indicators for monitoring progress toward reaching global TB milestones and targets in USAID priority countries.



Assessment of Data Collection, Reporting, and Analysis Capacity (ARC)

After completing the ARC tool in Year 3, Year 4 was focused on reporting the results of implementation of the tool. By Q3, the project completed ARC reports for 23 USAID TB priority countries. The Burma ARC report was not completed due to political unrest in the country, and the report for Afghanistan was developed but not shared with country stakeholders due to the sensitive political situation. An ARC assessment was also completed for Haiti at a workshop held in Washington, DC, and attended by NTLP staff. The ARC tool was also introduced to EE countries at a workshop held in Tbilisi, Georgia.

Contribution to USAID's 2030 Goals



The ARC contributes to USAID's 2030 goals by identifying strengths and weaknesses in the national data collection capacity of a country—so countries can improve the quality of the data they are using to measure progress toward their 2030 goals.



Surveillance and TB M&E Strengthening Plan (STEP)

In collaboration with USAID/Washington, and building on the project's other assessment work, in Year 4, TB DIAH began to develop and implement a STEP planning tool. The scope of the STEP evolved to include a comprehensive assessment of a country's TB M&E and surveillance system, and completion of the STEP will yield a costed action plan to address major gaps, which are identified through a process inclusive of multilevel stakeholders. The STEP was piloted in the Kyrgyz Republic, starting with a desk review, landscape assessment, and ultimately culminating in an action-planning workshop. In the workshop, the participants developed the STEP plan that helped the drafting of a costed STEP. The results of STEP pilot in Kyrgyz Republic are informing the development of a generic STEP tool and protocol in Year 5.

Contribution to USAID's 2030 Goals



Digital case-based surveillance enables the use of automated data quality checks, which includes real-time access to individual and aggregate data up to the national level. The STEP helps missions and NTPs invest in the customization and scale up of a single, digital, case-based system for TB surveillance and program management, continuously adapting it to meet the practical needs of service providers, program managers, planners, and policy makers.

Intermediate Result 3: Strengthened reporting and communication as well as methods, tools, and approaches improved and applied to address communication gaps

TB DIAH communications disseminated the year’s key deliverables, including the launch of the Data Explorer and data dashboards on the TB Data Hub, and the COE in Eastern Europe, through the TB DIAH Digest quarterly e-newsletter, social media, and webinars with partners and stakeholders. By the end of Year 4, TB DIAH social media accounts were followed by 319 Twitter users and 413 LinkedIn users. The TB DIAH Digest e-newsletter was published in April and November 2022 and January and March 2023. Issues covered topics including the Data Explorer, the TB M&E training conducted in Cambodia, the COE work in Georgia, and a year-end “best of” wrap-up.



TB DIAH Knowledge Hub

The TB DIAH Knowledge Hub (formerly referred to as the Communications Repository) serves as the landing page for the project’s website and is the portal to all of the tools, resources, and data that TB DIAH generates or collates in support of our goals to improve and harness existing data on TB and expand knowledge sharing regarding TB worldwide. As the project grew, and our offerings expanded, it became evident that new content, as well as reorganization and streamlining, would help decision makers better understand what the project offers and find the information they need on the site.

Year 4’s major focus, therefore, was a relaunch of the project’s website after a significant design update, including expanding and reorganizing the content. New pages were created for the TB DIAH global goods that did not yet have a standalone page (including the [Center of Excellence](#), [NTP Website Activity](#), [ARC](#), [MESSA](#), and [STEP](#)), and the [TB DIAH Project Overview and Objectives](#) and [PBMEF](#) pages were updated. Links to all related key resources (including tools, user guides, reports, publications, and supporting materials such as two-pagers or FAQs) were added to each page. Links to the related sections of the TB Data Hub were also added to these pages. A visitor to the site can now find an explanation of each global good, guidance on its use, and results (when available) all in one location. Site navigation was also improved, with sections highlighting both trending pages and new additions to the site, and a short introduction to each global good on the homepage with links to additional information. Finally, a [capacity strengthening page](#) featuring key learning products from both TB DIAH as well as other industry thought leaders was launched, along with a portal for users to access all of TB DIAH’s e-learning products.

Website traffic to the repository continued to grow—from 5,084 annual visitors in Year 2, to 10,852 visitors in Year 3, to 18,103 visitors in Year 4. This continued growth is likely the result of a combination of factors, from the continued focus on growing the project’s social media following, to expanding SIG membership, to positive word of mouth about the project. Most visitors to the website in Year 4 were from the United States, followed by, in descending order, DRC, India, the Philippines, Nigeria, South Africa, Zambia, Uganda, Ethiopia, and Indonesia.

Contribution to USAID’s 2030 Goals



The Knowledge Hub is a one-stop shop for TB decision makers to find the resources, tools, and data they need to design, monitor and evaluate, assess, and adapt their TB program strategies to achieve their own TB targets and contribute to USAID’s global TB goals.



NTP Website Activity

The NTP Website Activity was created to offer support to NTPs in improving their program transparency according to the standards established by the Stop TB Partnership’s governance assessment. After initial outreach efforts, three countries—the Kyrgyz Republic, Nigeria, and Tajikistan—expressed interest in support from TB DIAH in this area. In Year 4, TB DIAH worked with these countries’ NTPs and local partners to evaluate their current sites and detail needed changes. Tajikistan, which had recently overhauled its website, requested no further support. In the Kyrgyz Republic, the NTP’s site was already under redevelopment by another organization, but the NTP requested that TB DIAH evaluate the relaunched site against the transparency criteria and to conduct a landscape assessment to determine if additional elements might be needed. The team completed the assessment in Year 4, and the report will be delivered early in Year 5. In Nigeria, the NTP required a new site to be built. TB DIAH completed a landscape assessment and site design in Year 4, and the new website, along with a maintenance calendar and training, will be delivered early in Year 5. A variety of challenges, ranging from difficulty identifying local consultants with both the technical expertise to build a website and the political connections to conduct the necessary landscape assessment, to lack of interest in the activity by NTPs, led TB DIAH and USAID to reassess the value of this activity and, ultimately, to shift its remaining resources after completion of its work in the Kyrgyz Republic and Nigeria elsewhere in the project. Accordingly, this activity will conclude at the end of Quarter 2 in Year 5.

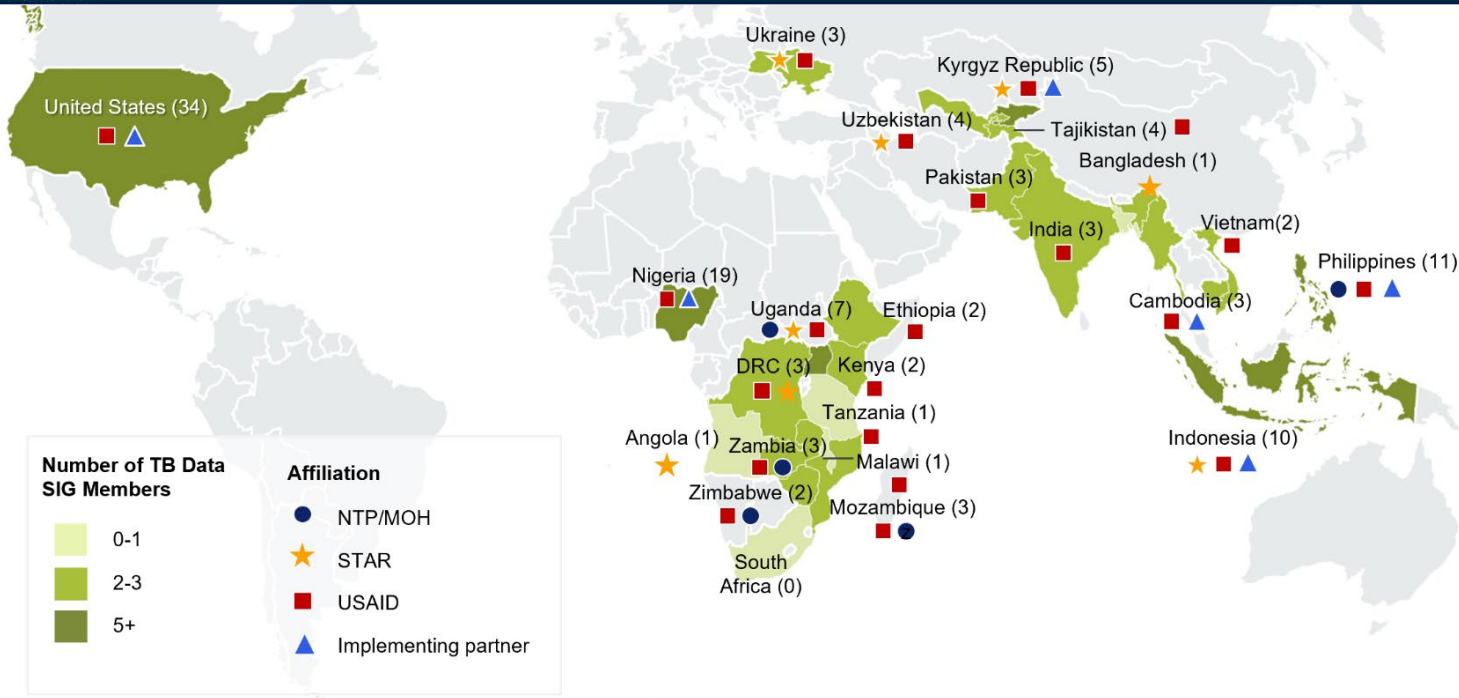


Figure 2: TB Data Special Interest Group Member Countries and Affiliations

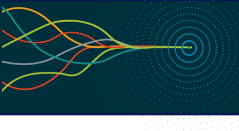
TB Data Special Interest Group (SIG)

TB DIAH continued its work as the TB Data SIG Secretariat, which included development of all TB Data SIG meeting materials and preparation, as well as meeting implementation. The project hosted 15 meetings, including two meetings of the PBMEF TWG, focused on alignment of the framework’s indicators with pending legislation. In Year 3, the SIG was composed of 33 members representing 17 countries; by the end of Year 4, that number had grown to 115 members from 25 countries. The team prioritized presentations from in-country teams, hearing from TB DIAH’s Totugul Murzabekova about the project’s work in the Kyrgyz Republic in April 2022; Dr. Abiodun Hassan about the integration of TB program data into the USAID Automated Partners Performance Report (APPR) in February 2023; Sao Sarady Ay on TB M&E Capacity Strengthening in Cambodia in March 2023; and Pont Santé Afrique (POSAF)’s Dr. Henriette Wembanyama on Strengthening TB M&E Capacity in the DRC.

TB DIAH Presence at the Union World Conference on Lung Health 2022

TB DIAH presented and promoted two e-posters and two oral presentations for the conference in November 2022:

- Data-to-Action Continuum: Introduction to the D2AC Model and Toolkit (e-poster)
- Improving TB monitoring, evaluation, and surveillance with a virtual center of excellence model (e-poster)
- Are People with TB Receiving Person-Centered Care? A Multi-country Comparison (oral presentation)



- Comparison of TB Services Available and TB Services Received in Two East African Countries – Ethiopia and Uganda (oral presentation)



e-Learning Courses

In Year 4, TB DIAH collaborated with the USAID TB Contact Investigation (CI) working group to finalize and launch the TB Contact Investigation for frontline workers (FW) course in English, French, and Portuguese—a 4.5 hour interactive course rich with quality content. A facilitator’s guide and PowerPoint source files were provided for local adaptation. Zambia and Tanzania expressed interest in using the materials.

Between April 2022 and March 2023, 698 persons from 45 countries enrolled in the TBCI course—319 (46%) completed the course and received a certificate, 72 enrolled in either the French or Portuguese versions of the course released in February 2023. A total of 492 participants completed a pre-test, with an average score of 51%; 319 (65%) completed the post-test, with an average score of 90%—for a +39% knowledge gain. Of the 335 participants that completed the end-of-course evaluation, 95% agreed or strongly agreed with the following statements: “I will apply what I learned in this course to my job,” and “the online course was an effective way for me to learn this content and was a worthwhile investment of my time.”

In Year 4, the team also developed a new e-Learning course for frontline workers—Finding TB Cases among People Living with HIV (PLHIV)—to address the critical need of TB detection among PLHIV. The course covers topics including: Introduction to TB and HIV; TB Screening and Diagnosis among PLHIV; Integrating TB Service Provision into ART Service Models; TB among PLHIV Data Recording, Monitoring, and Evaluation; and Program Management Basics to Detect TB among PLHIV.

The project conducted observational user-testing in Nigeria and South Africa to gather lessons learned and incorporate feedback to strengthen the e-Learning platform and course curriculum. With over 65% of users accessing the course from a mobile device, with varying degrees of digital proficiency, the team added ways to improve course registration and navigation on mobile devices. The team also made significant visual design enhancements, added multi-language pages, and created step-by-step tutorials. Monitoring use and engagement occurs monthly. When the newly designed template, course home page, and translations were launched in February 2023, course completion rates doubled—from an average of 23 users per month to 43 users per month.

Contribution to USAID’s 2030 Goals



An estimated 4.2 million TB cases went undetected and/or unreported in 2021. Building the capacity of frontline healthcare workers in the importance of TB contact investigations is a fundamental strategy for more effectively reaching vulnerable and at-risk people, especially those living with HIV. The online course materials specifically designed for frontline workers are freely available in multiple languages and can be adapted to local contexts.



Highlights of Year 4 Core-Funded Support to Missions

TB DIAH supported mission-requested work in 15 countries using core funding, encompassing 64 subactivities over the Year 4 period. Core-funded country engagement work supported the project's IRs 1 and 2. A summary of the project's core-supported field work is presented below, organized by country or region.

Cambodia TB M&E Training Curriculum Activity

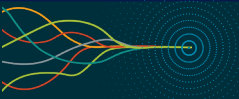
In Cambodia, TB DIAH developed a TB M&E training curriculum that has served as the basis for a global TB M&E training curriculum, to be used at TB M&E training of trainers (TOT) workshops for NTP M&E officers. The National Center for Tuberculosis and Leprosy Control (CENAT)-level M&E TOT was conducted in Cambodia in 2021. The remaining trainers were trained in 2022 and the step-down trainings with operational district TB supervisors took place in March 2023, with more scheduled for April. The country's TB M&E plan was signed by the CENAT director and is now publicly available.

DRC QTSA and DQR

In 2022, five QTSA tools and a DQR tool were administered in the DRC. A QTSA/DQR data review meeting was organized in Kinshasa to jointly review and validate the survey data. Data collection for an operational research project has been completed.

EE Regional Activities

In the EE region, Georgia was selected as the host country for a COE in TB. A founding event was held in Tbilisi in May 2022 to acknowledge and celebrate the COE partnership with the key COE



stakeholders: TB DIAH, the National Centre for Disease Control (NCDC), and the National Center for Tuberculosis and Disease Control (NCTDC). To catalyze country engagement in COE activities, a TB M&E and surveillance regional consultative meeting was held in Tbilisi in July 2022, in partnership with the NCDC and NCTLD, which convened TB experts from Armenia, Azerbaijan, Georgia, and Moldova. In the subsequent months, TB DIAH's EE regional consultant traveled to Armenia, Azerbaijan, and Moldova to hold individual meetings with key NTP staff to discuss country-level priorities. In November 2022, TB DIAH, through the COE framework, hosted the Regional Training Workshop on TB M&E and Surveillance Capacity Strengthening. NTP and USAID mission staff from the five EE countries and five Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) attended, as well as staff from USAID/Washington, WHO/Europe, and the Global Fund. A global webinar on the COE model and implementation was held on March 21, 2023. Speakers from TB DIAH, USAID/Washington, WHO/Europe, and Georgia's NCDC and National Center for Tuberculosis and Lung Disease (NCTLD) presented to a group of 108 attendees, representing over 30 countries. TB DIAH developed a COE design guide and a Georgian-based agency is developing the COE virtual platform, to be completed in the summer of 2023. Adapting TB DIAH's global TB M&E training curriculum, a TB M&E TOT will be held in May 2023, engaging NTP staff from Armenia, Georgia, Moldova, and Ukraine.

Haiti TB M&E Workshop

Representatives from Haiti's National TB Program (PNLT) and USAID/Haiti met in Washington, DC for a three-day workshop on TB M&E. Findings from Haiti's ARC and MESSA were reviewed, participants identified and prioritized key areas of the TB M&E and surveillance system for improvement, and an action plan was developed. It was agreed that a Haiti dashboard will be created on the TB Data Hub. The concept note for engagement with Haiti was reviewed by USAID and incorporated into the Year 5 workplan.

Kyrgyz Republic

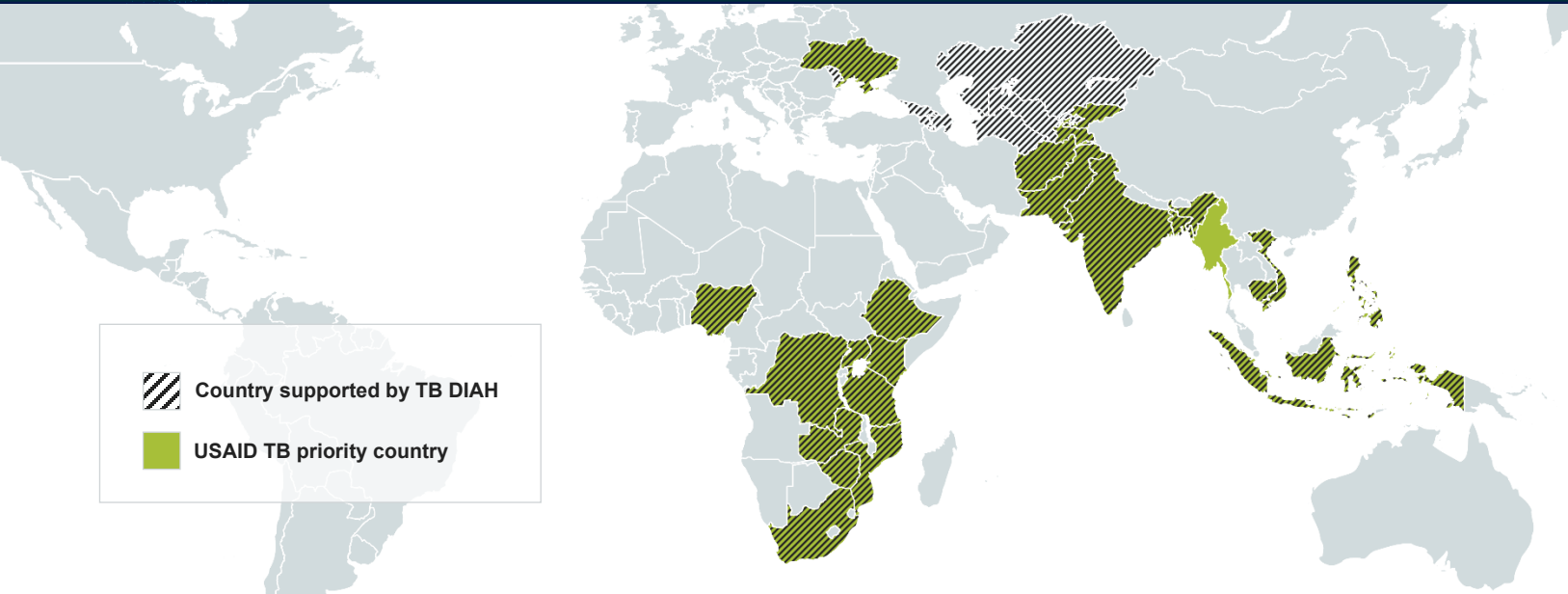
In the Kyrgyz Republic, after implementing the D2AC process, TB DIAH was asked to deliver a STEP workshop as a follow up to the ARC process conducted in 2021. The TB DIAH/Kyrgyz Republic team is conducting a bacteriological confirmation study, as well as supporting the continuation of a TB M&E surveillance working group, drafting program review meeting guidelines for national and oblast levels, and drafting a curriculum on TB M&E for an oblast coordinators training. The team also convened a TWG meeting to discuss the TB-6 indicators, at the request of the NTP and Cure Tuberculosis Project.

Nigeria D2AC, Automated Partners Performance Reporting

In Nigeria, the D2AC Toolkit, assessing barriers to data use, was piloted in April 2022. An M&E training curriculum was completed to improve the skills and knowledge of state-level TB program managers and M&E specialists on the use of TB data and performance-based indicators for programmatic decision making.



TB DIAH also successfully rolled out the Automated Partners Performance Reporting (APPR) system used by USAID to track implementing partner performance at weekly and monthly intervals. The indicators in the APPR are based on the PBMEF. The TB DIAH/Nigeria team updates and maintains the APPR to meet USAID/Nigeria's data requirements and continues to assist the LON partners in Nigeria (KNCV Tuberculosis Foundation [KNCV] and Institute of Human Virology of Nigeria [IHVN]) in creating a customized District Health Information Software, version 2 (DHIS2) instance to ensure seamless data exchange between their data management systems and the APPR. Regular review resulted in continuous improvement in the quality of LON reporting into Nigeria's national TB health information system (HIS). An assessment of the proposed TB Situation Room locations in Anambra and Osun states (in addition to existing locations in Abuja and Kano states) was completed. The national TB Situation Room has been set up and will be launched in June 2023.



Highlights of Year 4 Mission-Funded Work

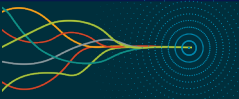
TB DIAH managed eight mission-funded activities, encompassing 64 sub-activities across six countries over the Year 4 period. Mission-funded work was tied to the project’s IRs 1 and 2.

Afghanistan QTSA

QTSA data collection in Afghanistan began in February 2021 and was completed in April 2021. A data review meeting was held to examine, validate, and contextualize preliminary results of the assessment. The QTSA report in Afghanistan was in its data analysis and drafting stages when the political situation in the country shifted and the team was no longer permitted to contact in-country colleagues. The project consulted with USAID/Washington to identify reviewers for the draft Afghanistan QTSA report and to provide recommendations. Reviewers included USAID/Washington, as well as staff from AFIAT and UHI, the two USAID-funded TB projects in Afghanistan. These perspectives were particularly helpful since AFIAT and UHI had been involved in QTSA implementation and participated in the data review meeting. TB DIAH used the feedback from these stakeholders to finalize the Afghanistan QTSA report. The Afghanistan QTSA technical report, tools, and dataset were completed, and the report and tools were published to the TB DIAH website. All three deliverables were shared with AFIAT and UHI, along with a summary matrix of QTSA findings and proposed recommendations.

Cambodia Technical Assistance

In Year 4, TB DIAH's work in Cambodia centered around improved data use based on the new National Strategic Plan (NSP) and M&E of that plan. The plan incorporates core PBMEF indicators. Working hand in hand with the NTP and other stakeholders, TB DIAH assessed individual and institutional M&E capacity at all levels of the system. Based on those assessments, TB DIAH created tailored M&E training and materials, including checklists to help improve data reviews, and mentoring



opportunities. Recognizing the value of distance learning, TB DIAH supported CENAT to create a TB M&E e-Learning course for district health workers, available in both English and Khmer on the CENAT and TB DIAH websites. Working with CENAT and USAID’s Community Mobilization Initiatives to End Tuberculosis (COMMIT) Project, TB DIAH also supported the development of TB data dashboards and visualizations. Finally, TB DIAH is collaborating with USAID, CENAT, and WHO on the USAID consultant-supported HIS design and planning for the rollout of a more extensive electronic system. Work in early 2023 focused on strengthening local stakeholders’ operational research skills.

DRC TB M&E and Surveillance System Strengthening

TB DIAH’s Year 4 work in the DRC began with supporting the Mission to complete a QTSA. Parallel to the QTSA, the Mission asked for TB DIAH assistance to strengthen M&E and surveillance in the country. Working with the PNLT and a local partner, Pont Santé Afrique (POSAF), and under the guidance of USAID, TB DIAH developed and implemented a tailored TB M&E national capacity strengthening training curriculum, conducted a TOT, customized the national curriculum to one province and held a provincial training for 41 participants in the first three months of implementation. That capacity strengthening enabled the next phase of the project’s work in the DRC, focused on strengthening data use capacity. Printing and dissemination of the annual TB surveillance report for the first time allowed the PNLT to conduct data quality review meetings at the national and provincial levels. TB DIAH is working closely with the PNLT to find a sustainable solution for program data storage. The third major project achievement in Year 4 was the strengthening of data use capacity in the country through the completion of an operational research agenda. A study to analyze the factors associated with mortality of TB patients on anti-tuberculosis treatment in the province of Lualaba was also completed.

Kyrgyz Republic Technical Assistance

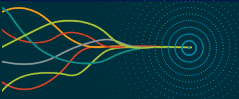
TB DIAH supported the USAID mission in Bishkek to accomplish several milestones in Year 4.

The project piloted and finalized a DQR checklist and identified gaps in reporting and recording at the management information system, primary healthcare, and TB facility levels.

TB DIAH also supported the revision of Kyrgyz Republic’s TB M&E policy guidelines, the development of a second version of the national TB M&E plan, and the sharing of customized report templates to track TB program performance against key indicators.

As part of its continued support to the TB M&E and surveillance TWG, TB DIAH convened a meeting to discuss the TB-6 indicators at the request of the NTP and the Cure Tuberculosis Project. A TB M&E capacity assessment report was finalized and translated into Russian, and the findings were shared with TWG members to strengthen their capacity.

The TWG also chose 21 indicators for the Kyrgyz Republic dashboard website based on the revised TB M&E plan. TB DIAH and its partners matched the WHO and NTP variables to enable easy data



extraction into the TB DIAH Data Hub website for newly developed dashboards on Kyrgyz Republic’s subnational TB data.

The project conducted an operations research study, “Predictors of Clinical Diagnosis versus Bacteriological Confirmation among Pulmonary Tuberculosis Patients,” and presented results to the Mission and Cure Tuberculosis Project team.

At the request of USAID/Kyrgyz Republic, a team from UNC completed a mid-project evaluation of the Cure Tuberculosis Project between April and November 2022.

Strengthening Use of TB M&E and Surveillance Data in Nigeria

The ultimate goal of TB DIAH’s work in Nigeria is to ensure adequate capacity to manage and use data that includes streamlined and efficient data management processes, uniformity, and interoperability of the systems, and an established interactive dashboard that will showcase all the electronic inputs in one spot.

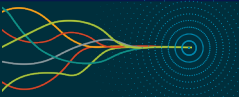
The Nigeria scope of work expanded to include deployment of the APPR and data management support to the USAID TB LON IPs.

The team completed the National TB Electronic System Assessment technical review and reporting process with the NTBLCP and stakeholders as well as APPR rollout trainings in Lagos and other zones for USAID implementing partners.

A main focus in Nigeria has been the set up and continuous improvement of the APPR systems with the USAID implementing partners (IPs) to improve data quality and use. Templates and a standardized weekly TB performance review slide deck were developed and weekly meetings were held with IPs and USAID, as well as quarterly deep dive analyses. IPs were trained in the APPR processes and the IPS are now actively reporting. TB DIAH entered into Memoranda of Understanding (MOUs) with the two implementing partners and developed customized DHIS2 modules for the IPs. Functional DHIS2 modules were customized for IP level reporting. There are quarterly/annual performance analyses with scorecards. The establishment of this database facilitates data analysis and use. The standardized reporting requirements and timelines facilitate alignment with PBMEF guidance, thus improving data quality. They also reduce the data entry workload and improve data analytics and visualization.

The interventions to strengthen the capacity to analyze, report, and use TB data follow the National Tuberculosis and Leprosy Control Programme (NTBLCP) data flow structure—that is, from the facility-level through to the state- and zonal-level reporting systems—by working collaboratively with the USAID-supported TB implementing partners.

A key workstream for Nigeria in Year 4 was to support the NTP and stakeholders to develop a roadmap and investment plan in response to findings from the National Electronic Tuberculosis Information Management System (NETIMS) assessment. The assessment was completed and a costed plan developed and is with USAID and the NTBLCP.



Another key workstream focused on capacity strengthening in the Nigerian system. A training curriculum to improve skills and knowledge of state-level TB program managers and M&E specialists on the use of TB data for programmatic decision making was completed. Materials focused on data use and program management and a TOT was held. Materials were then customized and delivered in each of the state settings. As part of the state supportive supervision visits, coaching and mentorship visits were conducted in Akwa Ibom, Kano, and Lagos.

Contribution to USAID’s 2030 Goals



TB DIAH’s core-funded field work and mission-funded work are the important first steps of translating USAID’s strategic approach to achieving its global TB goals, as reflected in the design of TB DIAH products such as the PBMEF and related suite of assessment tools, into action in the priority countries.



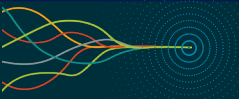
Progress Toward Results

The TB DIAH project provides TA to NTPs, Ministries of Health, and in-country TB implementing partners to collect, analyze, report, and use data to inform decisions in countries with high TB burdens. The project’s strategic selection of workstreams both at the core-funded and mission-funded (country) levels are intended to extend project activity outputs into outcomes which entail use, application, or adoption of TB DIAH-developed or supported products, resources, and activities. The project ultimately aims to influence stakeholders at the country level to reach higher levels of impact: to use TB M&E and surveillance data to inform program or policy decisions and to influence changes to strengthen the country’s TB M&E and surveillance system performance.

Reflecting on the results achieved in Year 4, it is important to note that the project’s results framework includes rigorous outcome and impact indicators that require evidence over time to demonstrate achievement. As such, it is not expected that all project countries will achieve these results on an annual basis or in the same year as their associated activity’s implementation. Project results from the fourth year of the TB DIAH project are detailed below by output, outcome, and impact level results.

Output Results

With the escalation of implementation across all project activities, there was a considerable rise in project outputs from both core- and mission-funded activities in Year 4. Assessments were the backbone of many core- and mission-funded activities throughout the year. The core-funded Data-to-Action-Continuum Toolkit was launched in Year 4, with two field-test workshops in Ghana and Nigeria before the refined Toolkit was implemented in Bangladesh and the Kyrgyz Republic. The core- and mission-funded QTSA activity, whose earliest country implementations date to before the TB DIAH project, was undertaken and completed in the DRC and, by year’s end, was near completion in Vietnam. The STEP, a new activity conceptualized at the end of Year 3, entailed an extensive desk review and in-country workshop components in the Kyrgyz Republic. Mission-funded work in Cambodia, DRC, Kyrgyz Republic, and Nigeria was assessment driven as well. By the end of Year 4, TB M&E capacity assessments were completed in all four countries to gauge the level of understanding of TB M&E essentials before engaging participants at various levels of the health system in TOTs and capacity strengthening trainings using tailored, country-specific and linguistically appropriate TB M&E



curricula. The project conducted an assessment comparison across countries (Cambodia, Kyrgyz Republic, and Nigeria), as well as synthesized the learnings from each country’s unique assessment and curriculum to inform the global TB M&E e-learning course to be launched in Year 5. Twenty-five assessments were completed across core- and mission-funded activities in Year 4. This included the finalization of 13 ARC reports and work on ARC assessments for Haiti and EE Region countries (Armenia, Azerbaijan, Georgia, Moldova). These ARC reports will be finalized in Year 5.

In contrast to earlier years, the project sharply increased its efforts in dissemination events,² seizing opportunities to showcase TB DIAH products and services to highlight the value of the project’s contributions in countries and globally. Sixty-two dissemination events occurred during Year 4, which included 18 training events or TOTs. With the abatement of the COVID-19 pandemic, the project was able to conduct training activities in person.

High profile dissemination events from Year 4 included:

- Thirteen TB Data SIG meetings—with participants representing up to 25 countries;
- A global webinar to showcase the TB Data Hub and its new Data Explorer Tool—attended by 136 participants;
- A global webinar to introduce the TB COE model and highlights of the EE Regional COE—attended by 118 participants;
- A global webinar produced by USAID/Washington as part of its Accelerator webinars to launch the first TB DIAH e-learning course, the USAID TB Contact Investigation (CI) eLearning Course for Frontline Health Workers (FHW);
- A series of EE Region and COE-related convenings:
 - The COE founding event, held May 20, 2022, in Tbilisi to celebrate the center’s partnership among the NCDC, NCTLD, and TB DIAH. The event was held at the NCDC and was well attended, including participants from USAID/Georgia; the Ministry of Internally Displaced Persons, Labor, Health, and Social Affairs; and the WHO/Georgia country office.
 - A regional consultative meeting held July 28–29, 2022, in Tbilisi, Georgia, to catalyze country engagement in COE activities. The meeting was attended by 20 participants from the four COE countries: Armenia, Azerbaijan, Georgia, and Moldova.
 - A regional training workshop on TB M&E and surveillance capacity strengthening for EE NTPs: The in-person workshop took place in Tbilisi, Georgia, November 30–December 2, 2022, and was attended by more than 90 participants from 10 EE region countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan). The event engaged NTP representatives; civil society organizations working in community-based TB M&E; USAID mission health staff; and USAID-funded TB implementing partners (IPs), including TB advisers.

² TB DIAH MEL Plan – Indicator A7 precise definition: “A dissemination event is any type of formal gathering of TB stakeholders in which TB DIAH products and/or services are presented, including but not limited to conferences, webinars, workshops, roundtable discussions, trainings, etc. Dissemination events may be conducted in person or online. A TB DIAH product is any resource, tool, or information product that the project has either developed or updated significantly. A TB DIAH service includes any of the workstreams that are described in core- or field-funded work plans.”

USAID/Washington staff as well as representatives from the World Health Organization Regional Office for Europe (WHO/Europe) and The Global Fund were also engaged. The event laid a solid foundation and further strengthened the grounds for intercountry collaboration through the COE and was an important step toward strengthening the M&E and surveillance capacity in the region.

Outcome Results

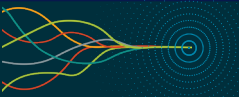
With four mission-funded activities going into their second year of implementation, the project has begun to identify instances of use of TB DIAH products and resources by stakeholders. In June 2022, the project participated in the United Nations Development Program (UNDP)/Global Fund Afghanistan Grant Revision workshop. During the workshop, the NTP Star Advisor (a close collaborator during the QTSA) presented the QTSA findings and recommendations to the grant revision team.

In Nigeria, the results and recommendations of the National M&E Assessment Report were shared with the Global Fund to negotiate for support to develop a ‘homegrown’ electronic medical record (EMR) system to ensure the TB program in Nigeria is fully digitalized. Also in Nigeria, TB DIAH assessed four potential TB Situation Rooms (TBSRs) sites for readiness. The NTBLCP and Kano State STBLCP applied the TB DIAH TBSR assessment recommendations to bring two future TBSR spaces up to appropriate levels of readiness; the two other state sites should be ready early in Year 5.

Global use of TB DIAH PBMEF resources has increased as well, with countries continuing to use the TB Data Hub to provide timely, accurate information for their country roadmaps. The TB DIAH PBMEF landing page views for Year 4 reached nearly 600, representing 59 countries. The English language PBMEF guide has had 1,579 page views (from 1,401 unique viewers). At the local level, stakeholders are finding the relevance of the PBMEF in their work. In Nigeria, KNCV and IHVN—members of the TB Local Organization Network—are using the PBMEF to identify relevant indicators to collect in measuring the performance of their programs.

Exciting progression of TB DIAH’s work comes from the use of project tools in new settings. The Cure Tuberculosis Project, with TA from TB DIAH, used the Global QTSA tools to conduct a QTSA in the Kyrgyz Republic. The Cure Tuberculosis Project in Kyrgyz Republic has also found value in TB DIAH’s data quality assessments, conducted at the oblast level with the NTP. The results were used by Sustaining Technical and Analytical Resources (STAR) advisors and the Cure Tuberculosis (TB) Project to conduct a data quality review workshop.

Given the tremendous outputs from Year 4 in terms of assessments, trainings, and dissemination events, the project anticipates a large volume of related outcome results to be documented in Year 5. Accordingly, Year 5 will be ideal timing for the project MEL Officer to conduct stakeholder surveys and key informant interviews with representatives from NTPs, MOHs, non-governmental organizations (NGOs), and any other stakeholders, as relevant, to glean results that may not otherwise be documented.



Impact Results

The impact level results for the project are intended to document instances in which countries use TB M&E and surveillance data for TB program and/or policy decision making, as well as instances in which countries demonstrate a change in the performance of a TB M&E and surveillance system.

The Kyrgyz Republic had two instances in which the project generated data that informed program and policy decisions. Starting in 2021, the Cure TB project, with TA from TB DIAH, conducted a QTSA which provided comprehensive, nationally representative data on quality of TB care for the first time in the Kyrgyz Republic. The results of this assessment informed achievements and gaps in the TB program and served as a baseline for the national TB strategy (National Program Tuberculosis VI 2022–2026). Additionally, the data quality visits conducted by TB DIAH at the oblast level generated results which were used by STAR and the Cure Tuberculosis Project to conduct a data quality review workshop. It was determined that the data quality review guide will be transformed into a SOP and included in the national M&E guidelines.

In Nigeria, stakeholders (KNCV and IHVN), as part of the TB Local Organization Network, are integrating the PBMEF indicators/data elements into their reporting system for greater accuracy and completeness of monitoring and reporting for USAID purposes. Both partners have used the PBMEF to revise their data collection and reporting to align with USAID reporting.

In Year 5, the project anticipates the use and impact of key Year 4 implementations such as the D2AC, STEP, the EE Region COE, QTSA in DRC and Vietnam to bear fruit and inform changes to programs and policies, and to directly influence improvements to TB M&E and surveillance systems' functioning. As a timely follow up to these many implementation activities, stakeholder surveys and key informant interviews with representatives from NTPs, MOHs, NGOs, and any other stakeholders will provide greater detail about the project's impact beyond planned work.



Lessons Learned

Promising Practices in Activity Implementation

The project has continuous learning structures in place, including an annual all-team meeting, quarterly senior management meetings, and core workplan prep meetings. In all instances, staff utilize these meetings to reflect on their learnings. The purpose of the all-team meeting in July 2022 was to share common areas of work and experiences among our country teams to identify synergies and improved efficiencies, and to learn from each. Common areas of work include capacity strengthening through capacity assessments and TOTs, scorecards/dashboards, DQR, operations research, and increasing NTP website transparency.

Leveraging capacity strengthening support helped build trust to advance other workplan activities in all countries. At the request of all missions, TB DIAH integrated capacity strengthening elements into the workplan that ultimately leveraged progress within other workstreams in each country. Examples include:

- In Cambodia, the development of an M&E plan for the recently approved ten year national strategic plan was intertwined in the activities of the capacity strengthening sessions, bringing senior NTP members into the process.
- In Nigeria, the training to develop interactive charts built into the system for cascade analysis allowed participants to observe data quality gaps and determine actions to fill the gaps. Training on Data Quality Assessment (DQA) tools makes data review sessions more meaningful. Creating electronic reporting instances builds accountability and requires the development of steps to address that process. A change management protocol is being used in Nigeria which facilitates systematic change.
- In the Kyrgyz Republic, a data quality checklist has been developed, piloted, and adapted to be consistent with country requirements. This stimulated requests for integrating a DQA tool into the management information system (MIS).
- Similarly, in Cambodia, the training included completeness but not quality checks. This resulted in the development of customized tools and a mentoring approach.
- In the EE region, a regional training on the PBMEF and WHO indicators brought together 90 TB experts from 11 countries for three days. The opportunity engaged NTP representatives; civil

society organizations working in community-based TB M&E; USAID mission health staff; and USAID-funded TB implementing partners, including TB advisers. USAID/Washington staff and representatives from WHO/Europe and the Global Fund were also engaged. The capacity strengthening event laid a solid foundation and further strengthened the grounds for inter-country collaboration through the regional COE and was another important step toward strengthening the M&E and surveillance capacity in the region.

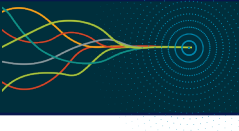
	Cambodia	DRC	EE Region	Kyrgyz Republic	Nigeria
Capacity Assessment	✓			✓	✓
Training/TOT on TB M&E	✓	✓	✓	✓	✓
Dashboards/Scorecards	✓		✓	✓	✓
Data Quality Review Meetings	✓	✓	✓	✓	✓
Operational Research	✓	✓		✓	
NTP Websites	✓			✓	✓

Continuous stakeholder engagement helped strengthen TB DIAH’s activities and deliverables. One of the key stakeholder engagement approaches for the project is the TB Data SIG. The SIG was reestablished in Year 3. The SIG’s main objective is to serve as an overall advisory board or governance structure for TB DIAH, particularly related to the PBMEF and the TB Data Hub. The SIG also serves as a resource group of technical experts to delve deeper into, and provide guidance on, specific topics around TB data. The SIG’s 115 members include USAID/Washington and Mission staff, TB advisers, IPs, and TB DIAH project staff from 25 countries. The project has benefited from the insight and feedback of these experts to develop the Data Explorer, update the PBMEF, improve the TB Roadmap process, and share TB M&E capacity strengthening approaches and tools. TB DIAH will convene monthly meetings with the SIG to engage with USAID Missions and stakeholders to discuss data needs and ensure they are appropriately addressed by the project.

Challenges and Lessons Learned During Activity Implementation

In Year 4, the volume of work and pace of project implementation increased from Year 3, particularly for field-funded activities, resulting in challenges including:

- The TBCI for Frontline Workers e-learning course was launched and rolled out quickly but hasn’t had the anticipated uptake because there was no communications or rollout strategy elaborated. TB DIAH traveled to Nigeria and South Africa to conduct usability tests of the technology and navigation. With these improvements, and the addition of the course



translated into French and Portuguese, the number of users began to increase. This trip was also an opportunity to increase awareness of the course as well as promote the upcoming course “Finding TB cases among PLHIV.”

- Coaching and mentoring are remarkable for helping individuals and teams to learn new skills and enhance current skills while increasing their confidence. The TB program collects, collates, and reports data from numerous sources; however, the extent of data use is still suboptimal compared to the opportunities for data use available in the TB public health space. TB DIAH builds NTP capacity in coaching and mentoring, developing tools and supportive supervision through its work in Cambodia, Nigeria, and the Kyrgyz Republic.
- In Nigeria, after completion of the National TB M&E and Surveillance Assessment, the decision by the NTBLCP and stakeholders to migrate from e-TB manager to a homegrown EMR system conflicted with USAID’s priorities. The team shifted their workplan to focus on other areas—principally the APPR and rollout of TB situation rooms at the national and state levels.
- TB DIAH has a unique role supporting missions in their M&E and surveillance activities. The project remains focused on engaging with donors and working together harmoniously when asked to support IPs in development of their own work (e.g., Nigeria, Kyrgyz Republic).
- In-person meetings, such as the regional meeting held in the EE region in November 2022, are particularly important as we all emerge from the pandemic. These meetings foster creative problem-solving.

Management

USAID Engagement

The TB DIAH team has a close and collaborative relationship with the USAID/Washington team as well as with teams based at missions where our work is focused. The USAID/Washington team grew in project year four with the addition of four team members working within and across the TB DIAH core workstreams and assigned as the M&E focal persons for specific Mission. As the PBMEF is rolled out to missions, USAID is expanding the M&E and surveillance resources available in its Washington headquarters. This year, TB DIAH worked closely with the USAID/Washington team members in the core areas of the TB Data Hub, QTSA, D2AC, and TBCI, all of which link back to the core of TB DIAH's work—the PBMEF and the newer MEL templates. There are weekly technical meetings with the USAID/Washington management team and activity leads, as well as biweekly team meetings for core and mission focused activities. We work together in a spirit of co-creation and collaboration, to ensure that the activities are within scope and adapted as needed. These team meetings include the TB Data Hub, TBCI, D2AC, and PBMEF activities. There is a smaller weekly operations and management meeting as well.

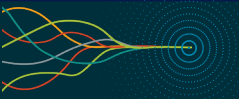
TB DIAH project teams are based in Cambodia, DRC, Kyrgyz Republic, and Nigeria. These teams meet with their USAID Mission counterparts regularly to discuss and implement workplan activities and respond to changing conditions in country requiring adaptation of the workplans. There is fluid coordination with the HQ members of the respective country teams through weekly meetings to discuss technical and operational issues. Monthly meetings are held with the Mission teams in Cambodia and DRC, and biweekly meetings with the Nigeria team. The Mission staff and STAR advisors work with the TB DIAH teams based in country to address M&E systems in each country.

The project moved to a once a month all staff meeting, with weekly team meetings. This flexibility has focused the discussions yet still provides opportunities to share updates with the full USAID/W management team. TB DIAH sends a weekly tracker along with the meeting minutes to USAID/Washington to provide updates on action points agreed upon at the weekly meetings, as well as updates by subactivity for the Mission-funded activities. These weekly updates are then compiled into written monthly updates and shared with the missions and TB project backstops. Quarterly reports are issued 45 days after the end of the quarter for the project and individual reports are made accessible to those countries requesting them.

Coordinating the status of outputs and deliverables has also been systematized this year.

Project Coordination

TB DIAH has weekly internal meetings open to all senior technical staff to simplify cross-project and cross-team communications. The focus shifted to operational and technical problem solving and sharing. The project activities are very synergistic, and it is helpful for operations, finance, and technical staff to take part in the same meetings. Although the meetings occur weekly, their content and focus change throughout the month. The meetings focus for two weeks on core activities, and on country updates the other two weeks. Once a month, an extra 30 minutes are devoted to in-depth



technical discussions. Technical teams include expert staff from both partner organizations, which enhances the discussions, perspectives, and approaches taken.

TB DIAH’s senior management team, which includes the four key personnel, the senior M&E and surveillance advisor, the MEL officer, and financial team members from the project, met quarterly to review the project’s performance, looking specifically at the staffing, financial, and deliverables schedule. The TB DIAH Management Report, generated by the project MIS, guided these discussions.

An in-person all team meeting was held in July 2022 and was the first chance to bring the full team together. The themes included integrating the country-funded activities with the TB DIAH global goods to share the learnings and improve collaboration; communication and knowledge management (KM) with the missions, NTP, and other stakeholders’ sharing country experiences; capturing project learning and progress; and developing workplans for the Mission-funded activities.

Staffing

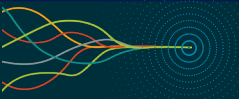
The TB DIAH HQ team works in close collaboration across the partners, as needed, to support the project’s core- and mission-funded activities. Looking across the meeting schedule, there are 17 teams working on project activities and subactivities. TB DIAH’s team of M&E and TB experts grew this year in response to the project’s full calendar of activities.

This year, we were in full implementation in Cambodia, DRC, Kyrgyz Republic, Nigeria, and the EE region, hiring resident advisors or consultant teams in each country—with additional staff added to the teams throughout the year. The Nigeria team is composed of one resident advisor and four staff; Kyrgyzstan has one resident advisor and four staff; Cambodia has four consultants. The DRC team is composed of a local group of TB experts. The EE team hired a regional consultant and is in the process of hiring a national consultant in each of the four countries—Armenia, Azerbaijan, Georgia, and Ukraine—as well as having a network of supporting institutions. Our consultant roster fluctuates depending on the expressed needs of the USAID Missions in each country in response to support needed by the national TB programs.

The HQ key personnel staff was stable in 2022, which allowed for steady implementation, particularly with the SIG committee meetings. TB DIAH’s Principal Investigator (PI), Dr. Manish Kumar, left the project in February 2022. Kavita Ongechi Singh represents the project at UNC. (See Appendix 4 for a complete list of project staff.)

Revision of the MEL Plan

The MEL plan was approved in July 2021. With significant changes in the project activities outlined for Year 5, and through the process of developing country specific MEL Plans, the project is currently drafting proposed revisions to the TB DIAH project MEL Plan to categorize TB DIAH project achievements at a more granular level of detail. The MEL Plan revisions are anticipated to be submitted for USAID/Washington review in August 2023.



Lessons Learned

Use of efficient communication strategies keep the project’s operations moving efficiently across the many project teams, and looping in the appropriate decision makers at the right time is crucial. As the project’s outputs and deliverables increase, so does the need for clear SOPs related to product quality checks and robust KM processes.

Challenges Encountered

Mission funds have been slow to reach the project. There was enough flexibility in the USAID/Washington management team and the TB DIAH team to minimize the impact of these delays on the project’s activities.

The inclusive approach of the teams on the projects creates multiple pathways and conversations and, ultimately, product flow. We are working to streamline that process and to make better choices about channel selection (e.g., shared documents versus calls). There is a specific challenge in terms of platforms to use as the prime doesn’t allow the use of Google applications and the Google suite of products is USAID’s choice.

The nature of TB DIAH’s work requires collaboration and coordination with NTPs, donors, and stakeholders in the countries. It is interesting to note that each country presented its own challenges—leadership changes in the NTP personnel in Kyrgyz Republic; insecurity in Nigeria, due to elections or terrorism, impacted the ability of our in-country teams; and the pace of government approval on key documents (NSPs, operational research agendas) delayed the rollout and uptake of M&E plans related to the NSP and start-up of operations research in Cambodia and Kyrgyz Republic .

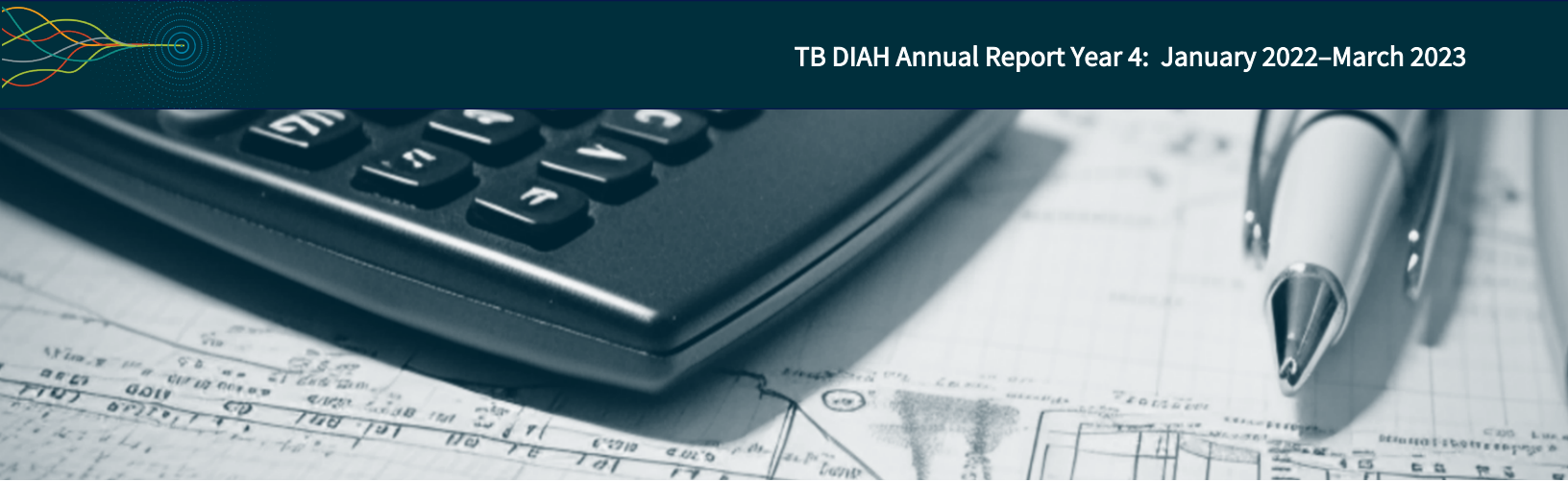
Next Steps

The Year 5 workplan has three priorities.

- 1 Update the PBMEF to align with USAID’s new TB strategy and the new End TB Now Act of 2023.
- 2 Establish the TB Data Hub as a central data repository that can integrate data from multiple sources and meet users’ needs for data gathering, reporting, and visualization.
- 3 Strengthen case-based electronic surveillance system as NTPs transition from paper to digital surveillance systems. Implementation is designed to emphasize partnership and collaboration with stakeholders and targeted capacity strengthening as well as ensure sustainability.

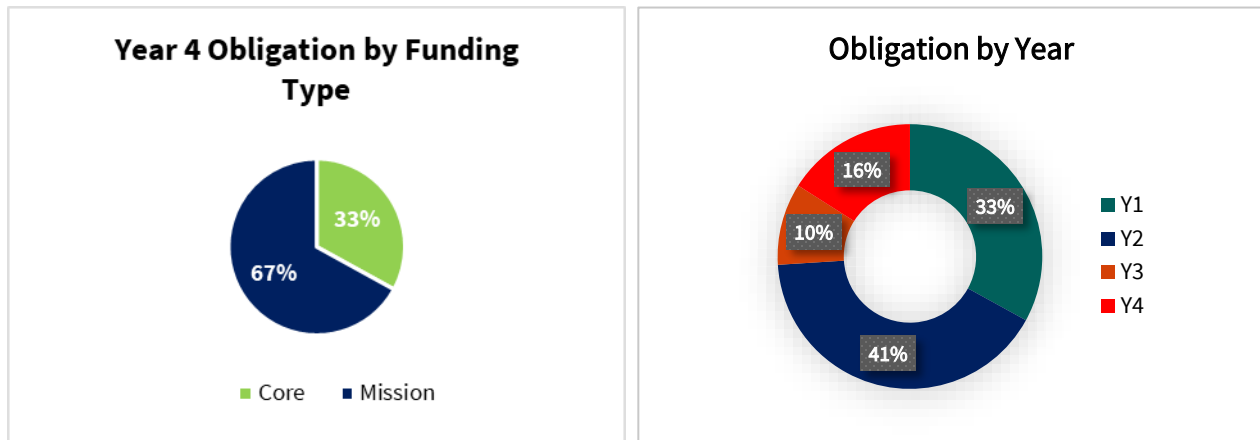
In Year 5, the project will promote the sustainability and legacy of tools, methods, and approaches in terms of making the tools, technical resources, and legacy products available to TB stakeholders on the TB DIAH Knowledge Hub and accessible via different modalities, including on the TB Data Hub, through presentations/sessions at relevant conferences and events, and in technical papers.

Programming in Cambodia, DRC, Kyrgyz Republic, Nigeria, and the EE region will wrap up and transition to other partners in the next 9–12 months.



TB DIAH Finance Year 4

TB DIAH received a total of US\$4,525,609 in funding between January 1, 2022, and March 31, 2023, bringing the total obligation at the end of Year 4 to US\$29,113,353. Funding received in Year 4 was composed of 33% core funds (US\$1,500,000) and 67% mission funds (US\$3,025,609). The remaining funding ceiling at the end of Year 4 was US\$6,828,632.



In Year 4, TB DIAH received mission funding for Cambodia (US\$302,885), DRC (US\$500,000), Kyrgyz Republic (US\$382,724), Nigeria (US\$1,300,000), and Eastern Europe and Eurasia (US\$540,000).

Appendices

Appendix 1. Country Pages



Afghanistan

Overview

TB DIAH’s work in Afghanistan included completing both a QTSA and ARC assessment.

The planning and data collection for the Afghanistan QTSA, a nationally representative health facility survey that assessed the quality of care and services provided by facilities under the NTP, was done in 2020-21.

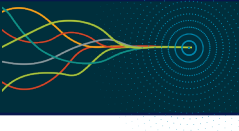
TB DIAH drafted the QTSA technical report, which was reviewed by USAID/Washington staff and staff from AFIAT and UHI (two USAID-funded bilateral projects involved in the implementation of the QTSA as well as the data review and validation), and finalized it in 2022. At the request of the Mission, TB DIAH also developed a document that summarized key findings and recommendations for improving quality of care—for AFIAT and UHI to consider in the development of their project workplans.

We were also asked by the Mission to participate virtually in the UNDP/Global Fund Afghanistan grant revision workshop and to present the QTSA findings and recommendations to the grant revision team.

The project also completed an Assessment of Data Collection, Reporting, and Analysis Capacity in the country.

Year 4 Achievements

- ✓ Completed the QTSA technical report.
- ✓ Developed a summary document of key QTSA findings and recommendations for improving quality of care for AFIAT and UHI.
- ✓ Presented the QTSA findings at the UNDP/Global Fund Afghanistan grant revision workshop.
- ✓ Completed the ARC technical report.



Key Learnings

- The Afghanistan QTSA provides a snapshot of the quality of TB services prior to the Taliban takeover in August 2021.
- The Afghanistan QTSA, which was conducted at the height of the COVID-19 pandemic, included modules that assess the impact of COVID-19 on TB services, providing data-derived evidence of how COVID-19 has set back progress in TB services.

Next Steps

- TB DIAH does not have plans to work in Afghanistan in Year 5.



Cambodia

Overview

TB DIAH’s efforts in Cambodia aim to improve performance of the TB M&E system in the country by assisting CENAT to complete the transition from a paper-based to electronic TB MIS and to improve the capacity to use data for decision making at all levels.

Year 4 Achievements

- ✓ Trained 26 CENAT staff and TB provincial supervisors in use of the TB DIAH TB M&E training curriculum and conducted step-down trainings with 75 operational district TB supervisors.
- ✓ Developed an online TB M&E course, provided free of cost on the TB DIAH and CENAT websites.
- ✓ Developed a Cambodia TB M&E Capacity Assessment Tool, finalized the report, and made publicly available.
- ✓ Developed a publicly available TB M&E Capacity Assessment “Lite” Tool, being used by CENAT to determine the level of knowledge of staff prior to holding trainings and workshops.
- ✓ In collaboration with WHO and other stakeholders, finalized the country’s TB M&E plan, secured CENAT director approval, and made publicly available.
- ✓ Translated and customized the WHO toolkit on data analysis and use, and data quality review, into Khmer for use by CENAT staff; developed supporting materials for data quality review, including an implementation SOP and Excel spreadsheet.
- ✓ Organized a TB-MIS roadmap workshop and provided technical and logistical support to USAID consultant and CENAT, yielding a completed Cambodia TB-MIS roadmap.
- ✓ Led the collaborative development of a report, with recommendations, on the Cambodia TB research enabling environment with other stakeholders.

- ✓ Conducted a situational analysis of TB research in Cambodia (including the prioritization of research agenda items with consensus from the Cambodia Research Technical Working Group [CCTBR]).

Key Learnings

- TB DIAH used a strategy that supported the NTP to address challenges in M&E at a pace that worked for them.
- Deliverables, such as the M&E Plan, were woven into the capacity strengthening activities.
- Teamwork with other donor agencies (e.g., WHO) was critical to moving forward in Cambodia.
- A well-rounded team on the ground, with good management leadership, increased USAID/Mission satisfaction with TB DIAH's progress and enabled the project to help address M&E needs both with CENAT and other IPS.
- Communication with CENAT leadership to advance key activities such as the national M&E plan was essential.

Goals for Year 5

- Strengthen TB M&E and surveillance systems by applying the PBMEF framework.
- Improve integration and enhance access to existing TB data platforms.
- Strengthen M&E and TB research capacity of staff involved in the collection, analysis, and use of TB data.
- Complete all activities and close out by December 2023.



Democratic Republic of the Congo

Overview

TB DIAH's efforts in the Democratic Republic of the Congo (DRC) are intended to strengthen the capacity of the PNLT to collect, report, analyze, and use TB data. TB DIAH will support the PNLT to develop TB surveillance systems and improve data use while building capacity to report on the country's TB indicators, strengthening M&E skills, and developing and promoting data resources. The project also conducted a QTSA in the DRC to measure the quality of TB diagnosis and care services, with the goal of providing the PNLT with information to improve the quality of care for patients.

Year 4 Achievements

- ✓ The QTSA, consisting of five separate survey instruments that gather quality of care data from the facility, provider and client perspectives, and a DQR tool, were administered at 227 TB facilities in the DRC. A QTSA/DQR Data Review Meeting was organized in Kinshasa to review and validate the survey data with the PNLT. The QTSA/DQR data were analyzed and synthesized in two reports that were validated by POSAF, the PNLT, and the USAID Mission.
- ✓ Presented a series of posters on the QTSA at the World TB Day events organized by the PNLT.
- ✓ Updated the country's M&E framework, aligned with the national TB strategic plan.
- ✓ Developed a generic M&E training curriculum.
- ✓ Conducted a national-level TB M&E TOT in August 2022 using the national curriculum developed in partnership with DRC's National TB Program (PNLT), the USAID/DRC mission, IPs, and other national-level technical partners, using TB DIAH's training curriculum as the source document. Subsequently, provincial-level training was conducted in September 2022.
- ✓ Set the national TB operational research agenda through a participatory consultative process coordinated by the PNLT with technical and financial support from the TB DIAH team.
- ✓ Completed operational research to analyze the factors associated with the mortality of TB patients on anti-tuberculosis treatment in the province of Lualaba, with the PNLT leading the technical aspects and the TB DIAH team providing technical inputs and financial support.

Key Learnings

- Partnership with the POSAF, PNLT, USAID Mission, and IPs played an important role in the successful implementation of TB DIAH activities.

Goals for Year 5

- The QTSA and DQR reports and tools will be published on the TB DIAH website in both French and English; the DRC QTSA data will be incorporated into the QTSA Data Explorer tool in the TB Data Hub; and TB DIAH and POSAF will hold a dissemination event to share the reports and the DRC QTSA success story with stakeholders and partners in Kinshasa.
- Provide training sessions for stakeholders in M&E at all levels with emphasis on quantitative and qualitative data analyses.
- Support review meetings for data validation and use at the national, provincial, and zonal levels, and dissemination of TB reports.
- Support the operationalization of DHIS2.
- Support ongoing operational research.



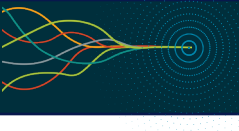
Eastern Europe-Eurasia Region

Overview

The Eastern European (EE) region activity focuses on strengthening the capacity of the TB M&E and surveillance system in five of USAID's priority countries in the region: Armenia, Azerbaijan, Georgia, Moldova, and Ukraine. The project will collaborate with NTPs and other key stakeholders, including the WHO, to develop a roadmap/action plan for improvements. A key part of this activity will be the COE strategy, in which one country within the region will provide TA to NTPs in the region's countries to further improve the use of TB data for decision making.

Year 4 Achievements

- ✓ In the EE region, Georgia was selected as the COE in TB M&E host country. A Founding Event was held in Tbilisi in May 2022 to acknowledge and celebrate the COE partnership with the key COE stakeholders: TB DIAH, the NCDC, and the NCTDC.
- ✓ A TB M&E and surveillance regional consultative meeting was held in Tbilisi in July 2022, in partnership with the NCDC and NCTLD, which convened TB experts from Armenia, Azerbaijan, Georgia, and Moldova.
- ✓ Met with key NTP staff in Armenia, Azerbaijan, and Moldova to discuss country-level priorities.
- ✓ TB DIAH, through the COE framework, hosted the Regional Training Workshop on TB M&E and Surveillance Capacity Strengthening in November 2022. NTP and USAID mission staff from the five EE countries and five Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) attended, as well as staff from USAID/Washington, WHO/Europe, and the Global Fund.
- ✓ A global webinar on the COE model and implementation was held on March 21, 2023. Speakers from TB DIAH, USAID/Washington, WHO/Europe, and Georgia's NCDC and NCTLD presented to a group of 108 attendees representing over 30 countries.



- ✓ Developed a COE design guide, and a Georgian-based agency is developing the COE virtual platform, to be completed in the summer of 2023.

Key Learnings

- Having on the ground support to implement trainings and workshops is very important.
- Trainings and workshops are essential in bringing together key regional stakeholders and to foster relationships, collaboration, and knowledge/learning exchange that would otherwise not take place.

Goals for Year 5

- Support the operationalization of the recently established regional COE to strengthen the M&E capacity of NTPs and other TB partner staff in data management, collection, quality, analysis, and visualization, and promote ownership and use of the TB surveillance system.
- Assess the current TB M&E and surveillance systems in five EE region countries in collaboration with NTPs and other key stakeholders (e.g., WHO) to identify bottlenecks, categorize areas requiring attention, and develop a roadmap/action plan for improvements.
- Improve the use of TB data for decision making through robust data analytics around program performance, resource allocation, procurement, and supply management, and for advocacy at all levels of the health system.
- Adapt TB DIAH's global TB M&E training curriculum and host a TB M&E TOT, engaging NTP staff from Armenia, Georgia, Moldova, and Ukraine.
- Close out all regional activities by March 2024.



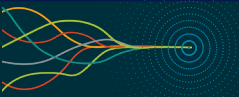
Kyrgyz Republic

Overview

TB DIAH’s efforts in the Kyrgyz Republic focus on strengthening the capacity of the NTP and IPs to collect, report, analyze, and use TB data. The project aims to increase the accessibility and availability of the Kyrgyz Republic’s online TB data resources to enable people to research TB data and use the information for decision making. TB DIAH will support the NTP in developing TB surveillance systems and improving data use, building capacity to report on the country’s TB roadmap indicators, strengthening M&E skills, and developing and promoting online data resources.

Year 4 Achievements

- ✓ As a follow-up to the ARC report dissemination, conducted a STEP workshop and a report highlighting the findings and recommendations.
- ✓ Implemented the D2AC assessment through a workshop, shared the findings—which were utilized by the NTP when developing their annual planning—and completed a workshop report summarizing the proceedings and outcomes.
- ✓ Finalized the M&E capacity assessment report and translated it into Russian, and shared the findings with the TB M&E TWG members to strengthen their capacity.
- ✓ Developed a curriculum on TB M&E in English and Russian that has been adapted to the Eastern Europe and Eurasia context and used to train NTP and USAID mission staff from the five EE countries and five Central Asian countries in the EE region.
- ✓ Conducted an operations research study, “Predictors of Clinical Diagnosis versus Bacteriological Confirmation among Pulmonary Tuberculosis Patients.”
- ✓ Continued support to a TB M&E surveillance TWG. Convened a meeting to discuss the TB-6 indicators at the request of the NTP and the Cure Tuberculosis Project. The TWG also chose 21 indicators for the Kyrgyz Republic dashboard website based on the TB M&E plan.



- ✓ Supported the revision of the Kyrgyz Republic’s TB M&E policy guidelines, development of a second version and final version of the national TB M&E plan, and the sharing of customized reporting templates to track TB program performance against key indicators.
- ✓ Piloted the data quality review checklist and identified gaps in reporting and recording at the management information system and primary healthcare and TB facility levels. Finalized the data quality review checklist.
- ✓ Signed a data sharing agreement between TB DIAH and the NTP.
- ✓ Began work to match the WHO variables with the NTP variables to enable easy data extraction into the TB DIAH TB Data Hub website for newly developed dashboards on the Kyrgyz Republic’s subnational TB data.
- ✓ At the request of the USAID Mission, conducted a mid-project evaluation of the bilateral Cure Tuberculosis Project.

Key Learnings

- Strong local staff have enabled TB DIAH to navigate this complex environment.
- When introducing a new process, such as the STEP, more time is needed to agree on the final outputs and appropriate methodology, or to structure a process with reflective learning and continuous improvement.
- Regular coordination with the Cure Tuberculosis Project, the Mission, and TB IPs is vital to implementing activities successfully.
- The project was able to navigate frequent changes in leadership at the MOH and NTP because of its long-term established collaboration with NTP leadership.
- The NTP and Mission must be included in the early stages of activity planning to ensure shared expectations and agreement on final outcomes.

Goals for Year 5

- Improve the use of TB data available in the electronic TB Management Information System (TB MIS) for operational management of the NTP and monitor progress toward country goals and global targets.
- Improve operational management of the NTP by national partners and other stakeholders to ensure data quality.
- Facilitate reporting on the ten core indicators and associated targets in the TB PBMEF. Also, assist the NTP’s Department of Disease Prevention and State Sanitary and Epidemiological Surveillance (DDPSSES) to use and report other PBMEF indicators.
- Facilitate the NTP policy and/or practice based on the results of the bacteriological coverage study.
- Complete the final deliverable of STEP, the costed plan and the generic STEP guidance document
- Close out all activities by September 2023.



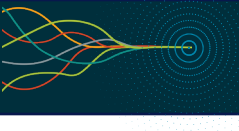
Nigeria

Overview

TB DIAH's work in Nigeria is focused on strengthening the country's TB system's capacity to collect, manage, and use data. The approach has focused on ensuring streamlined and efficient data management processes, uniformity and interoperability of the systems, and the establishment of an interactive data dashboard to make the country's TB data easily accessible by decision makers.

Year 4 Achievements

- ✓ Launched the APPR system used by USAID to track IPs' performance.
- ✓ Developed reporting templates and a standardized weekly TB performance review slide deck for weekly meetings with IPs and USAID and quarterly deep dive analyses, improving data quality, reducing data entry workload, and improving data analytics and visualization.
- ✓ Completed APPR rollout trainings for IPs in Lagos and other zones.
- ✓ Assisted the LON partners in Nigeria (KNCV and IHVN) to create a customized DHIS2 instance to ensure seamless data exchange between IPs' data management systems and the APPR.
- ✓ Completed an assessment of the proposed TB Situation Room locations in Anambra and Osun states (in addition to existing locations in Abuja and Kano states).
- ✓ Established a national TB Situation Room, to be launched in June 2023.
- ✓ Completed an M&E training curriculum for state-level TB program managers and M&E specialists on the use of TB data and performance-based indicators for programmatic decision making based on the outcomes of survey findings and expert opinions, and tailored to meet the needs of the trainees.
- ✓ Integrated coaching and mentorship visits as part of state supportive supervision visits in Akwa, Ibom, Kano, and Lagos.



- ✓ Completed a technical report on the findings of National Electronic TB Information Management System Assessment.
- ✓ Supported the NTP and stakeholders to develop a roadmap and costed investment plan in response to the findings from the NETIMS assessment, to be implemented in future years.
- ✓ Completed a landscape analysis to inform the development of a new NTBLCP website, to be launched in May 2023.

Key Learnings

- Processes and relationships are critical in a complex environment. TB DIAH worked collaboratively with the NTBLCP and relevant stakeholders to conduct an NETIMS assessment and develop a digital health strategic approach. The NTBLCP favored deployment of a homegrown EMR system. The project presented what they felt could be accomplished in the time available (12 months). USAID did not approve that plan. In response, the TB DIAH team pivoted in a way that maintained the confidence and collaboration of the NTBLCP to focus on the TB Situation Rooms and capacity strengthening in data use.
- Coaching and mentoring are remarkable for helping individuals and teams learn new skills and enhance current skills while increasing their confidence. The TB program collects, collates, and reports data from numerous sources; however, the extent of data use is still suboptimal compared to the opportunities for data use in the TB public health space.

Goals for Year 5

- Improve functionality and interoperability of the IP data management system with the USAID mission's internal data management system.
- Improve TB data quality, visibility, access, and use for program planning
- Improve data-driven programming.
- Launch one national TB Situation Room and two additional state Situation Rooms.
- Close out activities by Q1 2024.

Appendix 2. Year 4 Results

Table 2. Results by Output Indicator through Year 4

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
A1. Number of TB Data Hub resources (e.g., reporting tools, templates, and dashboards) developed/updated by TB DIAH	1	4	9	12	<ol style="list-style-type: none"> 1. COVID-19 Dashboard 2. Cascade visualizations in Contact Investigation Dashboard 3. Data Explorer Tool 4. Improvements were made to the Country Dashboards on the TB Data Hub 5. Kyrgyz Republic Subnational Dashboards (Russian) 6. PBMEF thematic dashboards 7. Tutorial video on how to use PBMEF section of TB Data Hub 8. Contact Investigation Dashboard 9. Drug-Resistant (DR)-TB dashboard 10. TB Data Hub video "An introduction to the new PBMEF section in the TB Data Hub" 11. The Prevention data collection form developed for data collection in Y4Q2 12. The TB Roadmap data collection forms developed for data collection in Y4Q2 	26	16
A2. Number of assessments completed by or with support from TB DIAH	0	43	37	25	<p>ARC country reports</p> <ol style="list-style-type: none"> 1. Afghanistan Final ARC Report 2. Ethiopia Final ARC Report 3. Indonesia Final ARC Report 4. Kenya Final ARC Report 5. Malawi Final ARC Report 6. Mozambique Final ARC Report 7. Nigeria Final ARC Report 	105	53

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					8. South Africa Final ARC Report 9. Tajikistan Final ARC Report 10. Tanzania Final ARC Report 11. Uganda Final ARC Report 12. Uzbekistan Final ARC Report 13. Zambia Final ARC Report Additional Assessments 14. QTSA for DRC 15. D2AC assessment for Bangladesh 16. D2AC assessment for Ghana 17. D2AC assessment for Kyrgyz Republic 18. D2AC assessment for Nigeria 19. Cambodia TB M&E Capacity Assessment Lite Tool 20. DRC DHIS2 capacity assessment 21. Needs assessment of Kyrgyz Republic NTP website 22. Needs assessment of Nigeria NTP website 23. Nigeria data quality assessment (5 states) 24. Nigeria M&E Capacity Assessment 25. Nigeria TBSR Needs Assessment		
A3. Number of field-funded TB M&E and surveillance strengthening activities (12+	0	0	0	0	<i>Note: Field-funded activities for Cambodia, DRC, Kyrgyz Republic, and Nigeria have exceeded 12+ months in length and will count for this indicator once they end in Year 5.</i>	0	4

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
months in length) completed							
A4. Number of Centers of Excellence (COEs) established ³	0	0	0	1	1. Center of Excellence for the Eastern Europe and Eurasia (EE) Region	1	At least 3, additional TBD
A5. Number of countries that requested support from TB DIAH for PBMEF reporting	0	1	6	2	1. Email to TB Data Hub Help Desk requesting reporting support from India Mission 2. Email to TB Data Hub Admin requesting support from Nigeria Mission	2	At least 4, additional TBD
A6. Number of products (e.g., reports, visualizations, guidance, etc.) developed/updated by TB DIAH	17	8	26	55	E-Learning courses, training materials, curricula 1. TB Contact Investigation (TBCI) e-learning course (English) 2. TBCI Frontline Worker e-Learning course (French) 3. TBCI Frontline Worker e-Learning course (Portuguese) 4. Cambodia OD-level training materials 5. DRC Generic M&E training curriculum 6. Kyrgyz Republic training TB M&E curriculum for TOT 7. Nigeria training curriculum for State Program Managers and M&E Officers 8. Nigeria training curriculum for M&E needs of the LGTBLS	106	126

³ Following approval of the Year 5 Core WP, the MEL Officer will revisit this indicator as the project will not pursue establishment of additional COEs. An additional outcome indicator could be added to capture the significant investment of time, TA, and resources in the EE Region COE.

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>Reports and Plans</p> <ul style="list-style-type: none"> 9. Cambodia landscape analysis of the needs for and use of analytical data 10. Cambodia TB Research Situational Analysis Report 11. Cambodia TB Research Capacity Building Plan for CENAT Research Unit 12. DRC - The national framework for TB monitoring and evaluation was developed and made ready for dissemination. 13. Nigeria National TB Electronic System Assessment technical report 14. NTP Websites Landscape Analysis report (PowerPoint) 15. Final country Roadmap reports for the 24 TB priority countries for 2022 (2021 data) 16. Final country Roadmap cross-country summary report for the 24 TB priority countries for 2022 (2021 data) 17. TB prevention indicators assessment profiles for 23 countries for 2022 (2021 data) 18. Completed Core Indicator Tables for TB Roadmap 19. 2022 Prevention Report (508 compliance/formatting) <p>Publications and Presentations</p> <ul style="list-style-type: none"> 20. Center of Excellence (COE) poster for 53rd Union Conference - "Improving TB monitoring, evaluation, and surveillance with a virtual center of excellence model." Presented by Georgia NCTLD staff. 		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>21. QTSA abstract accepted for the Health Systems Research (HSR) 2022 Conference: “Are TB Patients Receiving Patient-Centered Care?: A Multi-country Comparison” (poster presentation)</p> <p>22. QTSA Union Conference 2022 presentation: “Comparison of TB Services Available and TB Services Received in two East African Countries” (Oral Presentation)</p> <p>23. QTSA Union Conference presentation: The Union World Conference on Lung Health 2022 (Nov. 8-11, 2022): “Are People with TB Receiving Person-Centered Care?: A Multi-country Comparison” (Oral Presentation);</p> <p>24. The D2AC team published a peer-reviewed article: “Development and expert validation of a ‘Data-to-Action Continuum’ to measure and advance the data-use capabilities of national tuberculosis programs” in the Journal of Global Health Reports (Dec. 5, 2022)</p> <p>Tools and Toolkits</p> <p>25. D2AC Toolkit and supporting materials (Russian)</p> <p>26. QTSA DRC tools (English and French) including Patient Interview tool (translated into 4 local languages)</p> <p>27. QTSA Vietnam tools</p> <p>28. Generic M&E capacity assessment for use globally</p> <p>29. Translations of all PBMEF materials (the PBMEF guide, a two-pager, a four-pager, and a FAQ doc) in French, Russian, Portuguese</p>		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>Protocols</p> <ul style="list-style-type: none"> 30. Kyrgyz Republic bacteriological coverage study protocol 31. Nigeria data exchange protocol 32. QTSA DRC protocol (English and French) 33. QTSA Vietnam protocol <p>Webpages</p> <ul style="list-style-type: none"> 34. TB DIAH e-Learning portal 35. CENAT e-learning platform with TB M&E modules (English and Khmer) 36. D2AC webpage on Knowledge Hub 37. Capacity Strengthening page on Knowledge Hub 38. TB DIAH global goods (Centers of Excellence, NTP Websites, ARC, MESSA, and STEP) <p>Briefs, Infographics, and 2 pagers</p> <ul style="list-style-type: none"> 39. Cambodia country two-pager 40. DRC country two-pager 41. Kyrgyz Republic country two-pager 42. Nigeria country two-pager 43. EE Region two-pager 44. 2-page overview for D2AC (English, French, Portuguese, Russian) 45. QTSA infographics <p>Additional Products</p> <ul style="list-style-type: none"> 46. Nigeria harmonized list of LGA and facility names used by the different information systems 47. Nigeria APPR user manual, indicator reference manual, and the change management procedure (CMP) manual 		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					48. Nigeria DHIS2 module TB developed within the PEPFAR system 49. Nigeria APPR reconfiguration and CARD alignment 50. Revised checklists and monitoring report templates for Kyrgyz Republic 51. Summary analysis of the findings of 65 IP MEL plans reviewed 52. Nigeria on-going revision of the weekly and monthly reporting template for IPs 53. Translated and customized WHO toolkit on data analysis and use into Khmer 54. Updated Kyrgyz Republic National TB M&E Plan 55. TB DIAH Digest e-newsletters for Y4: April 2022, Jan 2023, Nov 2022		
A7. Number of dissemination events of TB DIAH products and/or services completed	1	5	20	60	Webinars <ol style="list-style-type: none"> 1. Webinar: “Using a Virtual Center of Excellence Model for Strengthening TB Monitoring and Evaluation” (March 21, 2023) 2. Webinar: “Introducing TB DIAH’s Data Hub” (October 13, 2022) 3. Webinar: “Launch of the New ‘TB Contact Investigation for Frontline Workers’ e-Course” (April 12, 2022) hosted on USAID/Washington platform with content developed and presented by TB DIAH TB Data SIG Meetings <ol style="list-style-type: none"> 4. TB Data SIG Meeting (Jan. 18, 2022) 5. TB Data SIG Meeting (Feb 15, 2022) 6. TB Data SIG Meeting (March 15, 2022) 7. TB Data SIG Meeting (April 19, 2022) 	86	12

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<ul style="list-style-type: none"> 8. TB Data SIG Meeting (May 17, 2022) 9. TB Data SIG Meeting (June 28, 2022) 10. TB Data SIG Meeting (July 26, 2022) 11. TB Data SIG Meeting (Sept. 28, 2022) 12. TB Data SIG Meeting (Nov. 2, 2022) 13. TB Data SIG Meeting (Dec. 6, 2022) 14. TB Data SIG Meeting (Jan. 10, 2023) 15. TB Data SIG Meeting (Feb. 14, 2023) 16. TB Data SIG Meeting (March 14, 2023) <p>Large-Scale Meetings and Workshops⁴</p> <ul style="list-style-type: none"> 17. EE Region COE Founding Event (May 20, 2022) in Tbilisi, Georgia 18. A Regional Consultative Meeting for the EE Region COE in Tbilisi, Georgia (July 28-29, 2022) 19. Regional Training Workshop on TB M&E and Surveillance Capacity Strengthening for Eastern Europe and Eurasia (EE) National TB Programs (NTPs) in Tbilisi, Georgia, (November 30–December 2, 2022) 20. STEP Workshop in Kyrgyz Republic (November 10–11, 2022) 21. Cambodia workshops (January 25-27, 2023) (February 13, 2023) for indicator finalization and target setting for the selected indicators in line with PBMEF WHO, and the National Strategic Plan (NSP) goals, objectives, and targets. 		

⁴ D2AC workshops were undertaken to complete the assessment and appear under A2.

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>22. DRC national review meeting (October 24–28, 2022); TB DIAH provided technical, logistical, and financial support.</p> <p>23. DRC national TB review meeting conducted in Lubumbashi (September 2022)</p> <p>24. DRC national workshop was conducted on TB operational research agenda-setting conducted with the national technical working group and coordinated by PNLT (August 2022)</p> <p>25. DRC PNLT workshop for customizing the training curriculum for the provincial level with TB DIAH support (July 2022)</p> <p>26. DRC PNLT workshop for national training curriculum development with TB DIAH support (July 2022)</p> <p>27. Haiti PNLT, USAID/Haiti, and TB DIAH workshop in Washington, D.C. (November 14–16, 2022) to discuss the TB M&E landscape through the lens of the PBMEF and to develop an action plan for further strengthening the TB M&E system in Haiti.</p> <p>28. A three-day workshop with the Nigeria NTBLCP to review and finalize the National Electronic Tuberculosis Information Management System (NETIMS) assessment report resulting in clear recommendations and next steps towards the development of the roadmap (February 2022)</p> <p>29. Q3 NTBLCP Zonal Review Meetings in Nigeria included TB DIAH presentation on the TB preventive therapy (TPT) and gaps in coverage to inform develop actions plan to improve TPT coverage. The PBMEF was used to illustrate the</p>		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>TPT cascade presentation in a way that aligned with the NTBLCP reporting system (October 26–28, 2022)</p> <p>30. Nigeria M&E Capacity TB Monitoring & Evaluation Training for Local Government Area TB & Leprosy Supervisors in Nigeria (August 15 – 19, 2022)</p> <p>31. Nigeria TBSR orientation workshops in Abuja (February 7-8, 2023) and Kano State (February 14 – 17, 2023)</p> <p>32. Nigeria TBSR SOP development workshop in Uyo, Akwa-Ibom state, (September 8-10, 2022)</p> <p>33. Field test workshop of the D2AC Toolkit in Abuja, Nigeria (April 20–21, 2022)</p> <p>34. Cambodia provided logistical support to organize three consultative workshops (October 4, 18, and 21, 2022) in Phnom Penh on the TB-MIS</p> <p>35. Cambodia orientation of the OD curriculum to core trainers was organized (September 2022)</p> <p>Presentations</p> <p>36. Kyrgyz Republic subnational dashboard was presented during an internal meeting with the Cure TB project (August 23, 2022) and to NTP director (August 30, 2022).</p> <p>37. The TB Data Hub was presented to the Kyrgyz Republic Mission</p> <p>QTSA data review meetings</p> <p>38. DRC QTSA Data Review Meeting (November 18–19, 2022)</p>		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>Consultative and Coaching Meetings</p> <ul style="list-style-type: none"> 39. National consultative meeting with Armenia 40. National consultative meeting with Azerbaijan 41. National consultative meeting with Georgia 42. National consultative meeting with Moldova 43. EE Regional Consultative Meeting (July 28-29, 2022) 44. Nigeria coaching and mentorship visits at the subnational level (Year 4, Quarters 3, 4, 5) <p>Trainings</p> <ul style="list-style-type: none"> 45. Regional Training Workshop on TB M&E and Surveillance Capacity Strengthening for Eastern Europe and Eurasia (EE) National TB Programs (NTPs) in Tbilisi, Georgia, (November 30–December 2, 2022) 46. QTSA training workshop for data collectors (February 8-16, 2023) in Hanoi, Vietnam 47. Cambodia second round of TB monitoring & evaluation (M&E) training of trainers (TOT) for provincial TB supervisors (March 7-13, 2022) 48. Cambodia DQR training (March 28-30, 2023) for operational districts 49. DRC QTSA TOT (March 21-April 2, 2022) 50. DRC TA supported the PNLT to organize a national training-of-trainers (TOT) in Kinshasa for participants from provinces and the central office of the PNLT (August 8-10, 2022) 51. DRC first provincial-level M&E step down training in collaboration with PNLT (September 19-24, 2022) 		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					52. DRC second provincial-level M&E step down training in collaboration with PNLT (September 30–November 4, 2022) 53. Kyrgyz Republic TOT for M&E TB coordinators (July 26-29, 2022) 54. Nigeria second TB Data Management Bootcamp occurred in Lagos state for participants from six organizations (January 16–20) 55. Nigeria APPR state level trainings: Kano State (March 15-17, 2022), Lagos State (March 14-16, 2022), Nasarawa State (March 29-31, 2022), Akwa Ibom State (March 28-30, 2022) 56. Nigeria APPR trainings - With the support of Data.Fi, training began with a five-day central level APPR training in Lagos with participants from USAID mission and TB LON partners (March 2022) 57. Nigeria TA to provide DHIS2 training for IHVN (February 6-10, 2023) 58. Nigeria state level M&E cascade trainings held in four batches across the country and were completed for all 35 states and the Federal Capital Territory (FCT) (June 6–July 1, 2022). Training for the local government supervisors was in August 2022. 59. QTSA DRC LRO TOT training on QTSA data collection (March 21 - April 2, 2022) 60. QTSA Vietnam training workshop in Hanoi for data collectors and data collection team leaders (February 8-16, 2023)		

Output indicators	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
A8. Number of individuals reached through electronic media dissemination of TB products supported by TB DIAH	3,000 email subscribers, 106 social media followers	5,600 email subscribers, 440 social media followers	5,570 email subscribers, 571 social media followers	2,766 email subscribers, 728 social media followers (409 LinkedIn + 319 Twitter)	Email subscribers: 2,766 LinkedIn followers: 409 Twitter followers: 319 Knowledge Hub visitors (pageviews/visitors): 56,511/18,103 TB Data Hub visitors (pageviews/visitors): 68,759/8,888	2,766 email subscribers, 728 social media followers (409 LinkedIn + 319 Twitter)	7,450 email subscribers 580 social media followers

Table 3. Results by Outcome Indicator through Year 4

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
B1. Number of countries that utilized a TB Data Hub resource to produce a TB information product (e.g., report, data visualizations, etc.)	0	23	23	23	<ol style="list-style-type: none"> Of the 24 TB priority countries, 23 countries⁵ used the TB Data Hub TB Roadmap tool to enter data for the 2022 TB Roadmap, which generated a Table 4 for their TB Roadmap in May 2022. Of the 24 TB priority countries, 23 countries⁶ used the TB Data Hub to enter data for the Prevention Indicators/PBMEF Core Indicator Assessment, which provided them with PBMEF Core Indicator Assessments Results PDFs. 	23	23

⁵ Ukraine did not participate.

⁶ Ukraine did not participate.

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					3. In Year 4, the TB Data Hub ARC tool was used to enter data for 1 country (Haiti) to support a workshop November 14-16, 2022, during which the NTP and Mission representatives met with TB DIAH to review the TB M&E system and structure in Haiti. Following the opening presentations, the TB DIAH team worked with the Haiti stakeholders to collect additional information needed for the Assessment of Data Collection, Reporting, and Analysis Capacity (ARC); M&E and Surveillance Systems Assessment (MESSA); and indicator prioritization. The ARC findings supported data verification and review activities during the workshop. ^{7,8}		
B2. Number of instances of use ⁹ of an action plan by a TB stakeholder following completion of an assessment	0	0	0	2	<ol style="list-style-type: none"> 1. Nigeria TBSR Assessment conducted in Abuja – recommendations adopted by NTBLCP to bring proposed TBSR site up to level of readiness (equipment, electrical, technology essentials) required to launch successful TBSR. 2. Nigeria TBSR Assessment conducted in Kano State – recommendations adopted by STBLCP to bring proposed TBSR site up to level of readiness (equipment, electrical, technology essentials) required to launch successful TBSR. 	2	30

⁷ The Haiti ARC report will be finalized in Year 5 and reported under indicator A2 with other ARC reports.

⁸ Additionally, ARC assessments which were started in EE Region countries (Armenia, Azerbaijan, Georgia, Moldova) during Year 4 will be completed in Year 5; their final reports will be reported under A2.

⁹ The use of an assessment action plan may not occur immediately after the recommendations are available to TB stakeholders and may occur after the TB DIAH activity is complete. In Year 5, the project will use targeted interviews, web-based surveys, and/or other approaches to capture instances of stakeholder use following TB DIAH assessments.

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
B3. Proportion of field-funded TB M&E and surveillance strengthening activities that result in a demonstrated change in a specific M&E and surveillance practice	0	0	0	0	<i>Note: Field-funded activities for Cambodia, DRC, Kyrgyz Republic, and Nigeria have exceeded 12+ months in length and will count for the denominator of this indicator once they end in Year 5.</i>	0%	85%
B4. Number of instances of M&E technical support provided by a COE ¹⁰ to TB stakeholders	0	0	0	1	1. Regional Training Workshop on TB M&E and Surveillance Capacity Strengthening for Eastern Europe and Eurasia (EE) National TB Programs (NTPs) in Tbilisi, Georgia, (November 30–December 2, 2022)	1	6
B5. Number of countries that entered high-quality data on all 10 core PBMEF indicators ¹¹	0	0	0	10	1. Of the 24 TB priority countries reporting in May 2022, 14 countries had missing data or data discrepancy in the 2022 Projections or 2021 Provisional Data. ¹²	10	23

¹⁰ EE Region COE to begin providing country-specific TA in Year 5, to be launched with a Regional Workshop in May 2023.

¹¹ Following approval of the Year 5 Core WP, the MEL Officer will revisit this indicator definition to add more specific language about how quality is assessed (and at exactly what point in the submission/review process) as the current definition/IRS is written broadly.

¹² Missing data/discrepancies identified in TB DIAH internal review of data submissions into TB Data Hub and reported to USAID/W on May 31, 2022.

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
B6. Proportion of TB DIAH products used by a TB stakeholder	0	24% (6/25)	37% (19/51)	27% (29/106)	<ol style="list-style-type: none"> 1. The Cure TB project, with TA from TB DIAH, used Global QTSA tools to conduct QTSA in Kyrgyz Republic. 2. Afghanistan NTP STAR advisor shared the QTSA Afghanistan recommendations and findings in a presentation in the UNDP/Global Fund Afghanistan Grant Revision workshop to inform the renewal of the Global Fund/UNDP combined grant to support HIV/AIDS, TB and malaria grant and health systems in Afghanistan. 3. The results and recommendations of the National M&E Assessment Report assessment was shared with Global Fund to negotiate for support to develop a homegrown electronic medical record to ensure TB program in Nigeria is fully digitalized. 4. The assessment's findings were condensed and presented to the NTBLCP and other stakeholders along with implementation scenarios for an electronic medical record platform. The assessment findings are being used by NTBLCP to support their desire for a domestic electronic medical record. 5. Local Organization Network (KNCV and IHVN) Using the PBMEF to identify relevant indicators to collect in measuring the performance of their program 6. TB DIAH visited Naryn oblast with the NTP to 	27% (29/106)	75%

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
					<p>conduct data quality visits. The results were used by STAR and Cure TB to conduct a data quality review workshop.</p> <p>7. TB DIAH developed the M&E of TB Programs in Cambodia in collaboration with CENAT. CENAT now hosts the training in the Khmer on its website and uses it for capacity strengthening for its staff.</p> <p>8. COMMIT and CENAT used the OD level training curriculum developed by TB DIAH to train OD level TB supervisors.</p> <p>9. COMMIT and CENAT used the lite TB M&E Capacity Assessment tool.</p> <p>10. Kyrgyz Republic - The data quality checklist was installed into the tablets of oblast TB M&E coordinators during the TOT conducted from July 26-29, 2022, for their familiarization and use. They will be required to use the checklist during their visits. The checklist is being implemented nationwide.</p>		

Table 3. Results by Impact Indicator through Year 4

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
C1. Number of countries that use	0	0	1	1	<p>1. Kyrgyz Republic</p> <ul style="list-style-type: none"> In 2021, Cure TB, with technical assistance from 	2	15

Outcome indicator	Results by year				Year 4 results	Result totals through Year 4	Life of the project targets
	Y1	Y2	Y3	Y4			
<p>TB M&E and surveillance data for TB program and/or policy decision making</p>					<p>TB DIAH, conducted a QTSA which provided comprehensive nationally representative data on quality of TB care for the first time in Kyrgyz Republic. As the Cure TB project was involved in the National Program Tuberculosis VI development, they used some preliminary QTSA results for setting NTP priorities and formulation of relevant sections and implementation plan of the national TB strategy.</p> <ul style="list-style-type: none"> Kyrgyz Republic - TB DIAH visited Naryn oblast with the NTP to conduct data quality visits. The results were used by the STAR advisor and the Cure TB project to conduct a data quality review workshop. The data quality review guide will be transformed into a SOP and included into the M&E guideline. 		
<p>C2. Number of countries that demonstrate a change in the performance of a TB M&E and surveillance system</p>	0	0	1 (25%)	1 (25%)	<p>1. Nigeria</p> <ul style="list-style-type: none"> Local Organization Network projects (KNCV and IHVN) are both integrating the PBMEF indicators/data elements into their reporting system - Both partners have used the PBMEF to revise the data collection and reporting in order to align with the USAID reporting needs. 	<p>25% of countries that engage in TB M&E and surveillance system strengthening</p>	<p>75% of countries that engage in TB M&E and surveillance system strengthening</p>

Appendix 3. Publicly Available Year 4 Key Deliverables

Center of Excellence (COE) poster for 53rd Union Conference: “Improving TB Monitoring, Evaluation, and Surveillance with a Virtual Center of Excellence Model”

Introduction

The TB Data, Impact Assessment and Communications Hub (TB DIAH) is a multi-country, multi-sectoral partnership between the TB Impact for International Development (TBDIAH) and a virtual center of excellence (COE) model. The goal was to create a center of excellence (COE) model to improve TB M&E research, dissemination, expertise, and teaching and service to improve TB M&E.

Methods

TBDIAH developed standard qualitative and quantitative methods to assess TB M&E. The COE model was created to establish and promote best practices with a center of excellence (COE) model to improve TB M&E research, dissemination, expertise, and teaching and service to improve TB M&E.

Results

A virtual COE was established in Georgia for the Eastern Europe and Central Asia region. The COE model has helped to establish and promote best practices with a center of excellence (COE) model to improve TB M&E research, dissemination, expertise, and teaching and service to improve TB M&E.

Discussion

The Georgia COE has become a model for TB M&E research and dissemination. The COE model has helped to establish and promote best practices with a center of excellence (COE) model to improve TB M&E research, dissemination, expertise, and teaching and service to improve TB M&E.

COE Website

QTSA Union Conference presentation: “Convergence and Divergence TB Treatment Support Services between TB Health Facilities and People with TB in two East African Countries” (Oral Presentation)

The Union WORLD CONFERENCE ON LUNG HEALTH 2022
COMBATING PANDEMICS, TODAY & TOMORROW
Virtual Event November 8-11

CONVERGENCE AND DIVERGENCE TB TREATMENT SUPPORT SERVICES BETWEEN TB HEALTH FACILITIES AND PEOPLE WITH TB IN TWO EAST AFRICAN COUNTRIES

Kola Oyediran
TB Data, Impact Assessment and Communications Hub (TB DIAH)
Project

worldlunghealth.org #UNIONCONFERENCE #UNIONCONF

QTSA abstract accepted for the Health Systems Research (HSR) 2022 Conference: “Are Individuals with TB Receiving Person-Centered Care?: A Multi-country Comparison” (poster presentation)

Are Individuals with TB Receiving Person-Centered Care?: A Multi-country Comparison

Nikki Davis¹, Kolarvole Oyediran¹, Hana Zwick², Upama Khatri¹, Stephanie Mullen¹, Charlotte Colvin¹

¹ John Snow, Inc.
² Duke Global Health Institute
³ US Agency for International Development

Background

Person-centered care offers a path to improved TB outcomes by providing care that is responsive to and respectful of individuals' needs and desires and uses these preferences and priorities to guide clinical decisions. In recent years, countries have strived to identify and provide responsive treatment support services by using a person-centered approach, though considerable gaps still exist.

Methods

Quality of TB service assessments (QTSA) were conducted in Afghanistan, Ethiopia, Philippines, and Uganda between 2019-2021. Across the four countries, 1,969 individuals on TB treatment were surveyed and asked to specify TB treatment services they deemed beneficial, and of those services, which ones they received.

Results

When comparing desired services desired by people with TB against services received, major gaps existed across all of the QTSA countries. Free TB medicines had the smallest gap across all four countries given a large proportion of individuals with TB reporting that they received free TB medicines. In general, Uganda was found to have smaller gaps among TB the most desired services and the services most often received. The largest gaps between desired and received services were related to the provision of transportation assistance and nutritional support (e.g., food baskets) across all four countries.

The D2AC team published their second peer-reviewed article on the Toolkit development process in the Journal of Global Health Reports

Research Article

Development and expert validation of a 'Data-to-Action Continuum' to measure and advance the data-use capabilities of national tuberculosis programs

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Keywords: tuberculosis, data use, capacity building, toolkit

<https://doi.org/10.2196/jghr.2022.0010>

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Vol. 6, 2022

Background

The Data-to-Action Continuum (D2AC) Toolkit is intended to advance the data use capabilities associated with people, processes, technology, and institutions of national tuberculosis programs (NTPs). It empowers NTPs and stakeholders to measure current capabilities, identify areas amenable to interventions to build future capacities, and helps align the TB information systems to better achieve the NTP's goals. This paper describes the development process of the D2AC Toolkit, whose aim is to enable NTPs and stakeholders—especially the policymakers, program managers, and laboratory and facility managers—to precisely gauge the barriers limiting the use of data for action and devise appropriate interventions to address them.

Methods

Building on a scientific and grey literature foundation, the D2AC Toolkit was collaboratively developed by a core group of the TB Data, Impact Assessment and Communications Hub (TB DIAH) project. The Toolkit was validated by a group of international and country-level experts following an iterative and user-centered process.

D2AC Union Conference presentation: “Data-to-Action Continuum: Introduction to the D2AC Model and Toolkit”

The Union
WORLD CONFERENCE ON LUNG HEALTH 2022
COMBATING PANDEMICS, TODAY & TOMORROW
Virtual Event November 8-11

Data-to-Action Continuum: Introduction to the D2AC Model and Toolkit

Jeanne Chauflour, MS; Meredith Silver, MPH; Yanira Garcia-Mendoza, MPH; David Boone, PhD

E-Poster No. 15-748

Background	Design Method	Results	Conclusions
<p>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 for TB (GATB) is the Agency's programmatic approach to fight TB. Under the Accelerator, USAID funds the TB Data, Impact Assessment and Communications Hub (TB DIACH) project, which developed a 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 prioritize gaps/barriers to data use and assess decision-making capabilities of different actors across their health systems. The purpose of the 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 identify evidence M&E 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) identifying gaps/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.</p>	<p>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 country's 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 quotations submitted in the 32 (Ghana) and 42 (Nigeria) instruments and brought up in group discussions and report-backs—were transcribed and analyzed.</p> <p>Figure 1. The five continuum levels of the D2AC scale</p>	<p>In Ghana, the overall D2AC assessment score from the aggregate group responses was 3.18 (out of 5), putting Ghana at an “establisher” level according to the D2AC (see Figure 1). The country performed best in Data Collection and Reporting (score of 3.68) and had the lowest score in ICT (score of 1.89). In Nigeria, the overall D2AC assessment score from the aggregate group responses was 3.45 (out of 5), putting Nigeria at an “establisher” 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 2.09).</p> <p>Priority recommendations were developed in small groups. They were then combined to identify a plan to develop a post-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 analysis, resolve data management software synchronization challenges, regularly recruit staff on new tools and forms, implement a hardware needs assessment, allocate funds to procure hardware and essential TB diagnostic and surveillance 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 invest in shared electronic tools at all levels, develop standard operating procedures and build capacity on data collection and reporting, increase supportive supervision and peer-to-peer mentoring, build sustainable solutions to existing indicators that are facing challenges, hold regular M&E meetings, provide consistent pre-service training, implement data quality assurance, and procure hardware at all levels.</p>	<p>D2AC assessments shed light on the perceived weaknesses of the Ghana and Nigeria TB systems, primarily in the domain of ICT when hardware, network and connectivity, and ICT barriers infrastructure proved 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 guidelines, 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 “definer” stages of the continuum (see Figure 1). The D2AC assessments also observed 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 (M&E) also received high scores (above 4 out of 5) in both countries, securing their designation in the “multifunctional” stage of the continuum (see Figure 1).</p> <p>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 some existing programmatic interventions and can inform policymakers, donors, and program managers who wish 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.</p>

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 Chauflour, J., Silver, M., Boone, D., Anderson, J., & Garcia-Mendoza, Y. (2022). Data-to-Action Continuum in Ghana. Report. Chapel Hill, NC, USA: TB DIACH, University of North Carolina.
 Chauflour, J., Boone, D., Kwan, J., Oshinubi, C., Saha, D. (2022). TB Data-to-Action Continuum in Nigeria. Report. Chapel Hill, NC, USA: TB DIACH, University of North Carolina.

Translations of all PBMEF materials (PBMEF guide, two-page brief, four-page brief, FAQ) in French, Portuguese, Russian

Overview of the Performance-Based Monitoring and Evaluation Framework for Tuberculosis

PBMEF Description
 The Performance-Based Monitoring and Evaluation Framework (PBMEF) is a comprehensive indicator tool. It can help USAID Mission staff monitor and evaluate TB programs (TB) and national governments, including of both, implementing partners (IPs), and national TB programs (NTPs). Track progress against TB targets in one country and measure USAID's TB investments at one or more. This systems monitoring and evaluation (SM&E) framework contains 10 high-level core indicators selected to provide standard cooperation across USAID's 23 TB priority countries and reflect the investments of USAID and the global TB community. The framework's objective is to offer a standardized approach to measurement and reporting to strengthen the use of data for decision making by NTPs.

FAQ: Frequently asked questions

The Performance-Based Monitoring and Evaluation Framework for Tuberculosis

What is the PBMEF?
 The Performance-Based Monitoring and Evaluation Framework (PBMEF) is a comprehensive indicator tool. It consists of a monitoring and evaluation (M&E) framework for tuberculosis (TB) and HIV/AIDS—specified as one or extended—organized in 14 technical areas. In collaboration with the United States Agency for International Development (USAID), the TB Data, Impact Assessment and Communications Hub (TB DIACH) project developed the framework to streamline and prioritize indicators for monitoring and evaluating progress toward reaching global and country-level TB milestones and targets as USAID's 23 TB priority countries. The framework is foundational for strengthening the implementation of USAID's Global Accelerator to End TB and will aid efforts to ensure accountability of the U.S. Government's TB investments at global, regional, and country levels.

Who is the audience?
 The PBMEF's main audience is USAID staff, national-level TB program managers, M&E staff, extended TB advisors, and TB implementing partners (IPs).

What are the core TB indicators?
 There are 10 standardized, high-level indicators that best reflect USAID's investments and assess country performance in detecting, treating, and curing TB cases. They measure performance toward the U.S. Government's Global TB Strategy and country-level TB targets. These indicators are generally readily available through NTPs' existing M&E systems or the World Health Organization databases.

Why do I have to report the core TB indicators?
 As part of the TB Roadmap process, USAID Mission in TB priority countries are required to report on the core indicators. By having all TB priority countries report on the same indicators, comparisons across countries are standard. Regularly collecting the understanding of progress made toward national and international TB control targets.

What are the extended indicators?
 help explain why a country is not achieving its targets, which some countries might be taking, and which gaps in programming require additional resources. These indicators can also be used to construct treatment cascades and patient pathways that are critical to identifying programming gaps and efforts that need to be strengthened.

Are the extended indicators required?
 It is strongly recommended that USAID-funded IPs incorporate and use some of the extended indicators in their M&E plans. Although only the core indicators are required, if the TB indicators are presented like a pyramid, with the core indicators at the top, the extended indicators from the foundation of the pyramid, providing context and more detail for understanding the core indicators.

What is the purpose of an indicator cascade?
 The indicator cascade uses standard indicators in a sequential way to identify potential gaps in the steps for TB case and treatment. This type of data analysis and visualization can bolster justifications for programming and funding specific technical areas. The PBMEF has various cascades built into it (e.g., TB-HIV, contact investigation, childhood TB screening and treatment) so that TB data can be analyzed using a cascading approach and used for decision making.

Where should I report my TB data?
 The core indicators are reported via the TB DIACH data hub (<https://www.tbdatahub.org/>). This web portal is a secure online data collection system based on an interactive web interface which aggregates, national- and eventually—subnational data dashboards for USAID's TB priority countries.

How do I access the TB DIACH website and TB data hub?
 You can access the project at <https://www.tbdatahub.org/>, which offers multiple ways to enter the data hub, so you can access the data hub directly at <https://www.tbdatahub.org/>.

How do I seek TB DIACH's technical assistance if I need help monitoring and evaluating TB in my country?

TB DIAH global goods webpages on Knowledge Hub (ARC, Center of Excellence, MESSA, NTP Website Transparency Activity, and STEP)

Tru looking for...

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Watch the TB Data Center of Excellence Webinar in English or Russian

Center of Excellence

TB DIAH is working with the Republic of Georgia's National Center for Disease Control and Public Health (NCDC) and National Center for Tuberculosis and Lung Diseases (NCLD) to create an Eastern European and Eurasian (EEE) Center of Excellence (COE) in TB monitoring and evaluation (M&E) and surveillance. Georgia, an Eastern European country with strong TB M&E practices, was selected as the EEE COE host country. Other COE partners include Ukraine, Moldova, Armenia, and Azerbaijan.

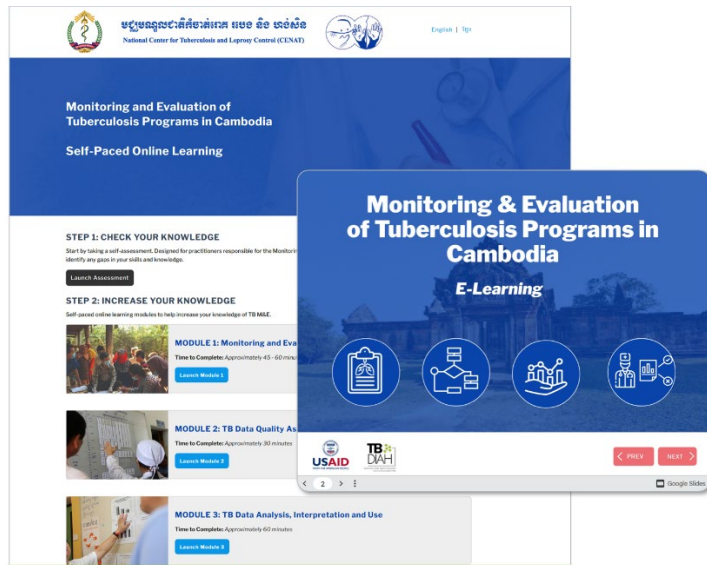
The COE contributes to TB M&E research, dissemination, expertise building, and knowledge sharing across the EEE region. It will feature a virtual platform for sharing online trainings, webinars, and other resources to harness existing TB data and engage those in the COE network.

The COE is designed to improve Georgia's TB data reporting, communication, and sharing for its own effective decision-making. TB DIAH is also supporting Georgia's NCDC and NCLD to document their experiences with identifying and addressing identified areas for improvement within their TB M&E systems as reference for other countries to learn from and build upon. Ultimately, the COE will serve as a regional model for best practices in TB M&E and surveillance.

Finally, the COE serves as a hub for TB DIAH support in the EEE region to ensure synergy, sustainability, and effective use of resources.

Learn more about the EEE COE:

CENAT e-Learning platform with TB M&E modules



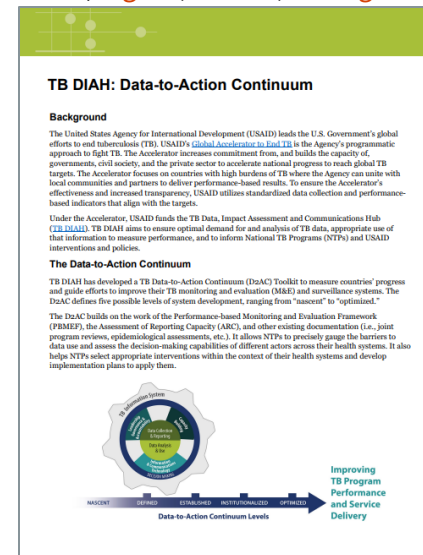
Capacity Strengthening webpage on the TB DIAH Knowledge Hub



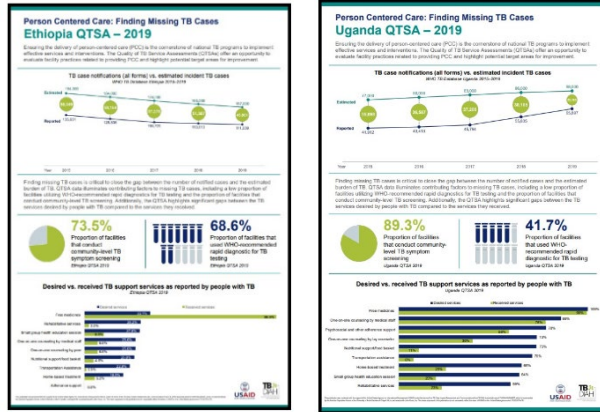
D2AC webpage on the TB DIAH Knowledge Hub



D2AC two-page overview (English, French, Portuguese, Russian)



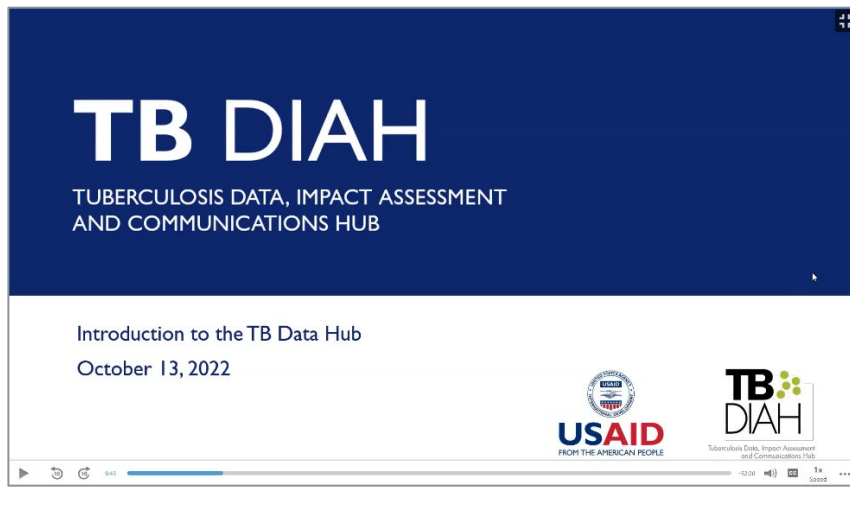
QTSA Infographics for Person Centered Care: Finding Missing TB Cases (Afghanistan, Ethiopia, Philippines, and Uganda) (Note: Afghanistan infographic not published to the Knowledge Hub).



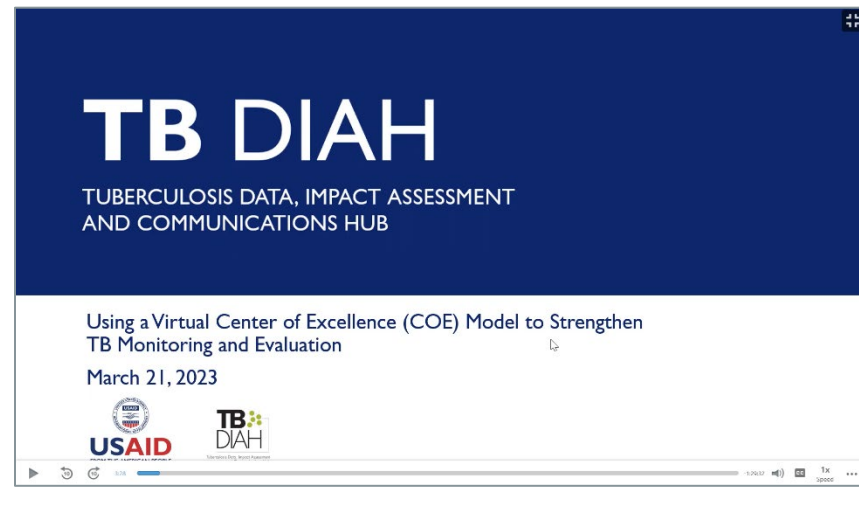
TB DIAH Digest e-newsletters for Year 4: [April 2022](#), [Nov 2022](#), [Jan 2023](#)



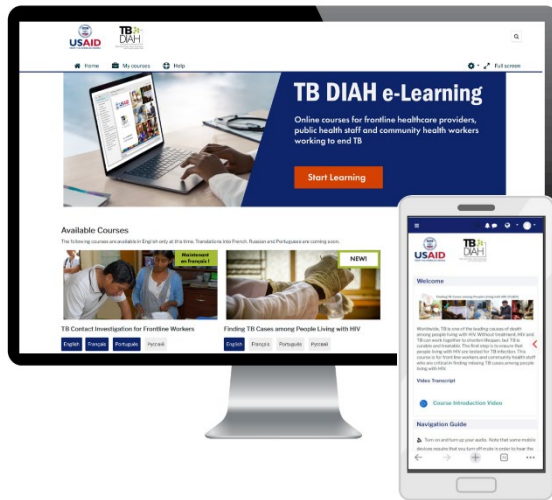
Webinar: **“Introducing TB DIAH’s Data Hub”**



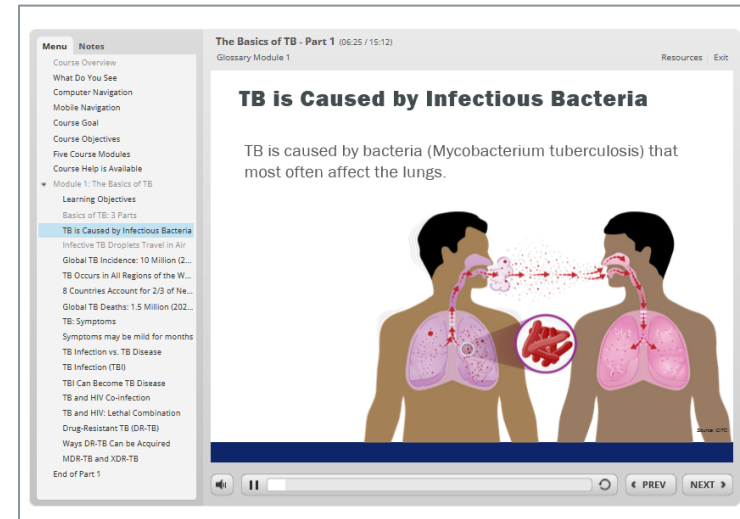
Global webinar on the COE model and implementation



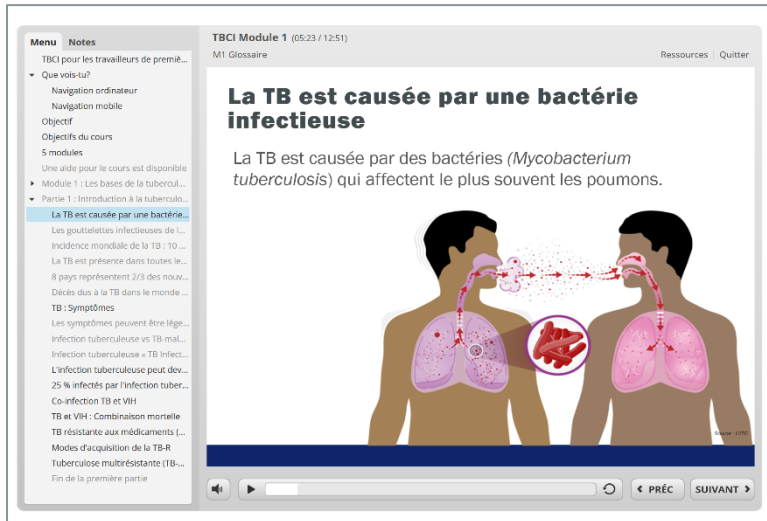
TB DIAH e-Learning portal



TB Contact Investigation (TBCI) e-Learning course



TBCI Frontline Worker e-Learning course (French)



TBCI Frontline Worker e-Learning course (Portuguese)



Appendix 4. TB DIAH Staff

Key Personnel:

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