TB DIAH

TUBERCULOSIS DATA, IMPACT ASSESSMENT AND COMMUNICATIONS HUB

Strengthening National TB M&E and Surveillance Systems:

Tools for understanding what to aim for, where to start, and how to get there

USAID
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TB DIAH
Tuberculosis Data, Impact Assessment and Communications Hub

HOUSEKEEPING

Please **use the Q&A for all questions.**

Please **tell us who you are and where you're from in the chat.**

Questions will be addressed during and at the end of the webinar.

REC

The webinar is being recorded and a link to the recording and presentation will be shared with all attendees and registrants tomorrow by a Zoom link and email.

Today's Presenters

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TB DIAH

TUBERCULOSIS DATA, IMPACT ASSESSMENT AND COMMUNICATIONS HUB

- Part of the Global Accelerator to End TB
- Global, five-year (2018-2023) associate award, $36M cooperative agreement
- Small team of M&E and TB experts working to clarify TB data in way that helps USAID monitor its TB investments in its TB priority countries
- Helps countries use data to share their story

Agenda

- ✓ Introduction to TB DIAH tools
- ✓ Overview of the TB Monitoring and Evaluation and Surveillance System Analysis (MESSA)
- ✓ Overview of the Assessment of Data Collection, Reporting, and Analysis Capacity (ARC)
- ✓ Overview of the TB Monitoring and Evaluation Capacity Assessment
- ✓ Closing

TB DIAH Tools

Understanding where to start, what to aim for, and how to get there

TB DIAH Tools for TB M&E

Performance-based M&E Framework

- Contains the 10 core and extended indicators to help Missions track progress against TB targets and manage USAID's TB investments—all in one place

TB Data-to-Action Continuum (D2AC)

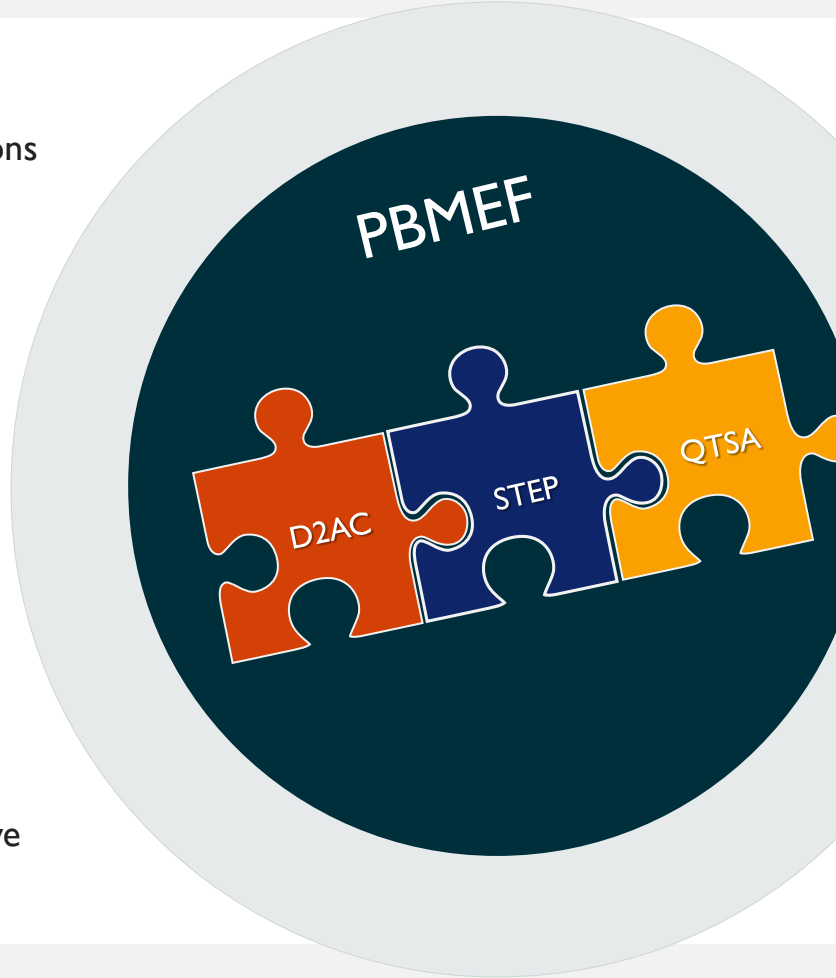
- Measures country and NTP capabilities to use TB data as they work toward improving their TB M&E and surveillance systems

Surveillance and TB M&E Strengthening Plan (STEP)

- Analyzes thoroughly the TB M&E and surveillance landscape of a country and informs the development of a costed plan

Quality of TB Services Assessment (QTSA)

- Informs NTPs, Missions, and others of the current state of quality of TB care and the strategic actions needed to improve TB services



TB DIAH Tools for TB Assessment

M&E and Surveillance Systems Assessment (MESSA)

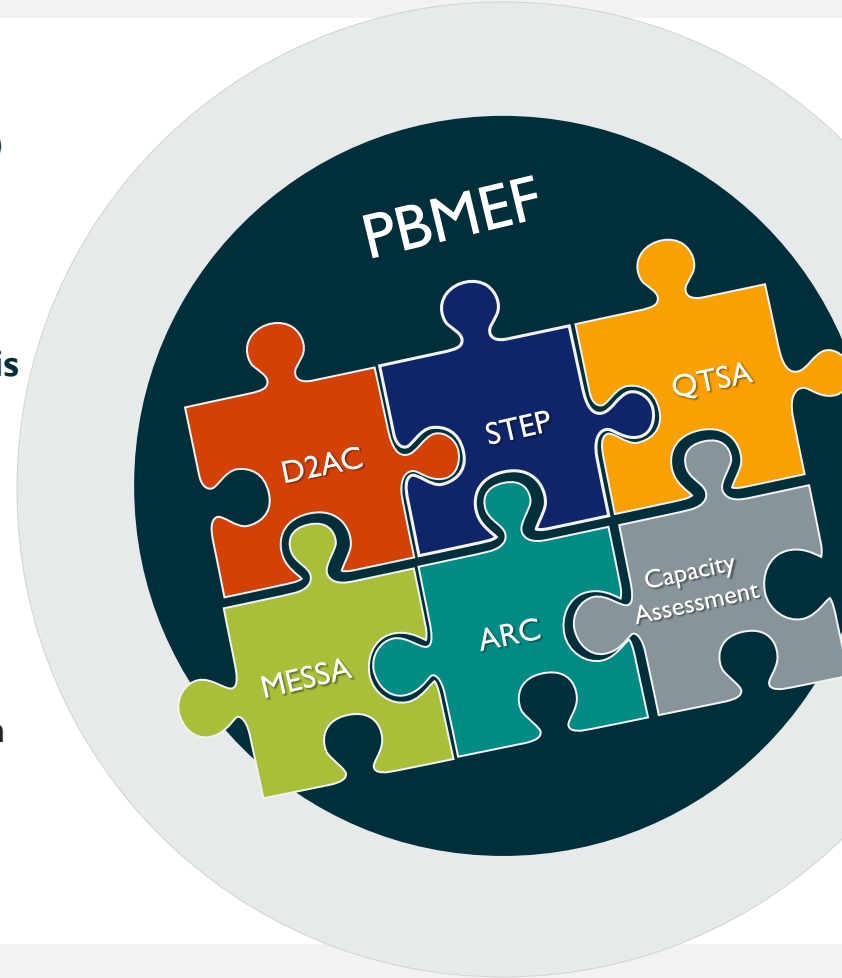
- Provides an overview of M&E and surveillance systems in each USAID TB priority country

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

- Maps the readiness and capacity of countries' current TB surveillance system to collect, report, and use the various data elements of the core and extended PBMEF indicators

TB M&E Capacity Assessment

- Assesses the TB M&E capability of human resources within the NTP and implementing partners



The Big Picture

TB Monitoring and Surveillance System Analysis (MESSA)

TB Surveillance System Structure:
- Governance
- Data quality
- Information and Communications Technology (ICT)
- Use and dissemination

Assessment of TB data collection, reporting and analysis capacity (ARC)

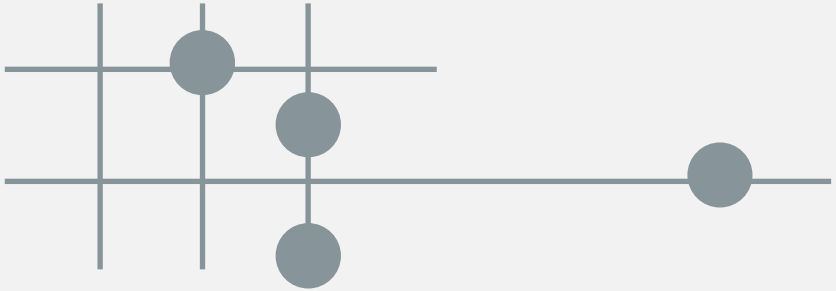
TB M&E Indicators:
- Data coverage
- Data source coverage
- Reporting mechanisms

TB M&E Capacity Assessment

Knowledge and Skill of:
- TB M&E indicators
- Data quality check
- Data visualization, data analysis, and interpretation
- Data communication

Analysis of strengths and gaps of TB surveillance system structure

TB SURVEILLANCE SYSTEM IMPROVEMENT ACTIONS



MESSA

TB Monitoring and Evaluation
and Surveillance System Analysis

Monitoring and Surveillance System Analysis (MESSA)

What is MESSA?

- The MESSA provides:
  - A robust overview of each country's TB M&E and/or surveillance system
  - A baseline for the TB data system in each of the 23 USAID priority countries
  - Serves as a repository of information to help provide context to country's TB program/system, etc.

MESSA Methodology

- Methodology
  - ✓ Document Review and Abstraction
    - General availability of information
    - Synthesis of information found
  - ✓ Targeted questions
    - Gap maps
  - ✓ Interview with Key Country Stakeholders
    - Strengthens, Weaknesses, Opportunities, and Threats (SWOT) analysis

MESSA Tool

COUNTRY NAME:

1. HMIS Overview

Potential sources for this information: Most information will come from interviews with each country MOH and/or Mission as well as some information from NTP guidelines

1.1	Provide an overview of the TB-related HIS (levels, structure, does it cover routine data, surveillance data, which types of TB cases are being captured, etc.) Are there written goals for the TB HMIS/Surveillance system?	
1.2	Describe how TB data flows through all levels of the system (through national HMIS, through parallel system, etc.) (Create a data flow map to accompany description)	
1.3	Is the system for TB data capture paper or electronic? If electronic, what system is being used and how (DHIS2, eTB, mobile etc.)? Do these systems have procedures to ensure confidentiality of data collected? If so, what are those procedures?	
1.4	Are there other systems (beyond the national HMIS) through which TB data is collected (i.e., systems developed by partners or other entities)? - If yes, describe where data comes from these systems and how it moves and is compiled at each level - If yes, do they use different tools and/or indicators?	

2. Governance

Potential sources for this information: Country Guidelines and Strategy Documents / Interviews with country MOH and/or Mission.

2.1	National TB Strategy available? - Years covered by the plan? - Who was involved in constructing the plan? - Who is responsible for implementing the plan? - Are there guidelines for DOT? If so, what are they?	
2.2	Describe the supporting policies and/or political commitments to the National TB Strategy	
2.3	Does the country have TB Treatment guidelines? - When were they last updated? - Collect a copy of these guidelines	
2.4	Does the country have DOTs guidelines? - When were they last updated? - Collect a copy of these guidelines	
	Does the country have laboratory guidelines (related to TB)? - When were these last updated? - Collect a copy of these guidelines	
2.5	Does the country have a health sector M&E plan for TB? - When was this last updated? - Are case definitions consistent with WHO guidelines? - Collect a copy of the M&E plan	

MESSA: Information Availability

Key Thematic Areas

- Description of TB Health Information System
- Governance
- Data Use
- Data Quality
- Financing
- Logistics
- Laboratory Reporting
- Communications
- Availability of Key Documents and Indicators

Additional Areas Analyzed

- Financing
- TB Service Delivery
- Drug Resistant TB
- WHO Recommendations
- Social Protection
- Diagnostics/Lab
- TB Co-Morbidities and Special Populations
- TB Knowledge and Stigma

MESSA Country Profiles

MESSA was completed for all 23 USAID TB priority countries

MESSA Profile: **CAMBODIA**

Photo credit: Chhor Sokunthea, World Bank Photo Collection, Flickr Creative Commons

National Tuberculosis Program Summary

Cambodia's National Tuberculosis Programme (NTP) is implemented across all of the country's public healthcare delivery system, which includes the National Centre for Tuberculosis and Leprosy Control (CENAT) at the national level, 24 provincial and city health departments, and 77 operational districts (ODs). Tuberculosis (TB) services are offered in 1,070 health facilities, which are comprised of 80 referral hospitals and 960 health centers. Each level of the health system has designated NTP staff responsible for various programmatic functions [1]. Details around the activities and staffing at each level of the NPT are detailed below [2]:

- **Central Level:** CENAT is supported by 30 full-time staff working at the NTP headquarters who are responsible for developing policy, strategic planning, training, supervision, monitoring of the TB program, and coordination of partner organizations working to support NTP efforts across the country. The central level also oversees a Referral Chest Hospital as well as the National TB Reference Laboratory (NTRL).
- **Provincial Level:** Each province is headed by a provincial TB medical supervisor responsible for overseeing TB control activities within the province and a TB laboratory supervisor responsible for the bulk of TB services including planning, training, coordination, and resource mobilization across the province. They are also responsible for the supervision of ODs, TB microscopy centers, and health centers (HCs).
- **Operational District Level:** The OD supervisor is responsible for maintaining the OD TB registry as well as planning, training, and coordination needed to facilitate supervision of HCs each month. This level has referral hospitals with dedicated TB units as wells as TB microscopy centers (about 210 throughout the country).
- **Health Center Level:** Facility-based directly observed therapy, short-course (DOTS) is implemented by at least two dedicated TB health workers at each HC. About ten percent of HCs in Cambodia have TB laboratories.

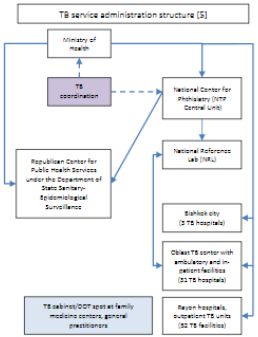
MESSA PROFILE: **KYRGYZSTAN**

Photo credit: Common Language Project, Flickr Creative Commons (https://www.flickr.com/photos/clpmag/9252014760)

Program Summary

The current Tuberculosis (TB) program of Kyrgyzstan is called "TB-V". This program builds upon the country's previous programs, particularly TB-IV. The current TB-V program, approved by a decree of the government, spans from 2017–2021 [1]. The main priorities of the program are prevention, detection and diagnosis, improving the efficiency of treatment of patients with TB, the formation of patient-focused care models, and strengthening cooperation with civil society in TB control.

Planned activities will be implemented with emphasis on groups at high risk of developing TB, including contact children up to five years of age, individuals with HIV infection, persons with chemical and alcohol dependency, migrants, ex-prisoners, medical personnel, and persons with chronic diseases associated with reduced immune status [1].



Overview of the TB Health Information System

Two parallel TB data reporting and recording systems are in use [2]:

MESSA Profile: **NIGERIA**

Photo credit: Curt Carnemark, courtesy of World Bank Photo Collection, Flickr Creative Commons

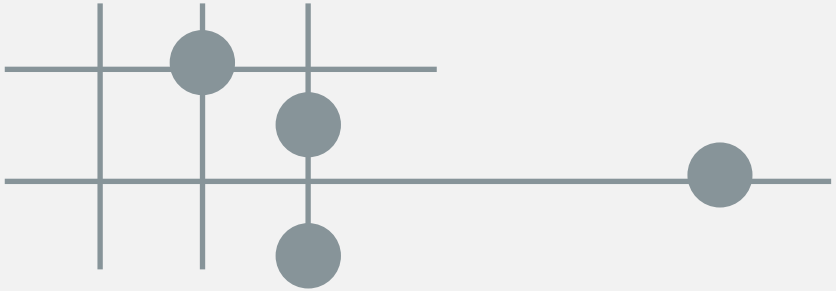
National Tuberculosis Program Summary

Nigeria's National Tuberculosis and Leprosy Control Programme's (NTBLCP) current strategic plan for tuberculosis (TB) control aims to provide Nigerians with universal access to high-quality, patient-centered prevention, diagnosis, and treatment services for TB, TB/HIV, and drug-resistant TB (DR-TB) by 2020 [1]. To achieve this goal, the NTBLCP has focused efforts on the following:

- Rapidly increasing detection of TB in adults and children
- Improving treatment success in specific geographic areas that are underperforming
- Integrating TB and HIV services
- Building capacity for diagnosis and treatment of DR-TB
- Creating strong, sustainable systems to support the country's TB program

The NTBLCP has proposed integrating TB and HIV services as a mechanism to increase the availability of TB services across Nigeria. Currently, there are almost 7,000 health facilities that offer TB services. This includes 6,753 Directly Observed Treatment, Short course (DOTS) centers, 2,551 microscopy centers, 390 GeneXpert sites, 27 DR-TB treatment centers, and 10 reference laboratories across Nigeria. In addition to services offered at the health facilities, the NTBLCP also conducts screening for TB in the community. This is facilitated by community health workers and volunteers during home visits and through screening campaigns and outreach events.

To ensure appropriate data capture and management of TB-related information, the NTBLCP has designated personnel to handle TB data across all levels of the system. This includes the Monitoring and Evaluation (M&E) Unit at the national level as well as focal persons at the state and local government area (LGA) level that oversee the compilation and analysis of TB data [2].



ARC

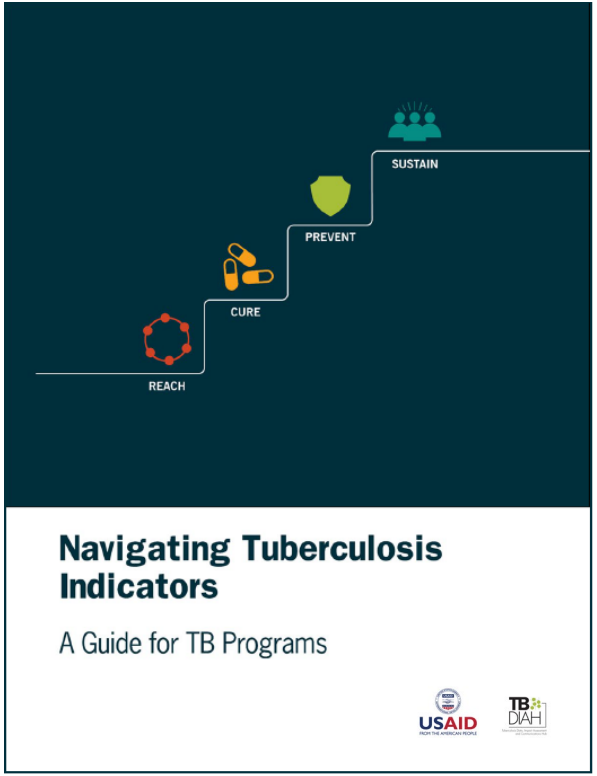
Assessment of Data Collection, Reporting, and Analysis Capacity

What is the Purpose of the ARC?

The ARC assists Missions and NTPs to:

- Map the readiness and capacity of their current TB surveillance system in collecting, reporting, and using the various data elements of the core and extended PBMEF indicators

- Provide a critical step towards strengthening the country TB M&E and surveillance system to collect, analyze, and use PBMEF indicators



ARC Tool

» Watch the How-To Video

- Select -

ds.1. Click the boxes below if any TB treatment units (e.g., basic management units or specialized units for TB management) record data on:

- ☐ ds.1.1a. New and relapse TB cases and cases with unknown previous TB treatment history (all forms)
- ☐ ds.1.1b. New and relapse TB cases (bacteriologically confirmed or clinically diagnosed, pulmonary or extrapulmonary) TB cases
- ☐ ds.1.2. New and relapse TB cases in the Basic Management Units with data on referrals by community health workers
- ☐ ds.1.3. New and relapse TB cases referred by community health workers / community volunteers to the Basic Management Units with data on referrals by community health workers
- ☐ ds.1.4. TB patients (all forms) who receive any social or economic benefits during the first month of treatment

Update draft | Submit Form

Status Draft

Index

What's in an ARC Report?

- Incorporates a country's health system profile drawn from the MESSA
- Describes the status of collection of data related to the 14 extended indicator groups in the PBMEF (e.g., treatment, DR-TB, contact investigation, childhood TB, TB-HIV, etc.) by the NTP, other departments of the ministry of health, or non-NTP/private providers
- Provides additional information by domain, such as:
  - ✓ **Administrative levels to which data are reported**: district, national, both, or none
  - ✓ **Method of data reporting**: paper-based, electronic file (Excel), electronic reporting (DHIS2 or other online database or website), or hybrid (paper and electronic)
  - ✓ **Reporting coverage**: percent of facilities providing TB services reporting the data

ARC Country Report Example

Table 1. ARC tool summary

Data element domain	Data collected at HFs	Percent of PBMEF data elements collected at HFs	Data record by age	Data record by sex	Percent of HFs reporting data	Level to which HFs report data	Data reporting method
DS-TB	Yes	92.86%	Yes	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
MDR-TB	Yes	92.31%	Yes	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
Extensively Drug-Resistant TB (XDR-TB)	Yes	84.62%	Yes	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
Childhood DS-TB	Yes	100%	Not applicable	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
Childhood MDR-TB	Yes	100%	Not applicable	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
Childhood XDR-TB	Yes	88.89%	Not applicable	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
TB Screening	Yes	100%	Yes	Yes	100%	Both district & national NTP	Paper-based
Presumptive TB	Yes	87.50%	Yes	Yes	100%	Both district & national NTP	Paper-based
Contacts	Yes	85.71%	Yes	Yes	100%	Only district NTP	Paper-based
TPT	Yes	18.18%	Yes	Yes	100%	Only district NTP	Hybrid: paper & electronic
TB-HIV	Yes	77.55%	Yes	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
TB Lab	Yes	100%	Not applicable	Not applicable	100%	Both district & national NTP	Hybrid: paper & electronic
TB Drugs and Diagnostic Supplies	Yes	100%	Not applicable	Not applicable	100%	Both district & national NTP	Hybrid: paper & electronic
Private Sector TB	No	0.00%	Not applicable	Not applicable	0%	Not reported	Not applicable
TB among HCWs	Yes	91.67%	Yes	Yes	100%	Both district & national NTP	Hybrid: paper & electronic
HFs Providing TB Services	Yes	100%	Not applicable	Not applicable	100%	Not applicable	Not applicable

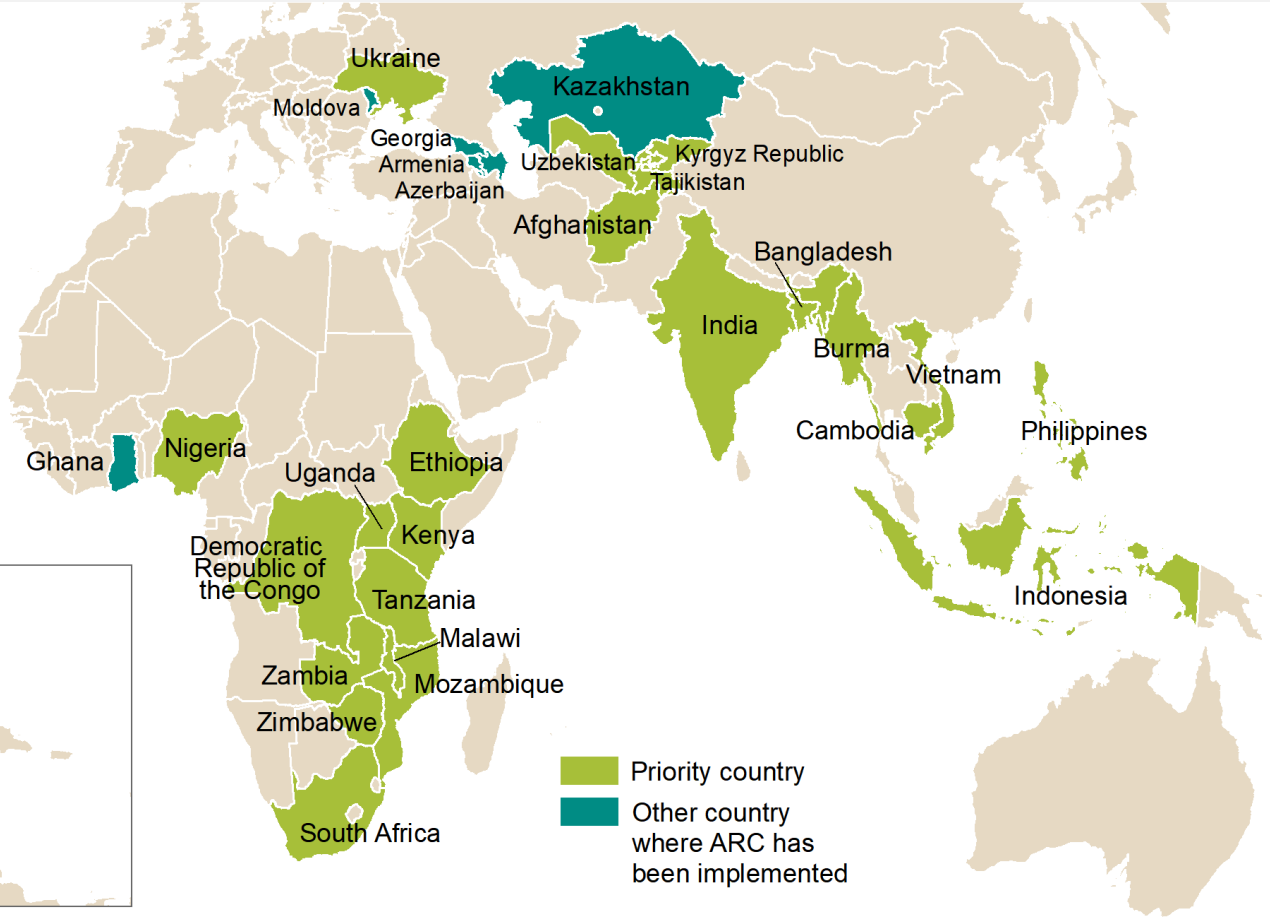
* Not applicable

Table 2. Data for PBMEF indicators reported in the WHO database as of 2020

Data definition	PBMEF indicator	Variable name in WHO database	Data availability year				
			2015	2016	2017	2018	2019
Total number of new and relapse cases, and cases with unknown previous TB treatment history	DT-1; DT-2; DT-3; DT-4; CH-6; TH-13	c_newinc					
New pulmonary clinically diagnosed TB cases (not bacteriologically confirmed as positive for TB but diagnosed with active TB by a clinician or another medical practitioner who has decided to give the patient a full course of TB treatment). Also includes pulmonary clinically diagnosed cases with unknown previous TB.	DT-12	new_clindx					
New extrapulmonary cases (bacteriologically confirmed or clinically diagnosed). As of 2013, this also includes extrapulmonary cases with unknown previous TB treatment history	DT-4	new_ep					
New pulmonary bacteriologically confirmed TB cases (smear positive or culture positive, or positive by WHO-recommended rapid diagnostics such as Xpert MTB/RIF). As of 2013, this also includes pulmonary bacteriologically confirmed cases with unknown previous TB treatment history.	DT-12; PT-6	new_labconf					
Number of new and relapse cases notified and tested using a WHO-recommended rapid diagnostic (e.g., Xpert MTB/RIF) at the time of TB diagnosis (regardless of test result)	DT-15	newinc_rdx					
New and relapse cases (but only new cases, if rel_in_agesex_flg = 0): females ages 0–14 years	CH-8	newrel_f04 (multiple)					
Relapse pulmonary bacteriologically confirmed TB cases (smear positive or culture positive, or positive by WHO-recommended rapid diagnostics such as Xpert MTB/RIF)	DT-12; PT-6	ret_rel_labconf					
Relapse pulmonary clinically diagnosed TB cases (not bacteriologically confirmed as positive for TB, but diagnosed with active TB by a clinician or another medical practitioner who has decided to give the patient a full course of TB treatment)	DT-12	ret_rel_clindx					
Relapse extrapulmonary cases (bacteriologically confirmed or clinically diagnosed)	DT-4	ret_rel_ep					
Number of new and relapse (or all, if newrel_tbhiv_flg = 0 and year >2015) TB patients recorded as HIV-positive	TH-14; TH-18	newrel_hivpos					
Number of new and relapse (or all, if newrel_tbhiv_flg = 0 and year >2015) TB patients tested for HIV at the time of TB diagnosis or with known HIV status at the time of TB diagnosis	TH-13; TH-14	newrel_hivtest					

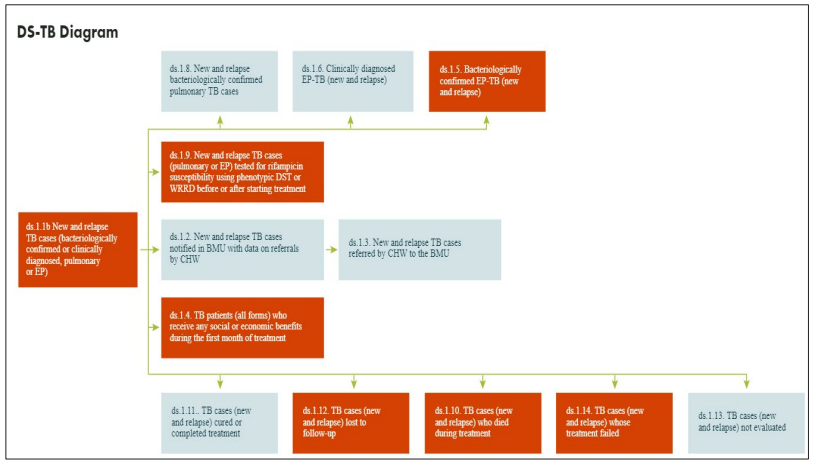
Where Has ARC Been Completed?

The ARC tool has been implemented and country-specific reports have been generated for all USAID TB priority countries, in addition to seven other countries



How Can ARC Findings Be Used?

ARC results form the foundation for each country's surveillance of TB and M&E strengthening plan (STEP)



TB M&E
Capacity Assessment

TB M&E Capacity Assessment Tool

The tool assesses the NTP TB M&E staff's knowledge of:

- ✓ TB indicators
- ✓ TB epidemiology
- ✓ Data quality assurance practices;
- ✓ TB M&E and surveillance data analysis, interpretation and use

TB M&E Capacity Assessment Tool

SELF-PERCEPTION OF COMPETENCY TO PERFORM TB M&E TASKS

This part of the questionnaire is about how you perceive your competence in performing tasks related to health information systems. A high perception of competence suggests that the person can perform the task, while a low perception of competence could indicate a need for improvement or training. We are interested in knowing how competent you feel in performing TB M&E-related tasks. Please be frank and rate your competence honestly.

Please rate your competence in accomplishing various M&E activities on a scale from 0–10, where 0 is "no competence" and 10 is "very strong competence."

Rate your competence in accomplishing the following M&E activities/tasks on a scale from 0 to 10:

SE1	I can check data accuracy	0	1	2	3	4	5	6	7	8	9	10
SE2	I can calculate percentages/rates correctly	0	1	2	3	4	5	6	7	8	9	10
SE3	I can plot a trend on a chart	0	1	2	3	4	5	6	7	8	9	10
SE4	I can explain the implication of the results of data analysis	0	1	2	3	4	5	6	7	8	9	10
SE5	I can use data for identifying service performance gaps and setting performance targets	0	1	2	3	4	5	6	7	8	9	10

TB INDICATOR KNOWLEDGE QUIZ

Q20.1	Which one is the correct calculation of drug-resistant (DR) TB treatment success rate for 2018?	1. Number of DR-TB cases who got cured in 2018 2. Percent of rifampicin-resistant (RR)/multidrug-resistant (MDR)-TB and extensively drug-resistant (XDR)-TB cases successfully treated in 2018 3. Number of rifampicin-resistant (RR)/multidrug-resistant (MDR)-TB and extensively drug-resistant (XDR)-TB cases who were enrolled on treatment in 2018 and got successfully treated 4. Percent of rifampicin-resistant (RR)/multidrug-resistant (MDR)-TB and extensively drug-resistant (XDR)-TB cases who were enrolled on treatment in 2018 and got successfully treated
Q20.2	Which statements below are correct for the indicator "Percent of extrapulmonary TB cases notified"?	1. The numerator is new and relapse extrapulmonary TB cases who were bacteriologically or clinically diagnosed during reporting period 2. The numerator is extrapulmonary TB cases (new and relapse, bacteriologically confirmed or clinically diagnosed) notified during reporting period 3. The denominator is total number of bacteriologically diagnosed extrapulmonary cases during the reporting period 4. The denominator is total of new and relapse TB cases and cases with unknown previous TB treatment history during reporting period
Q20.3	Which indicator is calculated using these data: Number of HIV-positive TB patients started or continued on ART during reporting period ÷ Number of new and relapse TB patients recorded as HIV positive during reporting period	1. Percent of HIV-positive TB patients started or continued on ART 2. Percent of DR-TB patients recorded as HIV positive 3. Percent of TB patients with known HIV status 4. Percent of TB patients recorded as HIV positive

CD1	The estimated number of TB cases (all forms) in the OD catchment area for the current period is 265. The health facilities in your OD have registered 87 TB patients during this period. → Calculate the percentage of TB cases in the district that have been notified in the current period. Answer: _____ For facilitator only: Answer provided (1) Yes (2) No
CD2a	The table below shows the quarterly screening results for Muk Kampul OD. In this OD, government facilities carry out active screening for TB. During a recent review of the data, it was discovered that youth (younger than age 24) account for a significant number of new TB infections. In response to these data, health centers in Muk Kampul OD regularly review TB data to inform decisions related to increasing the uptake of TB screening services among youth.

Table 1a. TB counseling and testing monthly summary, December 2009

		HC # 1		HC # 2		HC # 3		HC # 4	
		Age of client (in years)							
TB Screening Indicators		<24	24+	<24	24+	<24	24+	<24	24+
TBS1	Number of clients screened for TB	341	401	61	226	501	623	108	151
TBS2	Number of clients tested for TB	339	399	53	220	494	600	108	151
TBS3	Number of clients who received their test results	338	399	40	214	431	487	107	151
TBS4	Number of clients who tested positive for TB	30	41	9	63	96	141	17	19
TBS5	Number of clients referred to TB treatment center	30	41	4	41	84	98	4	8

Capacity Assessment Results

- Low understanding of country's National Strategic Plan (NSP) objectives
- Need to improve application of data quality check procedures and enhance data quality assurance environment

Gaps in:

- Knowledge of key TB indicators
- Knowledge of Excel
- Knowledge of data visualization
- Analytical skills

How These Tools Inform TB M&E System Improvements

Assessment Informed Decisions: MESSA

MESSA

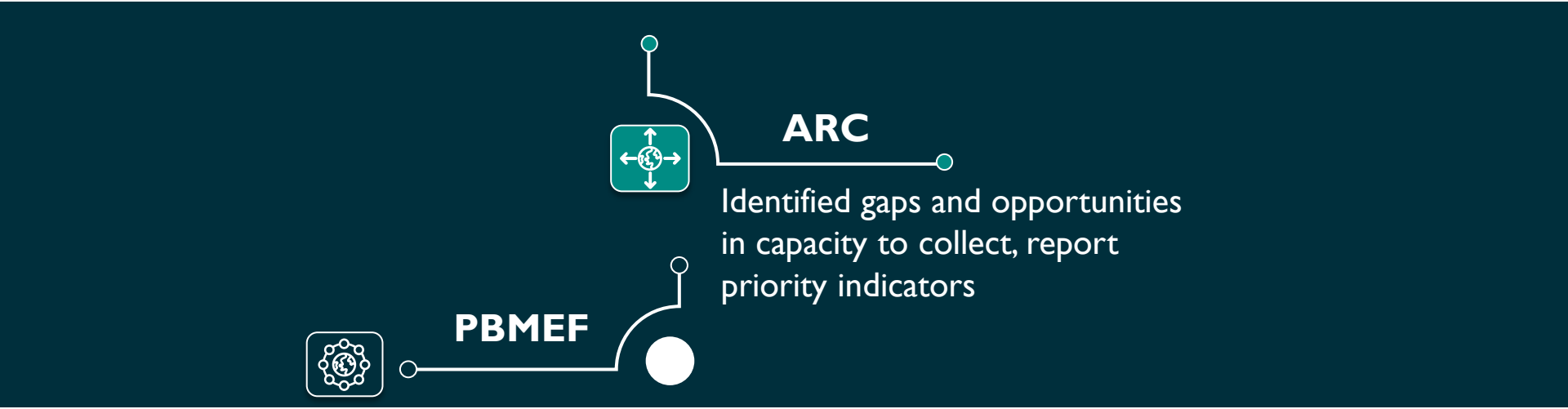
Identified need for deep-dive into country's TB surveillance system

Protocol

STEP Protocol

Need for protocol to develop a comprehensive landscape analysis & costed plan

Assessment Informed Decisions: ARC



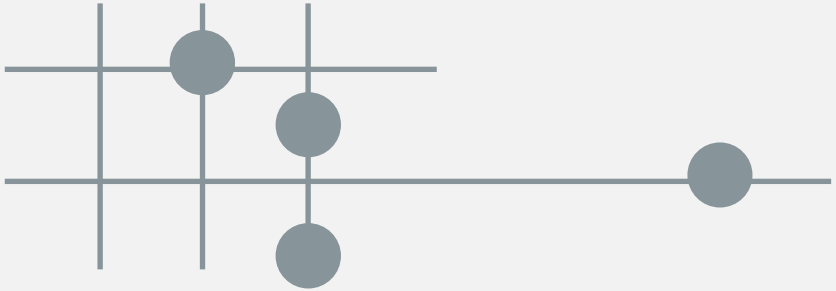
Informed Decisions: TB M&E Capacity Assessment

TB M&E Capacity Assessment

Identified gaps in TB M&E knowledge and skills

- ✓ TB M&E curriculum
- ✓ Data visualization tool
- ✓ Data quality check tool

Photo credit: December 2022_D2AC Dhaka Workshop



Thank You

Live Links

TBDIAH.org	http://www.tbdiah.org
PBMEF	https://www.tbdiah.org/resources/publications/navigating-tuberculosis-indicators-a-guide-for-tb-programs/
QTSA	https://www.tbdiah.org/assessments/quality-of-tuberculosis-services-assessments/
D2AC	https://www.tbdiah.org/assessments/d2ac/
Data Analysis & Visualizations	http://hub.tbdiah.org

For more information

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Tuberculosis Data, Impact Assessment and Communications Hub