# Eastern Europe and Central Asia Regional Conference on TB Data Reporting, Analysis, and Use

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TB DIAH
Tuberculosis Data, Impact Assessment and Communications Hub

MINISTRY OF INTERNALLY DISPLACED PERSONS FROM THE OCCUPIED TERRITORIES, LABOUR, HEALTH AND SOCIAL AFFAIRS OF GEORGIA

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# Eastern Europe and Central Asia Regional Conference on TB Data Reporting, Analysis, and Use

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# Abbreviations

| | |
|---|---|
| AI | artificial intelligence |
| ARC | Assessment of Data Collection, Reporting, and Analysis Capacity |
| Bdq | bedaquiline |
| COE | Center of Excellence |
| DR | drug-resistant |
| DS | drug-sensitive |
| DST | drug susceptibility testing |
| EEE | Eastern Europe and Eurasia |
| IP | implementing partner |
| JID | Joint Infectious Diseases Unit |
| Lnz | linezolid |
| MDR | multidrug-resistant |
| M&E | monitoring and evaluation |
| MESSA | Monitoring and Evaluation and Surveillance System Analysis |
| MELVIN | Monitoring, Innovation, Evaluation, Information, Learning, Vision, and Navigation |
| MoH | Ministry of Health |
| MoILHSA | Ministry of Internally Displaced Persons, Labour, Health, and Social Affairs |
| NCDC | National Center for Disease Control and Public Health |
| NCTLD | National Center for TB and Lung Diseases |
| NSP | national TB strategic plan |
| NTP | national TB program |
| PBMEF | Performance-Based Monitoring and Evaluation Framework |
| Pre-XDR-TB | pre-extensively drug-resistant TB |
| Q&A | question and answer |
| RR | rifampicin-resistant |
| SDG | Sustainable Development Goals |
| TA | technical assistance |
| TB | TB |
| TBI | TB infection |

| | |
|---|---|
| TB DIAH | TB Data, Impact Assessment, and Communications Hub |
| ToT | training of trainers |
| TPT | TB preventive treatment |
| UNHLM | United Nations High Level Meeting |
| USAID | United States Agency for International Development |
| VST | video-supported treatment |
| WHO | World Health Organization |
| WHO/Euro | WHO Regional Office for Europe |
| WRD | WHO-recommended rapid diagnostic |
| XDR | extensively drug-resistant |

# Executive Summary

## Background

The TB Data, Impact Assessment, and Communications Hub (TB DIAH), funded by the United States Agency for International Development (USAID), is part of USAID's programmatic approach to fight TB (TB): the Global Accelerator to End TB (the Accelerator). TB DIAH aims to ensure optimal demand for and analysis of routine and non-routine TB data and their appropriate use to support interventions, policies, and performance management. To achieve this, TB DIAH supports national TB programs (NTPs) in strengthening TB surveillance systems and improving data use, building capacity to report on countries' TB Roadmap indicators, strengthening monitoring and evaluation (M&E) skills, and developing and promoting online data resources. TB DIAH's approach in the Eastern Europe and Eurasia (EEE) region, which is comprised of Armenia, Azerbaijan, Georgia, Moldova, and Ukraine, is centered on a Center of Excellence (COE) model as a means of providing technical assistance (TA) and sharing best practices in TB M&E in the region. The TB DIAH project established a virtual EEE COE in TB M&E and Surveillance in May 2022 in Georgia. The COE is hosted by Georgia's National Center for Disease Control and Public Health (NCDC) together with the country's National Center for TB and Lung Diseases (NCTLD).

## About the Event

The purpose of the regional event was to provide an opportunity for country-level TB experts, stakeholders, and technical partners to cross-fertilize M&E experiences and further M&E capacity development in the region. The objective of the conference was to improve data use, promote experience-sharing among countries in data use, share success stories and lessons learned, address cross-border data issues, share the updated Performance-based Monitoring and Evaluation Framework (PBMEF) edition, and provide USAID, World Health Organization (WHO), and Global Fund updates. Seven countries participated in the conference: Armenia, Georgia, Kyrgyzstan, Moldova, Tajikistan, Ukraine, and Uzbekistan.

## Day One

The conference started with a welcome, introductions, and opening remarks. Each of the countries were then given the opportunity to provide updates. Country representatives presented progress towards their national strategic plans (NSPs) and global targets and shared challenges and successes.


In Georgia significant progress has been made in fighting TB, with a 50 percent reduction in TB incidence since 2015. Georgia has new

digital technologies that allow for the collection, recording, and reporting of data on people on TB treatment and those who are being treated for TB infection.

Armenia has improved case detection, but challenges still remain. The country conducts active case finding among high-risk groups. In 2022, a patient-centered model was introduced that includes home-based care, video-supported treatment (VST), and treatment support of family members.

Kyrgyzstan's current strategies for effective use of national TB data are as follows: implementation of the National TB-VI Program plan (2023-2026), optimization and restructuring of the M&E departments to expand TB data management functions, and creation of a Department of Strategic Development and International Cooperation at the national level.

In Moldova, over the past two years, there has been a significant emphasis on enhancing their TB M&E system. The key component of this system is the information platform SIME TB, which was introduced in 2007. The SIME TB database includes official documents, such as orders, decrees, and updates from WHO, that can be easily downloaded and reviewed by doctors in the country.

Tajikistan has experienced consistent improvements in drug-sensitive (DS)-TB treatment outcomes, with a success rate of 93 percent in 2021. With the help of international colleagues, their TB M&E manual was updated. Information obtained as a result of M&E allows the TB program to identify priority areas. Routine M&E of activities is aimed at preventing and controlling TB; budget development; procurement; distribution of drugs and other resources; and preparing reports for the Ministry of Health (MoH), coordination committee, and donors.

The TB Services and Surveillance System in Uzbekistan is designed to highlight and utilize TB data as outlined in their NSP. Its primary objective is to ensure consistent M&E of TB response efforts. This is achieved through the operation of an efficient and effective surveillance system, which plays a critical role in tracking the progress of TB control strategies, assessing treatment outcomes, and guiding decision-making processes based on accurate and up-to-date information.

Ukraine is currently transitioning from paper-based reporting to digital forms. The country aims to establish a multisectoral accountability mechanism, where each ministry reports on its contributions to TB eradication. These efforts align with the United Nations Sustainable Development Goals (SDG) and involve the development of practical measures to address the consequences of the war, as outlined in the new political declaration.

## Day Two

The second day opened with a review of USAID's Global TB Strategy and its implementation outcomes. The vision of the strategy for 2023-2030 is a TB-free world. Its mission is to provide high-quality TB development assistance and TA through programs founded on the principles of diversity, equity, and inclusion, and implemented in partnership with affected individuals and communities.

An updated edition of PBMEF was presented. The strategy and paradigm of the PBMEF underwent significant changes through a consultative and collaborative process with TB DIAH and the USAID/Washington TB team. TB DIAH reviewed and synthesized patient pathways and treatment cascades, identifying key M&E questions relevant to the TB program. These questions were then matched with draft indicators. These indicators were prioritized based on importance, feasibility, and credibility, and organized into technical areas. Kyrgyzstan, Uzbekistan, and Tajikistan shared their PBMEF experiences.

The model for the virtual EEE COE in TB M&E and Surveillance was presented. The primary purpose of using the COE model is to help improve the COE country's TB data reporting, communication, and sharing for their own effective decision making. Additionally, the COE country's improved functioning serves as a model for other countries in the region.

The virtual COE is a multifaceted platform designed for practicality and action. The COE's approach encompasses MELVIN (Monitoring, Innovation, Evaluation, Information, Learning, Vision, and Navigation), a specialized conversational artificial intelligence (AI) model for TB-related issues. This AI model guides conversations, offers content, and provides follow-up questions.

TB DIAH's M&E and Surveillance Systems Assessment (MESSA) tool was presented. MESSA documents the current status of the TB M&E and surveillance systems in USAID's TB priority countries and beyond. The tool covers topics such as TB service delivery, an overview of the country's TB health management information system TB M&E system governance, and more.

The Assessment of Data Collection, Reporting, and Analysis Capacity (ARC) tool was presented. The ARC is designed to assist USAID Missions and NTPs with mapping the readiness and capacity of their current TB M&E and surveillance system to generate, report, analyze, and use the data generated to improve the TB situation in their country. Based on the PBMEF, the ARC tool systematically reviews the TB data that are generated against the PBMEF indicators and identifies the strengths and gaps in the surveillance system—a critical first step in developing a comprehensive landscape analysis of a country's TB M&E and surveillance system.

Georgia, Armenia, and Moldova shared updates on the COE activities in their countries and their MESSA and ARC profiles.

New and updated indicators in the Global Fund Modular framework were presented. In the new cycle, the TB modular frameworks have been updated, resulting in 39 indicators, with three indicators discontinued, 16 updated, and eight newly added.

The Global Plan to end TB 2023-2030 is a roadmap and the most detailed budget estimate to date for ending TB as a public health challenge by 2030. It is a comprehensive set of policy interventions. The global commitment to ending TB has grown stronger in recent years, with political commitment and new targets set at the United Nations High Level Meeting (UNHLM) on TB. SDG targets provide a roadmap for reducing TB incidence and mortality. Technical experts worked diligently to gather data and develop costing models for interventions tailored to individual countries.

## Day Three

The third day was dedicated to exploring the overarching purpose of TB surveillance and its guiding principles, as well as emphasizing the significance of systematic data collection and reporting. The presentations focused on clarifying definitions, identifying and emphasizing the essential set of data items that should be consistently and continuously collected by TB surveillance systems, which ensure comprehensive and reliable data capture.

The overall purpose of TB surveillance and its principles was presented. For TB surveillance to be effective, it is necessary to have standardized definitions, collect data to address defined objectives, have guidance applicable to paper and digital systems, assure data quality, and establish reporting frequencies. It should also be built on the experiences of other countries.

WHO's updated definitions related to people with or at risk of TB disease (TB) or TB infection (TBI) and their contacts were provided. The presentation included tables of changes made to the indicators compared to the previous 2013 edition.

Countries were encouraged to focus on collecting specific core elements for surveillance rather than amassing excessive data. Recommendations for collecting data on key indicators were provided, which could be customized to align with national needs.

Illustrative scenarios were presented related to the reporting of people diagnosed with TB and their treatment initiation and treatment outcomes. This was practical work, where all participants took part.

The technical presentations concluded with common challenges in calculating and reporting TB data and WHO-recommended programmatic indicators.

The day ended with group work and closing remarks.

# Background

In 2021, TB DIAH embarked on the detailed process of selecting a COE host country in the EEE region based on qualitative and quantitative factors. After Georgia was selected, TB DIAH organized in-person meetings in Georgia in January 2022 to discuss the virtual COE model and partnership framework with Georgia's National Center for Disease Control and Public Health (NCDC) and National Center for TB and Lung Diseases (NCTLD). In May 2022, a Founding Event was held at the NCDC in Tbilisi, Georgia to formally establish the COE. The COE is hosted by the NCDC, together with the NCTLD. Its purpose is to model, test, and share best practices in TB M&E in the region, serve as a hub for TB DIAH regional support, and ensure synergy and effective use of resources.

After the COE's establishment, the COE convened its first regional consultative meeting in Tbilisi in July 2022. With more than 40 participants from Armenia, Azerbaijan, Georgia, and Moldova, it laid a solid foundation for collaboration and effective country engagement. During the intensive two-day workshop, countries identified common challenges across different TB M&E and surveillance systems domains which helped TB DIAH and the COE identify country- and region-specific follow-up actions. After the consultations revealed that a context-specific approach was required, the COE conducted national review meetings in each of the intervention countries in October and November 2022.

To address the overarching need to strengthen the capacity of NTP staff to improve TB data collection, reporting, analysis, and use, the COE hosted a Regional Training Workshop on TB M&E and Surveillance Capacity Strengthening for EEE and Central Asian NTPs. The three-day in-person workshop was held in Tbilisi at the end of November 2022. Over 90 participants came from five EEE countries (Armenia, Azerbaijan, Georgia, Moldova, and Ukraine) and five Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan), as well as Denmark, Switzerland, and the United States. The event engaged NTPs, civil society organizations working in community-based TB M&E, USAID mission health staff, USAID TB implementing partners (IPs) from participating countries, and staff from the WHO Regional Office for Europe (WHO/Euro).

In May 2023, the COE hosted a Regional Training of Trainers (ToT) in TB M&E and Surveillance to provide a foundation for critically reviewing, understanding, and using routine TB surveillance data through the practical examples of analysis, interpretation, and visualization of the data at sub-national and national levels. The five-day in-person training was held in Tbilisi with 18 NTP representatives and affiliated M&E staff from Armenia, Georgia, Moldova, and Ukraine. Georgia and Armenia each subsequently conducted national-level step-down trainings.

## About the Conference

The overall purpose of the regional event was to provide an opportunity for country-level TB experts, stakeholders, and technical partners to cross-fertilize M&E experiences and further M&E capacity development in the region.

The conference took place at the Pullman Tbilisi Axis Towers, in Tbilisi, Georgia, from Wednesday, October 4, through Friday, October 6, 2023. Participants came from seven countries (Armenia, Georgia, Kyrgyzstan, Moldova, Tajikistan, Uzbekistan, and Ukraine) as well as Denmark, Switzerland, and the United States. The event engaged NTPs, personnel working TB M&E, USAID mission health staff, and USAID TB IPs from participating countries. Representatives from WHO/Euro, Global Fund, and Stop TB Partnership were also engaged.

The objective of the conference was to improve data use, promote experience sharing among countries in data use, share success stories and lessons learned, address cross-border data issues, share updates to the Performance-Based M&E Framework (PBMEF), and provide USAID, WHO, and Global Fund updates.

# Day One

## Welcome and Opening Remarks

The first day served as an opportunity for countries to present updates about the progress towards their NSPs, global targets, challenges, success stories, and plans.

**Tamar Gabunia, Deputy Minister of the Ministry of Internally Displaced Persons, Labour, Health, and Social Affairs of Georgia (MoILHSA)** welcomed the participants on behalf of the MoH and NCDC. Georgia has made substantial progress in reducing TB incidence. With new approaches and guidelines for TB treatment, treatment outcomes have improved for drug-susceptible (DS)-TB as well as drug-resistant (DR)-TB. This achievement should be sustained and this project that is focused on improving TB data reporting and analysis allows us to implement a new platform for TB data collection and analysis, share experience and achievements with others, and help to find common solutions thereby making substantial progress towards the 2030 TB goals. At the recent UNHLM all countries recommitted to invest more and eliminate TB by 2030.

**Irma Khonelidze, Deputy Director General, NCDC,** said that the NCDC stays committed to sustaining the operation of the COE within the NCDC, together with the National TB Center, and plans to continue further efforts. Extraordinary progress was made with TB DIAH during one year as a result of the joint work and cooperation of other countries. This meeting is important to understand the importance of partnership.

**Zaza Avaliani, Director, NCTLD,** remarked that this conference, held after the UNHLM, adds even more responsibility to this meeting and will provide fruitful discussions and knowledge mining.

**Stephanie Mullen, Project Director, TB DIAH,** sent her warmest regards to the participants via video recording. This workshop is to further review TB data, learn from each other, and hear important updates with the goal of strengthening TB M&E capacity and surveillance systems in the region. This workshop is an opportunity to share experiences and lessons learned. She expressed special thanks to Georgia's NCDC and NCTLD for hosting the event, and to USAID for sponsoring the event.

**Giorgi Kuchukhidze, Joint Infectious Diseases Unit (JID), WHO/Euro,** expressed gratitude to USAID and Sevim Ahmedov for USAID's efforts to strengthen TB surveillance and monitoring in the region through different platforms and initiatives. Kuchukhidze also expressed thanks to the TB DIAH team, NCDC, MoH, and the NCTLD for hosting the event. Within these three days WHO will share insights and explore tools

available to WHO partners. The WHO consolidated guidelines on TB surveillance with updated definitions and reporting framework underwent a comprehensive revision after ten years.


**Silviu Domente, WHO Representative and Head of WHO Country Office in Georgia,** commented that the UNHLM political declaration is unprecedented and very ambitious. Following this declaration, we hope that 45 million people will have access to vital treatment. The declaration looks at funding for TB and aims to increase domestic funding fourfold and increase international funding too. The declaration also strives to eliminate inequality and address stigma and discrimination. Georgia has always had an extremely high commitment to addressing TB and the Georgian TB program is a model for the region. WHO/Georgia collaborates closely with ministries and other entities.

**Sevim Ahmedov, TB/HIV, Prevention, and M&E Team Lead, USAID, Bureau for Global Health, TB Division,** said that this meeting comes on the footsteps to the previous meeting held in Tbilisi a year ago. Thanks to our Georgian colleagues for their outstanding support with organizing and hosting this meeting. Georgia has made incredible progress with its TB program. This is a partnership with several entities, including the Global Fund, WHO, Stop TB Partnership, and TB DIAH.

## Progress towards NSPs, Global Targets, Challenges, Success Stories, and Plans: Country Presentations

### GEORGIA

**Maka Danelia, Manager of the Global Fund TB Program, NCDC**

The presentation from Georgia focused on two key indicators during the 2022 period: case detection and treatment success rate. Remarkably, Georgia successfully achieved its target of reducing TB incidence by 50 percent compared to the 2015 rate. Furthermore, the reduced mortality rate provides strong evidence that this decrease is a genuine accomplishment, rather than a result of inadequate detection methods.

In Georgia, the overall treatment success rate is 87 percent, which is notably higher than the Eastern European average of 70 percent. In 2019, the treatment success rate was 79 percent compared to 59 percent in the European region. This demonstrates a significant improvement in treatment outcomes in Georgia.

For data quality assurance and quality control Georgia uses a well-functioning supervision system. Supervisory visits to all regions and the prisons from the central level occur twice a year and from the regional level to the district level quarterly. Crosscheck of the completeness of all TB registers, as well as relevancy to the patient's medical charts are evaluated on the district level by the regional coordinator during quarterly monitoring visits. On the other hand, the regional facilities are supervised by

the central supervisory team, comprised of the TB case management and coordination unit head, pharmacy and NRL heads on a bi-annual basis, which also includes visits to randomly selected district facilities. This system covers all aspects related to the implementation of TB control interventions. A robust checklist is used which includes detailed variables covering every TB program activity. The data is validated through various sources such as lab registries, patient registries, and interviews with patients, physicians, and nurses. However, it is time consuming to create an accurate report. At the central level, the data is received about a month after data collection.

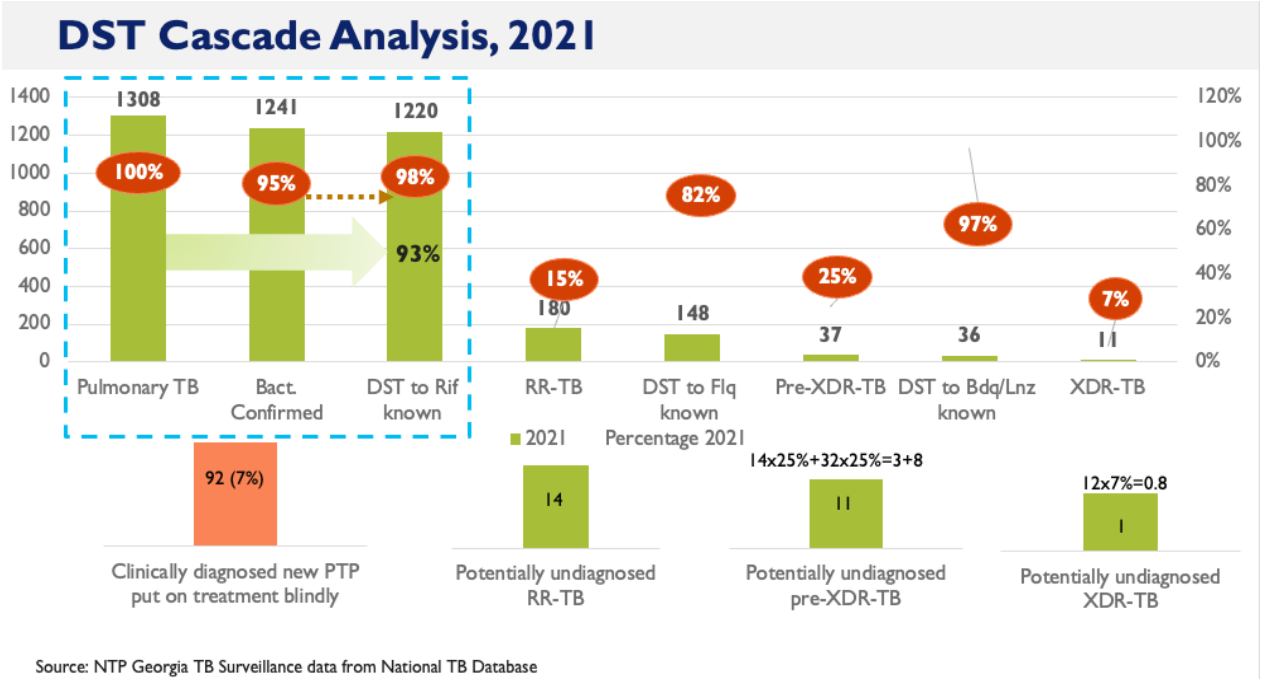
Digital technologies have been developed to capture information about all TB contacts. In 2022 a contact tracing and TB preventive treatment (TPT) tracking app called TraceTB was launched with the purpose of recording all contacts and persons withTBI throughout the country in a database. The system is used by TB doctors and epidemiologists, allowing them to work simultaneously. Currently, the system is in the rollout stage. In 2018 another application was launched, a VST mobile app called AdhereTB. Patients are enrolled in VST regardless of their drug susceptibility pattern. A supervising nurse registers the patient and reviews the videos through a web-based platform to track the patient's adherence. Effective coordination between these two systems is crucial. The Global Fund recognized this application as a best practice in 2022. From January to June 2023, a total of 505 patients were enrolled in VST constituting 65 percent of all outpatient cases.

On October 1st, 2023, the new health information system was launched which is a fully electronic real-time case-based approach that follows the patient pathway and is integrated into the civil registry and other systems in Georgia.


The trend analysis of the treatment success rate for multidrug-resistant (MDR) and rifampicin-resistant (RR) TB from 2009 to 2019 revealed a persistent pattern of consistently low success rates, fluctuating within the range of 50 to 49 percent. However, since the introduction of new drugs and treatment regimens, a significant improvement has been observed, with the success rate reaching the target of 79 percent by 2019. Every initiative of NTP was designed to support adherence, including financial incentives, the inclusion of civil society, peer support, etc.

The 2021 drug susceptibility testing (DST) cascade analysis revealed that out of all pulmonary TB cases, 95 percent were bacteriologically confirmed, with the RR status known in 98 percent of confirmed cases. In 2021, 15 percent of TB cases were drug resistant. Of these, 82 percent had known DST results for fluoroquinolones (Flq), 25 percent were classified as pre-extensively drug-resistant TB (pre-XDR-TB), and 97 percent underwent DST for bedaquiline (Bdq) and linezolid (Lnz). Additionally, 7 percent were identified as extensively drug-resistant (XDR)-TB. Among the 92 cases (7% of all) that were clinically diagnosed and treated with TPT without DST confirmation, 14 were potentially undiagnosed RR-TB, 11 were potentially undiagnosed pre-XDR-TB, and just one was potentially undiagnosed XDR-TB.

**Figure 1. Georgia's DST Cascade Analysis**




Source: NTP Georgia TB Surveillance data from National TB Database

In analyzing the 2020 MDR/RR-TB treatment process, it was found that out of 340 RR-TB cases, 57 percent were bacteriologically confirmed as RR-TB (including pre-XDR/XDR). All of these confirmed cases initiated treatment with either Bdq and/or Lnz, and of these, 74 percent successfully completed their treatment regimen.

There is minimal likelihood of any missing cases of DR-TB. Nearly all the cases in 2023 involving individuals who tested positive were closely monitored for a duration of six months. It is widely acknowledged that, aside from these protocols, no alternative method exists to diagnose DR-TB. Current evaluations and assessments continue to be conducted to ascertain the discrepancy between the estimated number of cases and the reported notifications.

The key challenges in Georgia are as follows:

- Improving contact tracing and enhancing efficiency in finding missing cases are key challenges. To address this, mobile outpatient clinics visit congregate settings to facilitate active case-finding. General healthcare facilities are equipped with on-site testing capabilities to enable immediate investigation when physicians suspect TB. Georgia regularly conducts workload analyses of GeneXpert machines to optimize their placement based on need. The workload analysis has been introduced to enhance the case detection process and minimize the likelihood of missing cases.
- The implementation of the new electronic health management information system is still in

progress and has not achieved its full potential. Many facilities are transitioning from paper-based to electronic reporting, but the system remains unfinished with ongoing gaps to be addressed.

- The supervision systems on data collection, recording, and reporting require optimization. It is crucial to identify and reach out to high-risk groups that are currently not included in or covered by the state program.

**Question and Answer (Q&A) Session**

During the Q&A session, an inquiry was made regarding the potential strategic application of the discussed trends. Danelia underscored the significance of enhancing contact tracing methods to effectively identify potentially undetected cases. Furthermore, Danelia highlighted the ongoing implementation of active case-finding initiatives, with a specific focus on high-risk demographics such as minors and individuals engaged in drug injection. Additionally, efforts to enhance case identification at primary healthcare facilities were acknowledged. The WHO representative advised prioritizing laboratory confirmation coverage to bridge the gaps in the initial steps of the TB cascades instead of starting with estimations of TB incidence.

## Armenia

**Naira Khachatryan, Acting Director of the National Center for Pulmonology of the MoH of the Republic of Armenia**

Armenia has witnessed a noticeable downward trend in TB notification rates, suggesting a possible decrease in incidence. However, COVID-19 played a major role in this trend, resulting in a 31 percent decrease during the pandemic. Over the past two years, there have been slight improvements in case detection. The 2015 goal, which was a 50 percent detection rate, has been successfully reached. Nevertheless, the challenges of case detection and treatment success remain problematic for the country. In terms of absolute numbers in Armenia, a total of 472 cases have been recorded, with 126 falling under the category of pulmonary cases. Out of these, 253 cases were identified and subsequently initiated treatment, with 185 of them being pulmonary cases.

Active case finding activities for TB have been carried out among risk groups. A total of 2,485 cases were screened in 2022. The screening was performed using a portable fluorography device or digital radiology using computer-aided detection software. The initiative was implemented in collaboration with primary healthcare institutions. The process included screening prisoners, people with mental disorders, people residing in public or elderly care homes, and migrants from Russia and other areas. As a result, 96 cases of suspected TB were identified, of which five were diagnosed with active TB. The TB detection rate was 0.02

percent.

Active case finding revealed that migrants were the most affected group by the disease. Screening activities are still ongoing in 2023. The disease primarily manifests in displaced people from Karabagh; in the past 10 days, five patients from Karabagh have been identified and hospitalized.

In 2022, a patient-centered model of care was introduced from which:

- The total number of patients receiving home-based care treatment was 113.
- 63 TB patients were enrolled in VST, of which 51 had DR-TB and 12 had drug-sensitive TB (DS-TB).
- In 2022, out of 313 cases of TB, 38 percent of patients initiated the treatment with the support of a family member. In 2023 this number increased to 77 cases.

These patients are provided with education, psychology, and counseling services. Text messages (notifications about taking medication) are sent to a family member who is responsible for the treatment, as well as a TB doctor.

In Armenia, the National M&E Plan was developed for 2021-2025 to support the strategy and goals adopted by the National TB Control Programme, which allows the following:

- Collection and submission of reliable program data
- Support in preparing regular and reliable program reports
- Monitoring the program implementation processes
- Identification of deviations from program plans
- Identification of factors related to program results
- Making timely decisions to address current or potential issues
- Identification of best practices and the need for research

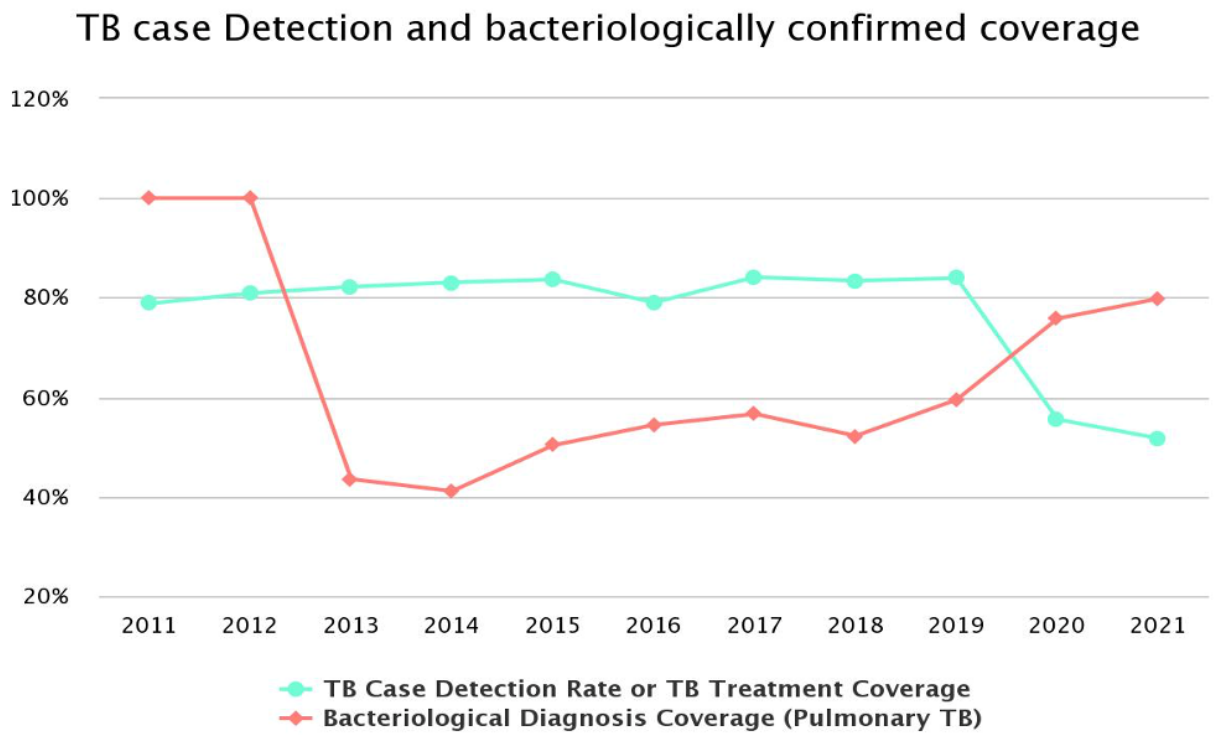
The country is working on approaches to improve detection, which can be done by supporting primary healthcare doctors such as giving them financial incentives for successful treatment outcomes.

Regular data collection and analysis are essential components of the program's operations. Indicator sheets, along with internal and external reports, are valuable tools. Electronic resources, such as central M&E, play a significant role in this process. A dedicated team conducts monitoring visits to TB facilities, primarily relying on an electronic online system for data collection. These visits focus on assessing data quality and accuracy.

Data plays an essential role in facilitating effective M&E and management of the program. Specific studies, such as the one conducted during the COVID-19 pandemic, provide valuable insights, enhancing the NTPs understanding of how to improve case finding and detection. Notably, the results of this study have been published in an international journal.

The NTP has been transitioning from paper-based methods to electronic data collection. Despite this advancement, enhancing quality assurance is critical to ensure the accuracy and precision of data. Moreover, there is a need to strengthen the analytical skills of the M&E staff.

**Figure 2. Armenia's TB case detection and bacteriologically confirmed coverage**




Source: Indicator Comparison | TB-DIAH Data Hub (tbdiah.org)

Trend analysis of TB case detection and bacteriological confirmation coverage from 2011 to 2021 showed a notable decrease in the case detection rate in 2020 and 2021. While there was an increasing trend in bacteriological diagnosis coverage starting in 2018, a 10 percent decline was observed in 2022 and the first half of 2023. The NTP is actively investigating the reasons for this decline. An analysis of TB contact investigation and TPT treatment coverage revealed gaps in the alignment of contact registration and investigation processes. Khachatryan underscored the critical importance of documenting all contacts, along with highlighting the NTP's continuous work to enhance the TPT element within the national program.

**Q&A Session**

The Armenia country team raised concerns about the patient registration system, which allows patients to choose different polyclinics. This often results in family members being registered in different polyclinics. This situation poses a challenge because TB doctors do not have access to family members' information and cannot invite them for investigation. The MoH is currently in discussion to address this issue, with the aim of having the TB cabinet manage all contacts within the family. Additionally, the issue of migration from the country, particularly among families and children, has led to a decrease in the child population, contributing to a demographic crisis. Stigma continues to hinder the invitation of some individuals for TPT, and there are plans for an awareness campaign to improve this situation.

The experience of implementing VST in Armenia was of interest. Khachatryan described the process of providing individual incentives, mainly to primary healthcare specialists. She noted that doctors receive payments when they suspect a TB case, and a portion of the fee goes to the polyclinic if they support these doctors. However, it was highlighted that understanding the exact impact of incentives on treatment effectiveness can be challenging, as multiple factors influence treatment success. Patients receiving modified regimens are enrolled in VST. Discussion about the DST cascade highlighted a significant proportion (22%) of confirmed TB cases among the presumptive cases. Khachatryan pointed out that the discussed cascade includes data from specialized TB cabinets, focusing on more vulnerable groups. At present, the NTP and MoH are working on establishing a system to track referrals from the private sector and primary healthcare facilities.

The session highlighted practical concerns related to patient registration, migration, the use of incentives in treatment, and strategies to improve engagement and overcome challenges in TB control program in Armenia.

## KYRGYZSTAN

**Cholpon Nurgazieva, DS-TB coordinator, Department of Strategic Development and International Cooperation, National Center of Phthisiology**

Nurgazieva outlined the country's TB trends over three years, from 2019 to 2021, revealing a substantial decline in TB incidence, largely attributed to the effects of the COVID-19 pandemic. It was noted that WHO's 2021 data reports higher rates than the country's records, and the NTP is working with WHO to understand this discrepancy. For bacteriologically diagnosed pulmonary TB cases during the past three years, the indicator has remained relatively consistent. This stability is due to limitations in the diagnostic tools and algorithms as the detection capabilities have not reached the required level. However, it is worth noting that there are a significant number of clinically

detected cases on record.

The reported instances of TB in children are notably low, ranging between four and five percent for new and relapse cases. This is below WHO's recommended range of five to 10 percent. Efforts are underway as part of the state's NSP to reach this target.

There has been a decrease in DR-TB cases over the past three years. However, the treatment success rate has remained consistent at around 21-22 percent. This can be partly attributed to the loss of a significant amount of follow-up data due to migration and deaths. The records primarily include severe cases where individuals are seriously ill.

The success rate of DR-TB treatment in Kyrgyzstan is improving. The data from the 2017, 2018, and 2019 cohorts was analyzed, and in 2021, the success rate reached 71 percent.

The trend of TB morbidity and mortality in the Kyrgyz Republic per 100,000 population has remained relatively stable. The morbidity rate was declining until 2020, but has started to increase again. It is estimated that it reached approximately 14.5 in 2022, similar to the levels observed in 2019.

Kyrgyzstan's current strategies for effective use of national TB data are as follows:

- An implementation plan for the National TB-VI Program (2023-2026) has been developed and approved covering 21 program indicators from PBMEF.
- Optimizing and re-structuring of M&E departments to expand TB data management functions, such as quality control of entered data, verification, analysis, and data use.
- Restructuring the M&E department and creating a Department of Strategic Development and International Cooperation at the national level.

Key improvements in the national TB M&E system are:

- The electronic system for recording TB data.
- Regular online verification of registration in the e-TB register of lab-confirmed cases of DS-TB and DR-TB.
- Implementation of cohort analysis as a routine analyzing process for reported data on key indicators, and investigation of complex TB clinical cases using the developed tools.
- Development of electronic M&E checklists to systematize the process of clinical and program management monitoring.

Key challenges remain:

- Current projects supporting NTP efforts to strengthen the national M&E system are nearing their end.
- Problems will emerge concerning the sustainability of TB information systems after the projects are over.

- Weak staff capacity to work with electronic information systems.
- Suboptimal quality of TB data collection to date.
- No analysis and use of TB data at the regional levels.

Future plans include:

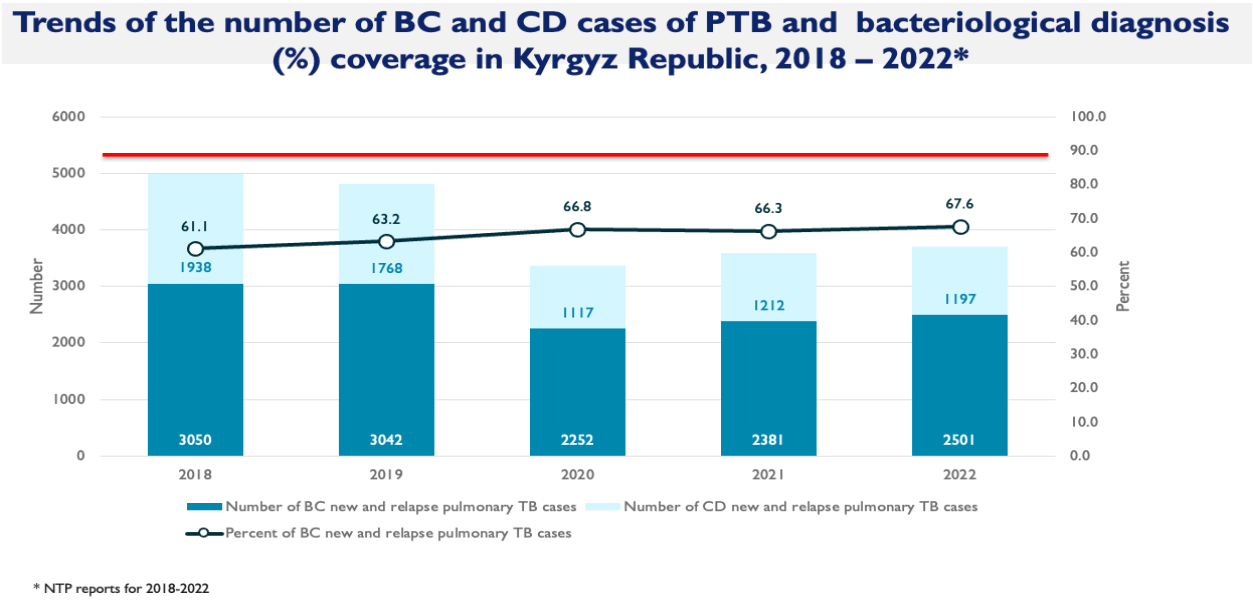
- Sustaining the ongoing initiatives, taking into account all potential resources.
- Finalizing and rolling out the electronic TB registry that will be integrated with other health information systems such as the HIV registry, and subsequently transition to fully electronic forms.
- Finalizing and implementing a practical M&E guideline within the country.
- Developing an M&E training module that includes data analysis and use (cohort analysis) for further programmatic implementation at all levels.

The key indicators of success:

- Test coverage
- Rapid diagnostic
- Treatment

In the 2024 plan, the goal is to achieve 84 percent coverage for TB diagnostics. To reach this target, a new diagnostic algorithm has been introduced, prioritizing molecular testing. All individuals suspected of having TB are advised and referred for GeneXpert testing. In addition, efforts to optimize laboratory services include acquiring five platforms and establishing a sputum transportation system covering all regions.

**Figure 3. Trends in the number of bacteriologically confirmed and clinically diagnosed cases of pulmonary TB and bacteriological diagnosis coverage in the Kyrgyz Republic**




* NTP reports for 2018-2022

There has been a slight improvement in the percentage of bacteriologically confirmed new and relapse pulmonary cases since 2020. However, achieving the target of 90 percent has been challenging due to the significant number of clinically diagnosed cases. Nurgazieva highlighted that during the DS-TB cohort cascade analysis for the year 2021, the achievement of having DST resulted in 94.1 percent of new and relapse bacteriologically confirmed cases and treatment initiation in 99.6 percent of those who were notified. The treatment success rate in this cohort was 80.8 percent.

The cascade analysis for DR-TB treatment in the 2020 cohort revealed a treatment success rate of 71 percent. The positive treatment outcomes for DR-TB can be attributed to the recent introduction of new treatment regimens.

Currently, comprehensive case management and VST are being implemented nationwide. This approach was implemented throughout the country in response to an order from the MoH.

**Q&A Session**

The Q&A session emphasized the importance of identifying and understanding the gaps between stages of the TB cascade. As an example, the DS-TB cascade was referred to, where, although the treatment success rate among those who started treatment was 80.8 percent, a participant was interested in the importance of understanding cascade loss, as shown in the cascade slides presented. Specifically, they mentioned the cascade for DR-TB, highlighting that although more than 70 percent of cases were completed, the number of cases that successfully completed treatment was much lower. This emphasized the need to address cascade issues at different stages.

A question was raised about the absence of DR bacteriologically confirmed cases in the presentation. The participant noted that the presentation only seemed to include those who started treatment with the first line of medicine and asked about the categorization of new and relapse.

In response to the testing and positivity rates, it was clarified that the presentation was comparing data from different years, and the cascades presented were not continuous. The speaker explained that the figures represented cases that had undergone testing using GeneXpert and were subsequently confirmed as bacteriologically confirmed cases. These were not presumptive cases but rather lab-tested cases. A concern was raised about the high percentage of positive outcomes, suggesting that only severe patients might have been tested due to the high positivity rate of bacteriologically confirmed cases.

## REPUBLIC OF MOLDOVA

**Andrei Corloteanu, Head of the National TB Response Program Coordination Department, Institute of Phthisiopneumology "Chiril Draganiuc"**

Corloteanu presented a trend analysis for the incidence of new TB cases and relapses as well as the mortality of TB from 1990-2022. A significant number of cases went undetected in 2020 due to the impact of the COVID-19 pandemic. Subsequently, in 2021-2022, more than 300 cases were detected compared to the previous year, although the figures still fell short of those in 2019.

The mortality rate has declined from 209 to 199, however, this can be partially attributed to the change in population figures in Moldova, which decreased from 4,100,000 to 3,100,000 due to out migration. This population adjustment has resulted in more realistic figures and, consequently, more accurate indicators.

The NSPs have been in place since 1996. The most recent plan, covering 2021-2025, was officially adopted in 2022 and is referred to as the "National TB Program 2022-2025". This program has introduced several key initiatives, including a shorter treatment regimen for MDR cases. Four additional GeneXpert machines for MDR-TB diagnosis have been procured, with three located in the national lab at the Institute of Pulmonology and one in the city of Bender. Furthermore, mobile X-ray equipment has been introduced in compliance with the Ministry's decree, facilitating mobile visits to various small towns and villages for population screening.

Over the past two years, there has been a significant emphasis on enhancing the M&E system. The cornerstone of this system is the information platform called SIME TB, which was introduced in 2007. While it continues to function, it falls short of many of NTP's requirements, lacking essential modules. To address this, the NTP plans to incorporate additional modules for programmatic activities such as contact tracing, contact investigation, and TPT. By 2026 it is expected that this database will be improved with additional modules, simplifying follow-ups on patient screening and treatment.

The SIME TB database includes official documents, such as orders, decrees, and updates from WHO, which can be easily downloaded and reviewed by doctors in the country with different levels of access.

The SIME TB database also manages the distribution of both first-line and second-line drugs, as well as laboratory tools. Annually, data is collected from districts to assess their inventory needs, and drug delivery is facilitated through the platform. The platform further centralizes patient data, with different access levels for national and district authorities.

In 2019, 100 percent of eligible individuals were tested with rapid diagnostic tests at the time of diagnosis, primarily using GeneXpert technology. However, since 2020 there has been a reduction in the number of patients tested with GeneXpert. Currently, the capacity allows for 100 percent coverage of the country with the 33 devices. However, a challenge persists due to the need to cover 59 districts. It is worth noting that microscopic cabinets also integrate GeneXpert testing capabilities.

The DS-TB cascade analysis revealed that 88 percent of patients who started treatment achieved treatment success, with a slightly lower rate of 85 percent among those notified. The DR-TB cascade analysis showed a 100 percent treatment initiation rate among all notified DR-TB cases.

**Q&A Session**

The Q&A session focused on various aspects of TB screening and related data. The first question asked about the utilization of GeneXpert devices, specifically regarding workload and the possibility of relocating them to different districts based on data analysis. Corloteanu noted that GeneXpert machines were originally employed for hepatitis C detection, and that no machine transfers had taken place because the manufacturer made module configurations based on location.

A comment from the audience emphasized that the stages of the cascades presented in the session were not subsequent, with different cohorts of patients represented in each column. This highlighted the need to better understand the different patient groups and stages.

Another question sought to understand the characteristics of the population considered to be at risk. Corloteanu elaborated that the risk groups had been revised to align with WHO recommendations, and 18 groups were identified for screening. Additionally, changes in population figures were discussed, as well as plans to ensure data accuracy.

A comment from the audience raised the issue of discrepancies between national and WHO estimates for case notification rates. It was explained that WHO uses estimates from the UN population division for consistency, but national estimates might differ, particularly when converting to rates.

## REPUBLIC OF TAJIKISTAN

**Bobojon Pirmahmadzoda, Director, Dushanbe City Center for Protection of the Population from TB, MoH and Social Protection of the Population of the Republic of Tajikistan**

Tajikistan has a population of over 10 million people with 93 percent of the country consisting of mountainous terrain, which poses challenges for screening access, particularly during the winter months. There is a significant number of migrants, which further complicates TB case finding. In 2021 a government-approved TB program was launched called the National Program for Protecting the Population from TB in the Republic of Tajikistan for 2021-2025.

The TB incidence rate is currently 39.7 cases per 100,000 people. Over the years, TB incidence and mortality has been declining. In 2022, this indicator decreased to 39.7, which is a significant reduction compared to 2014 when it was 60.8. It's important to recognize that, similar to other countries, the COVID-

19 pandemic had an impact on these figures.

Additionally, there have been consistent improvements in DS-TB treatment outcomes, with a success rate of 93 percent in 2021. With the help of international colleagues, the TB M&E manual has been updated. Information obtained as a result of M&E allows the TB program to identify priority areas. Regular analysis of activities is aimed at the prevention and control of TB, as well as budget development, procurement, distribution of drugs and other resources, preparation of reports to the MoH and donor organizations, committee coordination, and the development and implementation of various projects and programs.

Tajikistan regularly updates its statistical data, which is collected at various levels, including district, regional, and central. This information is accessible to a wide range of stakeholders, including the public, government, commercial, and international institutions. However, several challenges persist. For example, not all TB presumptive cases are properly recorded in the TB 015 system at the primary healthcare level. This is often due to a shortage of reporting forms, which are not readily available at the primary healthcare facility level.

The healthcare system also faces constraints due to lack of medical personnel, issues related to data quality, misalignment of employee responsibilities, limited time for monitoring, and a relatively low level of digitalization. Since 2018 an electronic open registry has been implemented countrywide. However, the equipment used during its pilot phase is now outdated, and there are insufficient computers and poor internet connectivity coverage. In addition, TB services face funding shortages.

In light of these problems and challenges, the NTP, in collaboration with partners, is actively developing strategies to address them. These plans include providing primary healthcare facilities with the necessary recording and reporting forms, fostering integration between TB services and primary healthcare alongside other services, training new specialists, particularly in TB reporting systems, offering support and training for IT specialists, and mobilizing resources to meet the needs of TB programs.

The reporting of TB cases falls short of WHO's annual targets, and the gap between reported and actual cases is expanding. Currently, the country is undergoing WHO NTP review, which may lead to revisions in presumptive figures.

The efficiency of DR-TB treatment is increasing annually. In the 2021 cohort, the treatment success rate of 83.1 percent was largely attributed to shorter treatment regimens and the introduction of family Directly Observed Therapy. However, some challenges have arisen. Although the reporting forms currently cover all patients who initiate treatment with clinically approved second-line drugs, including those with resistant forms, they do not currently distinguish between different cohorts. To address this, the reporting forms have been revised.

The TBI detection and treatment cascade covered the 2022 cohort from a pilot program in Dushanbe. This program introduced new and shorter regimen treatments for TBI. In conclusion, the analysis of the TBI cascade showed improved adherence to treatment, shorter treatment duration, fewer side

effects, reduced toxicity, a 100 percent treatment completion rate, and most importantly, the groundwork for updating the

country's guidelines on TBI and wider implementation of the new TBI treatment regimens in the country.

**Q&A Session**

During the Q&A session, various points were discussed regarding TB incidence, mortality, and contact investigations in Tajikistan. A participant highlighted the significant decline in TB incidence in Tajikistan from 60.6 to 37, which was praised. Additionally, the low mortality rate of 1 in 100,000 was noted. An inquiry was made about the TBI rate per index and how this figure was calculated, particularly whether a national-level TB infection survey was conducted. Pirmahmadzoda discussed the reliability of the figures registered in Tajikistan, noting the discrepancies with WHO figures. He clarified that the 24 percent TBI rate was specific to the pilot district of Dushanbe.

An advisor from Tajikistan discussed the challenge of reaching the pre-pandemic level of contact investigation, particularly due to the impact of COVID-19. Plans to improve contact investigation were mentioned, and an NTP review was ongoing to enhance data quality. The advisor also highlighted efforts related to TPT and the intention to expand data collection to cover the entire country.

## UZBEKISTAN

**Khasan Safaev, M&E Coordinator, Republican Specialised Scientific and Practical Medical Centre of Phthisiology and Pulmonology, MoH Uzbekistan**

According to the most recent WHO data, Uzbekistan reported a TB incidence rate of 62 cases per 100,000 population. In 2021, new RR/MDR-TB cases accounted for 17 percent of the total, while cases involving previously treated individuals comprised 29 percent. The treatment coverage for detected TB cases has improved and now stands at 64 percent. Furthermore, 2020 data reveals a treatment success rate of 91 percent for new and relapse cases, 84 percent for previously treated cases (excluding relapses), 70 percent for MDR/RR-TB cases undergoing second-line treatment, and 66 percent for pre-XDR-TB/XDR-TB cases on second-line treatment.

The TB Services and Surveillance System in Uzbekistan is designed to highlight and utilize TB data as outlined in the NSP. Its primary objective is to ensure consistent M&E of TB response efforts. This is achieved through the operation of an efficient and effective surveillance system, which plays a critical role in tracking the progress of TB control strategies, assessing treatment outcomes, and guiding decision-making processes based on accurate and up-to-date information. TB services are implemented by a vertical network of health structures at central, oblast, district, and primary healthcare levels.

The TB Center implements overall oversight of the TB control program including:

- Strategic planning
- Development and approval of the national policy and guidelines
- Capacity building of human resources
- M&E and surveillance

A digital registry has been implemented at the national level, which is aligned with the WHO and the Global Fund reporting requirements. Excel-based lab registries are maintained as well that record all lab investigations for each case. While the lab registries may feature multiple entries for the same individual based on their lab test frequency, the digital registry ensures patients are recorded only once. Discrepancies exist between these two registries, resulting in parallel reporting systems, leading to discrepancies in quarterly reports. To address these issues and align with the latest WHO recommendations, updating the national guidelines is planned.

During the COVID-19 pandemic, the case detection rate initially dropped to 55.1 but then increased to 64.5. However, it continues to fluctuate, leaving a 35 percent gap according to estimations. Bacteriological diagnosis coverage has been increasing and currently stands at 72 percent. This improvement reflects the enhanced diagnostic infrastructure, which includes the deployment of 100 GeneXpert devices throughout the country.

The treatment success rate for RR/MDR TB slightly improved in 2019 compared to the previous year (67% and 68% respectively). This improvement can be attributed to the resolution of delays in treatment initiation, which led to fluctuations in cohort coverage.

Uzbekistan has a population of 35 million, with an annual screening requirement of 30 percent, as mandated by the MoH. Each district compiles a comprehensive list of individuals to be screened within the risk groups by December of each year. This list contains the names of over 4 million people, and more than 90 percent of them undergo screening, which includes X-rays and skin tests for children under 15. Around 16,000 TB cases have been identified, representing 0.4 percent of the screened patients.

The future plans include:

- Updating the NSP, including developing a costed M&E and surveillance system strengthening plan with USAID technical assistance and Global Fund support
- Implementing the registration module of the developed DHIS2 case-based electronic database
- Implementing the Laboratory Information Management System
- Improving the capacity of TB centers to generate and report on the PBMEF and WHO TB indicators to increase the country’s accountability on progress to ending TB
- Identifying gaps and strengths in the country’s overall TB M&E environment to update TB case and treatment outcome definitions and align recording and reporting forms to the National TB M&E Plan as well as the PBMEF

**Q&A Session**

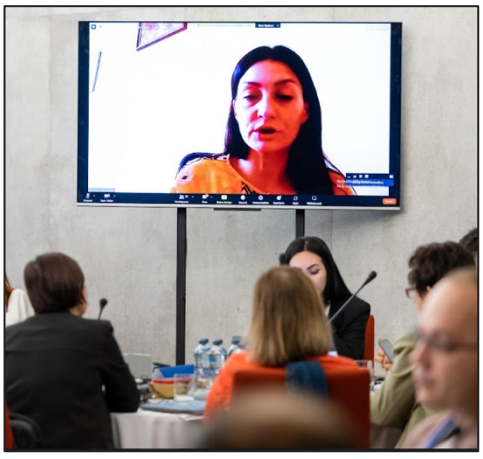
In the Q&A session, the participants discussed various aspects related to the digitization of the system for TB screening and data collection. A question was raised regarding the absence of data on presumptive TB cases apart from the 4 million planned screenings. Safaev clarified that due to the lack of an electronic database, there is no information available about presumptive cases, but plans are in place to investigate this aspect in the future.

The discussion touched on the TB screening methods used. It was explained that in addition to symptom screening, X-ray screenings were performed, and mobile X-rays were conducted in each region. For children under 14, skin tests were administered, with the government covering the associated costs. The approach of testing more people was commended as the right path for effective screening.

It was noted that there have been multiple attempts to fully digitalize the database since 2010. While there is a digital database, it is considered obsolete due to the limited analytic capabilities and a lack of recent updates. Safaev highlighted that the NTP has faced difficulties in implementing digital systems for various reasons. The effort to develop and update the current system was described as being in its final stages. Discrepancies in data were attributed to human factors and differences in reporting periods among various agencies.

## UKRAINE

**Olesia Medvedieva, TB Specialist Doctor, Public Health Center of the MoH of Ukraine**



Ongoing warfare in Ukraine, lasting over a year and a half, has heavily impacted essential healthcare programs, including TB control. Ukraine is among the countries with a high DR-TB prevalence, which poses a public health challenge. Each year about 4,000 people are diagnosed with DR-TB including 28 percent of new cases and 41 percent of pre-treated patients.

An independent review of the surveillance system and a comprehensive evaluation of the NTP was carried out in early 2023 in Ukraine.

Ukraine is actively addressing health challenges, including TB, HIV, and viral hepatitis, all of which are high prevalence diseases. Ukraine regularly updates its strategies in line with WHO recommendations every three years. Even during wartime, the country has conducted WHO-recommended epidemiological surveillance.

In 2023 the TB guidelines were updated, and the country achieved complete digital integration of TB treatment. New information systems are used that cover TB, HIV, and viral hepatitis while ensuring data

integrity, accuracy, and security. The TB portal provides essential data on disease incidents and mortality. Ukraine is committed to implementing new tools for fighting these diseases effectively and sustainably.

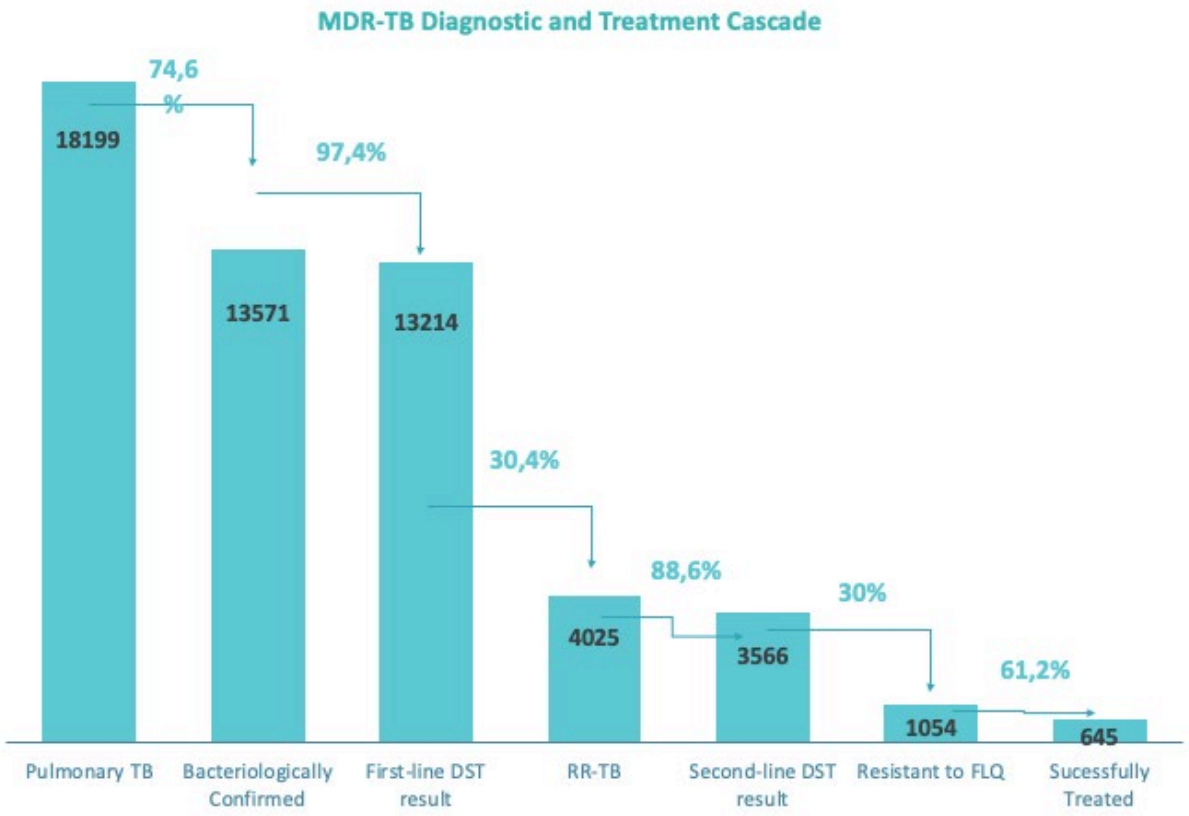
Despite the war, Ukraine successfully manages to collect and analyze TB data. This task is often challenging, especially in areas that had long been under Russian military occupation. In some cases, doctors must resort to unconventional methods, such as climbing onto rooftops to access data and transmitting patient information to doctors in other countries who are providing care to those who have sought refuge abroad. Despite facing extended periods without electricity and internet, the collection and analysis of data continues, with regular updates being posted on a dedicated web platform.

Ukraine is currently transitioning from paper-based reporting to digital forms. Furthermore, it aims to establish a multisectoral accountability mechanism, where each ministry reports on its contributions to TB eradication. These efforts align with the SDGs and involve the development of practical measures to address the consequences of the war, as outlined in the new political declaration.

The average cumulative progress of the UNHLM achievements for 2018-2022 is 85.4. In general, there has been good progress in TPT, and some improvement in detection and treatment among children. The indicator for preventive treatment for HIV patients tracks low for Ukraine, but it is still two times higher than before. An analysis of new and relapse TB cases by age group reveals a downward trend in detection, indicating an aging epidemic and effective prevention measures. The impact of COVID-19 led to a 30 percent reduction in new case registrations in 2020. Vulnerable populations, particularly those in adverse living conditions, are at increased risk of TB. Despite political uncertainties, the NTP is collaborating with WHO to model and assess the situation. During the first half of 2023, there was an alarming 13 percent increase in TB cases.

Since 2018 the treatment outcomes have consistently improved as a result of the expanded access to new drugs and treatment regimens. However, there are certain factors that are beyond the control of the NTP — patients who migrate abroad or live in occupied territories are not accessible for follow-up.

**Figure 4. MDR-TB diagnostic and treatment cascade**




The high prevalence of individuals infected with HIV in the country has an impact on the MDR-TB diagnostics and treatment cascade. There have been improvements in the response to first-line drugs, and these indicators are steadily increasing. The robust laboratory infrastructure in place is expected to further contribute to the improvement of these indicators. A cascade analysis shows that, in terms of diagnostics, the strength lies in the rate of DST on first-line drugs. On the other hand, the weak aspect of diagnostics is the insufficient fulfillment of the indicator on bacteriological confirmation, as well as the insufficient diagnostics of pre-XDR and XDR-TB forms.

Currently, data for the TB contact investigation and treatment cascade are gathered using paper forms, with plans to transition to an electronic system. Ukraine is in the process of adopting Quantiferon tests for TBI detection. Over 90% of contacts from newly confirmed bacteriological cases were screened, and more than 86.6% started TPT. Of these, 95% successfully completed their treatment as of June 2023. The NTP aims to collaborate with civil society organizations to strengthen the TPT aspect of the TB program.

**Q&A Session**

During the session, a question was raised about the frequency of data collection for contact investigation. Medvedieva explained that data is currently collected annually but there are plans to transition to quarterly data collection. Additionally, there are intentions to expand data collection to include various groups recommended for screening and testing, not just contacts.

An inquiry was made about TB patients who leave and continue treatment in another country, specifically in the context of Ukraine and Poland. Medvedieva highlighted that data exchange occurs with many countries, and information is shared when treatment is completed with particular results. Bordering countries coordinate and engage in data exchange to the extent possible in such circumstances.

A suggestion was made to enhance the TBI contact tracing cascade by including a category for individuals who have been excluded from treatment. This category would indicate the number of people who are not eligible for TPT. The suggestion aimed to provide a more comprehensive view of the data by accounting for those who do not qualify for TPT.

Following the seven comprehensive NTP update presentations, the session progressed into a valuable feedback exchange where country teams and organizers took the opportunity to reflect on the experiences and insights shared by the participating countries.

# Day Two

The second day was dedicated to a thorough review of the USAID Global TB Strategy and its implementation outcomes. Discussions encompassed changes to the PBMEF and the journey in implementing the COE model with a focus on country-level activities in Georgia, Armenia, and Moldova. Participants gained insights into the vision for the COE model and the latest Global Fund Modular Framework indicators. The session also included a detailed discussion of the UNHLM TB Targets for 2023-2027 and the Global Plan to End TB.

## USAID Global TB Strategy, Implementation Status, Results Framework Implementation

**Sevim Ahmedov, USAID**

The USAID Global TB Strategy comprises five key elements: reach, cure, prevent, innovate, and sustain. Emphasis is placed on technical interventions rather than a service delivery approach. Setting up M&E frameworks for technical assistance is more challenging than for service delivery.

The strategy was developed through a modeling exercise that assessed various interventions concerning one another. It aims to reduce overall TB mortality and incidence. A marginal improvement in diagnostics and scaling up active case finding can yield significant results. Shifting from clinical settings to community-based interventions can make a substantial difference. Implementing TPT among non-HIV populations, along with active case-finding, is another key factor. Notable progress has been made in recent vaccine developments, including malaria, HIV, and TB vaccines, which has informed the strategic approach.

The vision of the USAID Global TB strategy for 2023-2030 is a TB-free world. Its mission is to provide high-quality TB technical and development assistance through programs founded on principles of diversity, equity, and inclusion, and implemented in partnership with affected individuals and communities.

The Agency will work with partners worldwide to reach every person with TB, cure those in need of treatment, and prevent new infections and progression to active TB disease while scaling up innovations in detection, care, and treatment, and fostering local ownership to sustain TB programs that contribute to pandemic preparedness.

USAID directly supports 24 TB priority countries, including Tajikistan, Uzbekistan, Ukraine, and Kyrgyzstan. Other countries like Georgia and Moldova receive regional support. The strategic plan spans eight years, from 2023 to 2030, aligning with the WHO End TB strategy. This alignment has been a rigorous process. The frameworks aim to enhance current diagnostics and TB services, which are inherently challenging goals, and to reduce the TB incidence rate by 35 percent and the TB mortality rate by 52 percent by 2030.

The outcome targets in USAID Global TB Strategy are as follows:

- 90% of incident TB cases diagnosed and initiated on treatment
- 90% of incident DR-TB cases diagnosed and initiated on treatment
- 90% treatment success rate for DS-TB and DR-TB
- Provide TB preventive treatment to 30 million people

To reach these targets, the process should be as follows:

- All priority countries rapidly introduce new TB tools and approaches
- All priority countries have strong TB national networks and USAID partnership
- All priority countries include appropriate TB interventions in pandemic preparedness plans
- All priority countries have implemented plans to address socio-economic determinants and health related risk factors that impact the TB epidemic

The UNHLM TB political declaration, Paragraph 48, pledges to accelerate progress towards timely, quarterly universal access to TB services in both high- and low-burden countries by 2027. Approximately 45 million people will receive life-saving interventions by 2027, including 4.5 million children and up to 1.5 million people with DR-TB.

The alignment process aims to establish specific targets for the 24 countries, focusing on DS-TB which accounts for 76 percent of the global burden. Additionally, DR-TB in these countries represents 68 percent of the global burden.

The next step involves tailoring the targets to individual countries and projects under the 2030 strategy. Ahmedov acknowledged that there are variations in project baselines. The goal is to continually update the target's table with the latest data annually.

Transitioning from a high-level strategy to an implementation approach involves addressing specific intervention measurements. The framework relies on performance-based monitoring, a conventional M&E method. Currently, work is being conducted to enhance this framework by incorporating five different indicator groups. This includes project-level M&E, as well as an extended set of indicators.

The updates involve standardizing core, core-plus, national, and project-level indicators to become a regular part of our partners' monitoring plans. These groupings will play a significant role in implementing the strategy, although the standardization process is quite challenging.

Regarding cascades, if the core and core-plus indicator groups are used, one can construct a basic cascade. By adding two more groupings, one can create a more comprehensive cascade for TB prevention and care. It is anticipated that partners will include these additional indicators in their plans and consistently report

on them. This approach ensures that regional data will complement WHO data to enable measurement of the impact of the USAID strategy. Partners should support and provide technical assistance for NSP development, emphasizing coordination and collaboration with the countries.

## Updated Edition of the PBMEF, Key Changes, and Implementation Strategy

**Ezra Tessera, Senior TB M&E Technical Adviser, TB DIAH**

The PBMEF is the cornerstone of USAID's efforts to ensure effective accountability for investments in TB at the global, regional, and country levels. The original PBMEF was published in May 2021, and the presenter informed that the new version is currently under revision and is scheduled to be released in February 2024. It is a comprehensive M&E tool that provides the following:

- Standardized indicators to measure performance of TB program outcomes
- Details on specific technical areas, such as diagnosis, treatment, TB/HIV, the private sector, etc.
- Treatment cascades that are critical for gap analysis

The strategy and paradigm of the PBMEF underwent significant changes through a consultative and collaborative process with TB DIAH and the USAID/Washington TB team. The TB DIAH team reviewed and synthesized patient pathways and treatment cascades, identifying key M&E questions relevant to the TB program. These questions were then matched with draft indicators. These indicators were prioritized based on importance, feasibility, and credibility, and organized into 14 technical areas.

There are 10 core indicators that serve as common metrics, integrated into the system and reported by all countries. Some extended indicators are also reported, depending on program specifics, but the core ones are mandatory for everyone. The PBMEF offers comprehensive details about each indicator via the reference sheets, explaining the cascade approach and data reporting procedures. Countries have begun using this approach in their reporting and internal decision-making processes.

The indicator reference sheet provides attributes of the indicators, with the updated version featuring additional information for extended indicators. Core indicators alone, while valuable for standard comparisons across countries, may lack the granularity needed to address specific questions about target achievement, course corrections, and resource gaps. These questions are addressed using the extended indicators.

Notably, a new US bill, End TB Now, was introduced in Congress to invest more in TB. The bill includes indicators not captured in the current PBMEF. Any legislative changes or updated information will be reflected in the new PBMEF. The revision process consists of three phases: updating the framework to align with the new congressional bill by April or May 2023, developing indicator reference sheets from July to October 2023, and completing the full PBMEF revision from September 2023 to March 2024.

Countries are encouraged to join the initiative and participate in monthly meetings. Information will be

disseminated, and comments and reflections from participants are welcomed and considered in the revision process.

**Kyrgyzstan PBMEF Experience**

In their comprehensive assessment of the national healthcare landscape, the speaker highlighted the significant contribution of PBMEF in simplifying data visualization. The tool is invaluable for tracking technological processes within the country and ensuring their logical progression. The ability to represent experiences through data facilitates a realistic evaluation of the situation, identifying any potential gaps or shortcomings. The discussion also touched upon the forthcoming development of M&E guidelines, aligning with international trends. Notably, the conversation emphasized the importance of dynamic indicators, both technical and operational, to delve deeper into the root causes behind program challenges. A suggestion was made to include recommendations for countries on utilizing these indicators dynamically, moving beyond static data snapshots and enabling in-depth analysis of underlying issues.

**Uzbekistan Experience**

The country team shared their experiences from the previous year's conference, initially having questions about the presented guidelines. However, through clarification and guidance, they gained a better understanding of how to effectively utilize these indicators. Presently, they are actively incorporating the 10 core indicators into a new project, along with additional extended indicators derived from the guidelines. The PBMEF serves as a valuable resource, providing insights into the proper utilization and significance of these indicators. Still, there is an expressed need to engage in further discussions regarding the new guidelines and indicators to comprehensively assess their relevance and importance.

The representative of the USAID-funded TIFA project elaborated on the mandatory requirement for reporting on ten core indicators. In their six ongoing grants launched this year, they ensure that at least one indicator is included in each grant, effectively covering nearly all core indicators within their scope of work.

**Tajikistan Experience**

The representative described how the country has implemented three distinct plans: one at the regional level, another at the local level, and a third at the bilateral level. This novel approach required them to collaborate closely with their partners. However, they faced initial difficulties in transitioning from regional to national reporting. It took approximately one year to develop the plan and incorporate the required indicators. The PBMEF served as a valuable resource, especially for local non-governmental organizations, equipping them with essential resources and guidance for data presentation in alignment with PBMEF definitions. Their bilateral program initiated in the previous year proceeded without significant issues, involving the recruitment of new specialists and experiencing no disputes. Looking ahead, they plan to continue updating their plans in the coming year.

## EEE COE in TB M&E and Surveillance: Journey in Implementing the COE Model – a Look Back and Ahead

### Overview of the COE Model

**Bridgit Adamou, Senior TB M&E Advisor, TB DIAH**

Establishing a COE in TB M&E and surveillance is one of TB DIAH's strategic approaches to strengthen the capacity of NTPs and other TB partner staff in data management, collection, quality, analysis, and visualization and to promote ownership and use of the TB surveillance system. The EEE regional COE was founded in May 2022 and is hosted by the NCDC in collaboration with the NCTLD. The COE's primary purpose is to help improve countries' TB data reporting, communication, and sharing for effective decision making. The COE will serve as a model for other countries in the region and will be the hub for TB DIAH support in the region to ensure synergy, sustainability, and effective use of resources.

The primary purpose of using the COE model is to help improve the COE country's TB data reporting, communication, and sharing for their own effective decision making. Additionally, the COE country's improved functioning serves as a model for other countries in the region.

The following functions fall to the COE team, comprised of NTP and TB DIAH staff:

- Establishing and promoting best practices with TB data collection, reporting, visualization, analysis, and use
- Engaging NTPs with necessary support and assistance in close collaboration with USAID and TB stakeholders in USAID's TB priority countries
- Training ("live" virtual trainings, in-person trainings, and/or online training courses) on TB M&E and surveillance to relevant NTP, MoH, or TB IP staff

- Providing leadership, guiding the implementation of TB M&E and surveillance activities
- Supporting capacity building and knowledge exchange so the COE can be a valuable resource to NTPs even after the TB DIAH project ends

## Introduction to MELVIN

**Alexander Asatiani, Senior TB M&E Consultant, EEE Region, TB DIAH**

The virtual COE is more than just a website or application; it's a multifaceted platform designed for practicality and action. Its core directions include data analysis, visualization, and turning data into actionable insights. It aims to strengthen connections, facilitate consultations, and identify the underlying causes of issues to provide practical solutions. The COE serves as an extension of M&E and surveillance efforts, offering hands-on expertise. It fosters collaboration, recommendations, and tracking of implementations. An online community is under construction to connect professionals and share best practices, creating a knowledge base with accessible resources curated by contributors.

The COE's approach encompasses Monitoring, Innovation, Evaluation, Information, Learning, Vision, and Navigation, leading to the development of MELVIN, a specialized conversational AI model for TB-related issues. This model guides conversations, offers content, follow-up questions, and provides sources for its answers, enhancing the learning experience. It is customizable, adaptable for future upgrades, and offers multi-language support — currently offering 92 languages. The COE encourages users to test MELVIN and embrace this innovative tool for exploring and navigating through TB-related information.

Furthermore, MELVIN is versatile, functioning as a tool for both education and professional practice, including quiz design. Plans are underway to integrate MELVIN with popular messaging platforms like WhatsApp to facilitate convenient interactions.

The information MELVIN provides is curated from a library of reputable sources, including PBMEF, ECDC reports, and Global TB reports. While Melvin is built on a custom GPT platform, the knowledge base relies on Notion. The continuous improvement and customization of MELVIN aims to enhance the learning and navigation experience for both users and the community. Users are encouraged to test MELVIN to explore its capabilities.

## Implementing the COE Model in the EEE Region

**Maka Danelia, NCDC**

To provide a foundation for critically reviewing, understanding, and using routine TB surveillance data through practical examples of data analysis, interpretation, and visualization at sub-national and national levels, TB DIAH, through the COE framework, hosted an international Regional Training of Trainers (ToT) in TB M&E and Surveillance Capacity Strengthening. The in-person training took place in Tbilisi, Georgia, from May 1–5, 2023. Twenty-eight participants from four EEE countries (Armenia, Georgia, Moldova, and Ukraine) attended a mix of presentations and individual and group activities. Together, COE and TB DIAH staff trained NTP representatives and professionals affiliated with M&E and surveillance on a variety of topics. These topics included:

- TB epidemiology in the EEE region
- M&E fundamentals
- PBMEF
- Data collection, quality, and analysis, including cascade analysis and root cause analysis
- Visualizing, communicating, and using M&E findings for decision making
- Understanding TB hotspot mapping
- Supportive supervision
- Stakeholder engagement

The training methodology was very much participatory and anchored to the fundamental principles of adult education, fostering the sharing of peer-to-peer knowledge, and practical experience from the field. Country teams were given the opportunity to draft their own national-level training plans. TB DIAH provided the participants with the necessary tools, templates, and technical assistance to identify their target audience, training curriculum, location(s), budget, timeline, and other logistics. The ToT resulted in a cadre of master trainers in the EEE region who are competent in TB M&E and surveillance and able to successfully deliver tailored training programs in their respective countries.

Danelia presented TB DIAH's M&E and Surveillance Systems Assessment (MESSA) tool that documents the current status of the TB M&E and surveillance systems in USAID's TB priority countries and beyond. The tool covers topics such as TB service delivery and TB management information system overview, including the system map; TB M&E system governance; laboratory and logistics for TB; data quality, use and communication; and TB program financing. The information gathered is synthesized to develop country profiles that provide a highly nuanced understanding of specific elements of the country's TB M&E and surveillance system.

She showcased the Assessment of Data Collection, Reporting, and Analysis Capacity (ARC) tool designed to assist USAID Missions and NTPs with mapping the readiness and capacity of the current TB M&E and surveillance system to generate, report, analyze, and use the data generated to improve the TB situation in their country. Based on the PBMEF, the ARC tool systematically reviews the TB data that are generated against the indicators in the framework and identifies the strengths and gaps in the surveillance system—a

critical first step in developing a comprehensive landscape analysis of a country's TB M&E and surveillance system. The COE is assisting with implementing both the MESSA and ARC tools in the EEE region.

## COE Country-Level Activities in the Region

### GEORGIA

**Maka Danelia, NCDC**

As a follow up to the ToT, a three-day in-person training was held in Tbilisi, Georgia, July 17-19, 2023. The objective of the training was to build the capacity of NTP staff on data collection, reporting, analysis, visualization, and use to improve TB surveillance and program management. Georgian NTP regional coordinators and database managers with M&E, surveillance, and TB program management background from every region of the country attended a mix of lectures and presentations and individual and group activities. Overall, 26 participants attended the training. The training was facilitated by Alexander Asatiani, TB DIAH's Senior TB M&E Consultant for the EEE Region.

While developing the curriculum, the COE staff reviewed and analyzed country-specific needs and adapted TB DIAH's standard TB M&E training modules to the Georgian context. The development process also included consulting with stakeholders, identifying relevant topics, and customizing the learning objectives accordingly. Specific modules were selected, modified appropriately, and translated into Georgian. The training focused on a range of vital modules essential for strengthening TB surveillance, data collection, analysis, and reporting.

The training served as a crucial initiative to enhance the capacity of NTP staff in Georgia. Throughout the training, participants engaged in interactive discussions, sharing practical experiences, identifying challenges, and proposing solutions. Notably, the importance of clear TB case definitions in the local language and the need for focused training for TB physicians were emphasized, signifying the commitment to improving understanding and expertise in TB case categorization.

The individuals attending the training were expected to provide supportive supervision at their local facilities and conduct on-site mini-training sessions related to recording and reporting. They would also serve as facilitators at the local level, helping to disseminate the knowledge and skills gained during the training.

Danelia presented the outcomes of implementing the MESSA and ARC tools in Georgia. Georgia's main strengths include:

- A national TB strategy
- Having national guidelines for TB treatment
- A country coordinating mechanism for TB
- Good TB data quality, diagnostics and laboratory
- Adherence to WHO guidelines

Weaknesses include:

- No national electronic health strategy
- No regular M&E trainings for personnel
- Insufficient information about co-morbidities
- No TB data communication strategy

Georgia scored 100% in the majority of ARC topics, but there were some areas that scored zero, including indicators for TB among healthcare workers and TB reporting in the private sector. Although most TB facilities are located within the private TB sector, all TB facilities are funded by the government.

## ARMENIA

**Naira Khachatryan, MoH**

Discussions with 30 participants explored preferences between physical and online monitoring methods. Currently, both methods are employed, with a focus on addressing patient and doctor needs. The collected data will guide the development of an updated action plan in line with MESSA guidelines.

Khachatryan presented Armenia's initial MESSA profile. The main components that need further development are special surveys, additional needs for social support due to the increased number of refugees, and more effective application in diagnostics and labs. For co-morbidities and special populations, attention points include nutritional status, TB, and TB prevention among health workers.

The ARC profile presented by Khachatryan showed that in contact tracing and TPT some components are missing. Gaps were identified in the detection of DR-TB and contact tracing for TPT, emphasizing the need for more comprehensive data analysis.

The MoH's collaboration with the WHO aims to enhance the quality assurance system for at-risk groups and special populations, with a focus on addressing the impact of stigma on specific groups.

## MOLDOVA

**Tatiana Cotelnic-Harea, Center for Health Policies and Studies (PAS Center)**

Following the Moldova team's participation in the COE-led ToT, Moldova is tentatively planning its M&E training sessions for December 2023. These sessions will target TB coordinators and focus on M&E practices, offering instruction in both the Romanian and Russian languages. Currently, the master trainers are analyzing all relevant components, conducting a desk review of available documents, and collaborating with the National Department of Coordination of National Programs. The primary guiding document is the National TB Response Program, implemented in 2022, which aligns with the MoH's decree on national program implementation.

Departmental challenges include a lack of a mandate for control functions. Physiologists conduct monitoring activities, but their roles are not clearly defined, and human resources are insufficient. A key recommendation is to establish a multisectoral responsibility system that ensures effective TB monitoring coordination.

On the financial front, the majority of the 2022 expenses were allocated to the TB program, primarily for the treatment of TB patients. These resources came from the state and Global Fund. Financing of TB services is fragmented, with TB cabinets within hospitals receiving funding based on the number of treated cases, and primary healthcare being financed per capita. This structure complicates our understanding of their involvement in TB services.

Another financial challenge is the lack of cost allocation for all TB components, spanning TB service delivery, risk group screening, and treatment under the supervision of a psychiatrist. The absence of systematic data and limited analysis tools for screening is a significant hurdle. Data collection is further delayed by the lack of a unified information system, which currently comprises three separate modules.

Centralized procurement and the high cost of international procurement platforms due to low volumes pose procurement challenges. Lab resource costs, including treatment, significantly impact expenses. The lack of information systems for monitoring drug and lab data further complicates data management. Regarding data quality, irregular monitoring practices and a shortage of personnel for data collection and analysis pose substantial challenges.

## Overview of the New and Updated Indicators in the Global Fund Modular Framework

**Nino Mdivani, Public Health and M&E Specialist, Eastern Europe and Central Asia, Grant Management Division, Global Fund**

Mdivani discussed the changes in TB modular frameworks for the upcoming cycle. The TB modular frameworks have been updated in the new cycle, resulting in 39 indicators, with three indicators discontinued, 16 updated, and eight new indicators added. Among the new indicators are three BST indicators to align with new definitions for DR-TB and XDR-TB- cases and the percentage of RR/MDR patients.

The prevention module now includes two new indicators, emphasizing the importance of prevention, notably the percentage of people who completed TPT. The TB/HIV module introduced the treatment success rate for patients in collaboration with other providers, including the private sector, while revising several indicators to better align with WHO definitions.

The new cycle places emphasis on notifying several TB patients, relevant for both DS-TB and DR-TB, and aims for closer to 100 percent compliance with the treatment initiation for the MDR-TB indicator across countries. The TPT category has also undergone revisions to meet the changing requirements.

TB program essentials have been developed for TB, HIV, and malaria, structured around five key areas: screening, diagnosis, treatment, prevention, and cross-cutting. Countries are tasked with completing questionnaires to assess their program's progress and identify any existing gaps in these essential areas.

## Global Plan to End TB 2023-2030: Leave No One Behind

**Sreenivas A Nair, Senior Advisor, Country and Community Support for Impact, CCS4i Team, Stop TB Partnership**

The global plan is a roadmap and the most detailed budget estimates to date for ending TB as a public health challenge by 2030. It is a comprehensive set of policy interventions.

The global commitment to ending TB has grown stronger in recent years, with political commitment and new targets set at the UNHLM on TB. SDG targets provide a roadmap for reducing TB incidence and mortality. Technical experts worked diligently to gather data and develop costing models for interventions tailored to individual countries.

The investment package, presented as a strategy, includes key interventions, such as active case finding, early detection, contact investigation, and the importance of TB prevention through TPT and vaccines.

Addressing enablers to strengthen the healthcare system is crucial, encompassing financial and nutritional support, social factors, and investment in new tools and vaccines. Considerations of human rights, gender equity, and ethics are also highlighted.

The global financial requirements are outlined, emphasizing the need for both domestic and external funding sources. Many countries have secured increased funding from the Global Fund, supporting comprehensive national plans. Ambitious national plans are encouraged, with an emphasis on requesting appropriate funding aligned with project goals and action plans. The Global Fund is committed to assisting countries in achieving their targets.

# Day Three

The third day was dedicated to exploring the overarching purpose of TB surveillance and its guiding principles, emphasizing the significance of systematic data collection and reporting. The presenters clarified definitions and identified and emphasized the essential set of data items that should be consistently and continuously collected by TB surveillance systems, ensuring comprehensive and reliable data capture. The core TB indicators that need to be reported and utilized to assess TB surveillance effectiveness and outcomes were reviewed. In addition, the sessions included practical team work analyzing different scenarios engaging participants in group activities and discussions to encourage collaborative problem solving and knowledge exchange.

## Overall Purpose of TB Surveillance and its Principles

**Hazim Timimi, TB M&E Specialist, WHO Global TB Programme, Geneva, Switzerland**


Timimi described what a TB surveillance system is, which is a systematic and continuous process of collection, analysis, reporting, and use of data related to TB infection and disease in the population. The basic principles of TB surveillance include:

- Standardized definitions
- Data that is limited to what will be used to address predefined objectives
- Guidance applicable to paper and digital systems
- Data quality assurance
- Variable reporting frequencies
- Processes built on experience

Timimi provided a link to the exclusive draft of the surveillance guidance document created by WHO and invited participants to check it out during the conference.

## Definitions Related to People with or at Risk of TB Disease or TBI, and Their Contacts

**Nino Lomtadze, Consultant, JID, WHO/Euro**

Lomtadze described changes in TB terminology and definitions. Lomtadze stated that the first principle of surveillance is that it should be based on clear, comprehensive, and standardized definitions. New definitions are in concordance with the latest clinical recommendations of the WHO and are divided into 2 main groups: 1) People with TB disease or people at risk of the disease; and 2) those related to data flow throughout the health system. Later it will be divided into 3 subgroups: prevention screening, diagnoses, and treatment. TB terminology is aligned with guidance on language used in the TB context.

**Table 1. Changes in TB terminology and definitions compared with WHO guidance published in 2013**

| New Term of Definition | Previous term or definition | Reason for change |
|---|---|---|
| Recurrent case | Relapse case | It ensured alignment with case definitions for people with TB commonly used in TB clinical trials. |
| Re-registered for treatment | Retreatment | It is a simplified and more accurate description for people who start a new TB treatment regimen (following either treatment failure or loss to follow-up) or for whom the outcome of previous treatment is undocumented. |
| New episode of TB | New or relapse case | It is a simplified descriptor of people newly diagnosed with TB |
| The same definitions are used for each category of treatment outcome, irrespective of DST and treatment regimen. | The definitions used for some categories of treatment outcome (e.g. cured, treatment failed) were different. | It allows for considerable applications and streamlining of definitions and is consistent with the outcomes of a WHO consultation convened in 2020. |
| A change of treatment regimen is recorded as a "treatment failure" | Patients were not included in the calculation of the treatment success rate for DS-TB. | It is important to identify the optimal treatment for people with TB disease at the start of treatment. The change also ensures a more accurate assessment of treatment outcomes. |

Lomtadze answered several questions during the Q&A session. After the presentation, there was a question about side effects and whether that meant a treatment failure. Lomtadze explained that side effects alone are not a reason to consider the treatment a failure but if because of side effects we have to change the treatment regimen, then yes. This applies to DS-TB as well. Sometimes people have an intolerance to drugs and they have to change the treatment.

Another question concerned change of treatment when drugs are replaced. The answer indicated that there is no definition for 'change of regiment'. The document says any change can be considered a failure.

## The Core Set of TB Data Items That Should Be Systematically and Continuously Collected by Surveillance Systems

**Araksya Hovhannesyan, Consultant, JID, WHO/Euro**

Hovhannesyan presented core data items including notification details of the person with TB disease, treatment eligibility, and treatment for TB disease. Hovhannesyan emphasized that countries should focus on collecting specific core elements for surveillance rather than amassing excessive data. Recommendations for such key indicators are provided, which can also be customized to align with national needs. Essential data elements for treatment eligibility encompass treatment regimen options, initiation status, and reasons for not initiating treatment.

For contacts of bacteriologically confirmed patients, crucial data elements include the identification of index cases, contact information (including eligibility for TPT), TPT initiation, and TPT completion. Facility and patient details, such as the health facility's level, diabetes skin test results, source of referral, country of birth, and native status, are also integral to comprehensive data collection. Specific issues, like treatment regimen changes, patient transfers between facilities, and de-notified TB cases, are addressed with clear instructions and procedures to maintain accurate and organized surveillance data.

**Q&A Session**

Several questions were answered, such as  inclusion of HIV status for household contacts. While HIV  status is not obligatory for all contacts, it is suggested for child contacts, irrespective of their bacteriologically confirmed status.

Effective management of interfacility communications could be ideally facilitated by implementing case-based electronic register systems. This determination arises from recommendations by countries following discussions with healthcare professionals, with the rationale that the destination facility possesses greater insight into treatment outcomes.

The classification of ambulance doctors into primary or higher healthcare levels is a decision that falls within the purview of individual countries. Flexibility in this classification allows each country to establish the criteria for distinguishing primary and secondary facilities, with the potential for some countries to segregate data by healthcare facilities based on their specific needs, including private sector contributions.

The requirement for screening household contacts is contingent on country-specific guidelines. Screening criteria may exhibit variations from one country to another. Notably, the monitoring process is applicable to the contacts of bacteriologically confirmed cases, and the precision of outcomes is key for ensuring accurate cohort analysis.

## Core TB Indicators to Report and Use

**Ana Ciobanu, Consultant, JID, WHO/Euro**

***Part I***

Ciobanu presented reporting and use of TB indicators. Ciobanu described TB data flow that depends on country surveillance systems (paper forms, digital aggregate, or digital case-based).

Frequency of reporting was discussed. That may be weekly or monthly reports for national digital case-based systems, monthly for paper-based systems, and quarterly and annual reporting.

**Table 2. Frequency of TB data reporting to WHO**

| Purpose | Rapid (weekly or monthly) | Regular (quarterly) | Annually |
|---|---|---|---|
| Monitoring of TB epidemiological trends | X | X | X |
| Timely detection and investigation of sudden or unexpected changes | X | | |
| Assessment of progress towards national and global targets | | | X |
| Assessment of the performance of TB services | | X | X |
| Informing and planning, budgeting, policy, programmatic and clinical actions necessary to ensure high quality and coverage of TB services | | X | X |

Ciobanu discussed templates for each report and demonstrated various graphs and information provided in the slides. These templates encompassed paper-based reporting, variables, and indicators necessary for digital databases, indicators for program performance evaluation, and patient data for different TB cases. Annual report templates were presented for patients who were re-registered and had recurrent DR-TB cases checked. The quarterly indicators were divided into two parts: the first part focused on detection and notification, while the second part pertained to treatment initiation and outcomes. This set of TB surveillance indicators was recommended for all countries, irrespective of their reporting systems.

The first indicator discussed was the notification rate, which calculated the number of people diagnosed with new episodes of TB disease per 100,000 of the population and is reported annually. This rate helps analyze increases or decreases in notifications and their potential causes, such as improved services or changes in healthcare providers. Age-group and gender-based disaggregation were also examined for deeper insights.

Additional indicators, such as bacteriologically confirmed cases and the percentage of people diagnosed with new episodes of pulmonary disease were discussed. These indicators provided insights into diagnostic capacity and potential problems like disruptions to diagnostic services or improvements in testing resources.

The presentation featured practical examples, reflecting on real situations from various countries. Another component discussed was TB-HIV, which included core indicators related to the documentation of HIV status and antiviral therapy, focusing on new TB episodes and their HIV status at the time of TB testing.

***Part II***

The second part of the presentation delved into the components of drug resistance in TB surveillance. Ciobanu presented various indicators related to drug resistance and their collection frequency.

Indicators that measure coverage of testing include testing for drug resistance (MDR-TB, Hr-TB, pre-DR-TB, XDR-TB, and testing for Bdq or Lnz resistance). These indicators are usually reported annually.

For Rifampicin testing, a decrease in this indicator could signal disruptions in laboratory services. The presentation showcased a two-year improvement trend in Rifampicin testing. In particular, testing among new and recurrent cases saw significant improvements, reaching 100 percent in new cases.

Ciobanu emphasized the need to segregate data for new and recurrent cases. The data revealed fluctuations in testing coverage, with a reduction in testing for new cases in 2020 and an increase among recurrent cases. It also explored the testing of other drugs in addition to Rifampicin.

The presentation highlighted the importance of not only testing but also examining the results to gain a comprehensive understanding of drug resistance in TB surveillance.

The treatment discussion revolved around key core treatment indicators, categorized into quarterly and annual collections. The quarterly form focused on the beginning of treatment, covering registered patients,

with additional categories for those who died before treatment began, were lost to follow-up, or were transferred to another facility. The format for annual reporting mirrored this structure. Ciobanu discussed the indicator related to treatment success, which is reported quarterly and annually.

Five additional indicators were discussed for the countries who have a case-based digital surveillance system:

People with presumptive TB

1. Number of diagnostic tests performed for TB using WHO-recommended rapid diagnostic (WRD) tests
2. Percentage of tests for TB that were positive using WRDs

People diagnosed with TB disease

3. Rapid testing for TB (percentage of people diagnosed with a new episode of TB who were initially tested with a WRD)

Contacts of people diagnosed with bacteriologically confirmed TB disease

4. Contact investigation coverage (percentage of household contacts (or all close contacts) who were evaluated for TB (disease or infection)
5. Preventive treatment of contacts (percentage of household contacts (or all close contacts) who were started on TPT, out of those eligible

**Q&A Session**

The Q&A session included topics about registering migrants and how it depends whether they were diagnosed in the country and their legal status. The discussion also touched on indicators related to patients who undergo treatment again, involving calculations based on the proportion of those who started treatment and different treatment regimens. Several questions were posed during the discussion, including one about cases where patients didn't initiate TB treatment and had other medical issues. In such cases, patients were considered "lost to follow-up." Another question related to the definition of presumptive cases and which patients should be treated as such, with a need for clearer definitions as situations could vary. A general clarification was provided that anyone tested for TB is considered a presumptive case, including situations where individuals get retested. The dilemma of cases without straightforward answers was acknowledged.

## Illustrative Scenarios Related to the Reporting of People Diagnosed with TB and their Treatment Initiation and Outcomes

**Nino Lomtadze, Consultant, JID, WHO/Euro**

This presentation was interactive and included practical work. Lomtadze presented illustrative scenarios about the reporting of TB diagnosis, TB treatment initiation, and treatment outcomes.

Lomtadze presented several scenarios that included cases of a person diagnosed with TB. With the help of the audience, she described how the case will be recorded in the system and then reported weekly, quarterly, and monthly.


Scenario 1: A person with a new episode of TB without RR starts treatment with first-line drugs within one week. After six months, the person is cured. The events and corresponding records are as follows:

- First event: Diagnosis of TB without RR is recorded as a new case.
- Weekly report: The person is included in the number of people with a new episode.
- Quarterly report: The person is among case notifications for that quarter.
- Annual report: The person is counted among those diagnosed with TB that year.

After one week, the person starts treatment with first-line drugs. In the quarterly report, they are counted among those who initiated treatment that quarter, and in the annual report, they are categorized as successfully treated.

Scenario 2: A person diagnosed with RR-TB starts treatment after one week and successfully completes TB treatment 20 months later. The events and records are as follows:

- First event: Diagnosis of RR-TB is recorded.
- Weekly report: The person is added to the list of those diagnosed with RR-TB.
- Quarterly report: The person is among those diagnosed with RR-TB that quarter.
- Annual report: The person is counted among those diagnosed with both TB and RR-TB.
- Second event: Initiation of RR treatment is recorded. Personal history is updated to include treatment details.
- Third event: Successful completion of RR-TB treatment is recorded.

In this case, the person is only included in the annual report among those successfully treated.

Scenario 3: A person diagnosed with TB starts first-line treatment, but two months later, RR is detected, and RR-TB treatment begins. After 12 months, the person successfully completes RR-TB treatment. The events and records are as follows:

- First event: The person is diagnosed with TB with no evidence of RR.
- Weekly report: The person is added to the list of those diagnosed with TB.
- Quarterly report: The person is among those diagnosed with TB in the quarter.
- Annual report: The person is included in the count of people diagnosed with TB (notified) in the year.
- Second event: The person is started on first-line treatment.
- Quarterly report: The person is included in the count of people started on TB treatment in the quarter.
- Annual report: The person is included in the count of people started on TB treatment in the year.
- Third event: DS test results show that the person has RR-TB.

Detection of RR-TB is recorded after two months. Treatment with first-line drugs is stopped, and the personal history indicates treatment failure at this stage. In quarterly and annual reports, the person is counted as a treatment failure for the year they started treatment. Subsequently, treatment for RR-TB is initiated, and a new record is made. In the annual report, the person is among those who were re-registered, diagnosed with RR-TB, and started on RR-TB treatment. After 12 months, successful completion of RR-TB treatment is recorded, providing outcome information for the person.

As a result, the person is registered and reported in the system twice, with outcome information available both times.

**Q&A Session**

During the Q&A session, participants raised several questions and concerns regarding the new reporting system, and WHO representatives provided explanations and insights. One question addressed the complexity of the new reporting system and why treatment outcomes are reported by a different clinic than the one responsible for the initial case notification. The response indicated that this approach might not be suitable for all countries and that the primary rationale was to capture more complete cohorts, especially for cases that did not receive treatment.

Another participant expressed the need for more time to digest the extensive information presented in the new system and inquired about the rationale behind the changes. The response was that the changes aimed to address issues such as discrepancies between cohort numbers and the need to capture a more comprehensive patient population.

The audience also expressed concerns about the substantial resources and time required to implement these changes and suggested that donors should coordinate and establish a unified reporting format. The

response acknowledged the challenges and highlighted the importance of cooperation between TB and HIV programs.

## Common Challenges in Calculating and Reporting TB Data and WHO-Recommended Programmatic Indicators

**Araksya Hovhannesyan, Consultant, JID, WHO/Euro**

Hovhannesyan discussed the data elements that commonly cause issues when countries report their data. These data elements are ART enrollment, contact tracing, TPT, rapid diagnostic testing, treatment outcome, prison TB cases, and group A drug resistance.

Hovhannesyan described the discrepancies of TB/HIV on ART data reported by NTPs and national AIDS programs that arise when the NTP transfers information to the WHO and UNAIDS. More communication and collaboration between these two programs was suggested to improve data accuracy.

In the case of the treatment outcome, the most common issue discussed was the difference of cohort size where the size of the cohort reported a year or two ago does not match the data of the cohort enrolled in treatment.

In terms of contact tracing, it is noted that current data submissions are often incorrect, as contact tracing is overestimated, and protocols are not consistently followed. Global standards require the tracking of contacts of bacteriologically confirmed pulmonary cases. A question about contact registration asked whether data for contacts of both new cases and relapses should be provided together or separately. The response was that it was the decision of each country as to how to desegregate their data, but WHO's report requires data on contacts of bacteriologically confirmed cases, both new and recurrent.

When reporting the people tested with rapid diagnostics, it should be reported only if the initial test is a rapid test.

Overall, the importance of accurate data collection, cross-checking, and providing population size for context was underscored. For example, for prison data, the most common issue is not reporting the population size. There is also insufficient data of group A drug resistance testing.

Questions included whether all contacts should be reported or only contacts of bacteriologically confirmed TB. As globally there is a problem of contact reporting in general, it was recommended that at this point to focus on bacteriologically confirmed TB cases.

In conclusion, the Q&A session addressed various concerns and clarified aspects of the new TB surveillance reporting system. Participants discussed the need for cooperation, resources, and a streamlined approach to improve TB data reporting.

## Group Work and Closing Remarks

During the group activity participants were asked to work together to fill in the different templates for reporting, responding to example scenarios presented on slides. They were tasked with writing short reports based on these scenarios.

Closing remarks included feedback on the three days of the conference.

**Dr. Sevim Ahmedov** expressed appreciation for the intensive discussions and the collective effort put into addressing the unique challenges posed by TB. Ahmedov thanked the Georgian colleagues for hosting the conference, including the MoILHSA, NCDC, NCTLD, and the COE. He emphasized the importance of the knowledge gained and its application in combating the disease.

**Irma Khonelidze** expressed gratitude and thanked USAID, WHO, the Global Fund, and StopTB Partnership for their collaboration. She thanked all the participants for attending the conference and for their contributions to the meeting, acknowledging the intensity and rich discussions that took place. At the end, Khonelidze thanked Alexander Asatiani for his outstanding work.

**Giorgi Kuchukhidze** expressed gratitude to USAID and TB DIAH for organizing the meeting and highlighted the value of in-person discussions alongside online interactions. He expressed hopes for another meeting in the future and wished everyone a restful stay in Tbilisi and safe travels.

The session concluded with Asatiani encouraging participants to fill out evaluation forms and expressing thanks to supporters and neighbors for their contributions to the conference. The three-day conference concluded with the group photo.

# Appendix

## Appendix 1. List of Participants

| | Country A-Z | Name A-Z | Affiliation | Title |
|---|---|---|---|---|
| 1 | Armenia | Anush Khachatryan | National Center for Pulmonology of the MoH of Republic of Armenia | Head of Data Management and Monitoring Department |
| 2 | Armenia | Naira Khachatryan | National Center for Pulmonology of the MoH of the Republic of Armenia | Acting Director |
| 3 | Armenia | Naira Mikaelyan | National Center for Pulmonology of the Ministry of the Health of Republic of Armenia | Head of Infection Control Department |
| 4 | Armenia | Naira Sergeeva | The Global Fund HIV/TB Grant Program Coordination Team, MoH, Republic of Armenia | M&E Specialist |
| 5 | Switzerland | Hazim Timimi | WHO, Geneva | Data Manager, TB M&E |
| 6 | Switzerland | Nino Mdivani | The Global Fund to Fight AIDS, TB and Malaria | Specialist, Public Health and M&E, Eastern Europe and Central Asia, Grant Management Division |
| 7 | Switzerland | Sreenivas A Nair | Stop TB Partnership | Senior Advisor, Country and Community Support for Impact, CCS4i Team |
| 8 | Denmark | Ana Ciobanu | The WHO Regional Office for Europe | TB Consultant, Joint Infectious Diseases Unit (JID) |
| 9 | Denmark | Arax Hovhannesyan | The WHO Regional Office for Europe | TB Consultant |
| 10 | Denmark | Giorgi Kuchukhidze | The WHO Regional Office for Europe | Epidemiologist, JID Unit |
| 11 | Georgia | Alexander Asatiani | TB DIAH / JSI | Senior Regional Consultant |
| 12 | Georgia | Anna Khoperia | National Center for Disease Control and Public Health | Specialist, Division of HIV/AIDS, TB, Hepatitis and STIs, Communicable Diseases Department |
| 13 | Georgia | Irakli Gabisonia | National Center for Disease Control and Public Health | M&E Officer, The Global Fund TB Program |
| 14 | Georgia | Irma Khonelidze | National Center for Disease Control and Public Health | Deputy Director General, Director of the Global Fund Programs in Georgia |
| 15 | Georgia | Liliana Domente | The WHO Country office in Georgia | Consultant |
| 16 | Georgia | Maia Tsereteli | National Center for Disease Control and Public Health | Head, Division of HIV/AIDS, TB, Hepatitis and STIs, Communicable Diseases Department |
| 17 | Georgia | Maka Danelia | National Center for Disease Control and Public Health | Manager, The Global Fund TB Program |

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|---|---|---|---|---|
| 18 | Georgia | Mamuka Chincharauli | National Center for TB and Lung Diseases | Manager, TB Database |
| 19 | Georgia | Marina Janjghava | National Center for TB and Lung Diseases | Head of TB Management and Control Service |
| 20 | Georgia | Nana Kiria | National Center for TB and Lung Diseases | Deputy Director General |
| 21 | Georgia | Natalia Adamashvili | National Center for Disease Control and Public Health | M&E Officer, The Global Fund TB Program |
| 22 | Georgia | Nino Chikovani | National Center for Disease Control and Public Health | Coordinator, The Global Fund TB Program |
| 23 | Georgia | Nino Lomtadze | National Center for TB and Lung Diseases | Head, Surveillance and Strategic Planning Department |
| 24 | Georgia | Nino Mamukashvili | National Center for Disease Control and Public Health | Specialist, Public Relations Division |
| 25 | Georgia | Piqria Nemsadze | National Center for Disease Control and Public Health | Department of State Health Programs |
| 26 | Georgia | Silviu Domente | The WHO Country office in Georgia | WHO Representative and Head of WHO Country Office Georgia |
| 27 | Georgia | Tamar Sirbiladze | USAID / Georgia | Office of Democracy, Rights, and Governance (DRG), Human Rights and Resilience Team Leader |
| 28 | Georgia | Zaza Avaliani | National Center for TB and Lung Diseases | Director General |
| 29 | Kyrgyzstan | Ainura Kadyralieva | USAID Cure TB project | M&E Specialist |
| 30 | Kyrgyzstan | Cholpon Nurgazieva | National Center of Phthisiology, MoH of Kyrgyz Republic | M&E Coordinator, Department of Informatics and Epidemiology, |
| 31 | Kyrgyzstan | Gulmira Kalmambetova | Department of Strategic Development and International Cooperation | Deputy of Head of NTP |
| 32 | Kyrgyzstan | Irina Gubankova | National Center of Phthisiology, MoH of Kyrgyz Republic | DR-TB Coordinator |
| 33 | Kyrgyzstan | Maria Idrissova | Sustaining Technical and Analytical Resources (STAR) project | Clinical MDR-TB advisor |
| 34 | Kyrgyzstan | Rahima Asanova | National Center of Phthisiology, MoH of Kyrgyz Republic | Chief of National Reference Laboratory |
| 35 | Kyrgyzstan | Rakhat Ismanbaeva | USAID / Kyrgyz Republic | Project Management Specialist (Monitoring, Evaluation and Learning) |
| 36 | Kyrgyzstan | Rakhat Mamutalieva | The Red Crescent Society of Kyrgyzstan (RCSK), USAID TB-LON Activity | Project Assistant |
| 37 | Kyrgyzstan | Sanzhar Kadyrakunov | USAID Cure TB project | Data Analyst, USAID Cure TB Project |

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| 38 | Kyrgyzstan | Timur Bazikov | STAR project | Senior TB Advisor |
| 39 | Kyrgyzstan | Totugul Murzabekova | TB DIAH Kyrgyzstan | Project Director/ Kyrgyzstan Team Lead |
| 40 | Moldova | Alexandru Codreanu | Institute of Phthisiopneumology «Chiril Draganiuc» | Microbiologist, National Reference TB Laboratory |
| 41 | Moldova | Andrei Corloteanu | Institute of Phthisiopneumology «Chiril Draganiuc» | National TB Response Program Coordination Department |
| 42 | Moldova | Aurelia Popov | MoH of the Republic of Moldova | Chief Consultant, Department of Public Health and Emergencies |
| 43 | Moldova | Tatiana Cotelnic-Harea | Center for Health Policies and Studies (PAS Center) | Programme Coordinator |
| 44 | Tajikistan | Ahmad Kayumov | USAID End TB Tajikistan Activity | Monitoring, Evaluation, Research and Learning Advisor |
| 45 | Tajikistan | Bobojon Pirmahmadzoda | Dushanbe City Center for TB Protection | Director of the Dushanbe City Center for TB Protection, Chief Specialist of the MoH and SP on TB in Children |
| 46 | Tajikistan | Firdavs Soliev | USAID End TB Tajikistan Activity | Monitoring, Evaluation, Research and Learning Officer |
| 47 | Tajikistan | Firuza Sharipova | Republican Center for the Protection of the Population from TB of the MoH and Social Protection of the Population of the Republic of Tajikistan | Head of Department of Statistics |
| 48 | Tajikistan | Guljamol Kasymova | Republican Center for the Protection of the Population from TB of the MoH and Social Protection of the Population of the Republic of Tajikistan | Head of Department of Statistics |
| 49 | Tajikistan | Hilol Khudonazarov | STOP TB Partnership Tajikistan | M&E Specialist |
| 50 | Tajikistan | Maka Akhalaia | STAR project | Senior TB lab advisor for NTP/MoH Tajikistan |
| 51 | Tajikistan | Malohat Shabanova | USAID / Tajikistan | TB Project Management Specialist |
| 52 | Tajikistan | Nana Zarkua | STAR project | Senior Technical TB Advisor |
| 53 | Tajikistan | Zumrad Maxumova | USAID End TB Tajikistan Activity | Deputy Chief of Party |
| 54 | Urkarine | Dilyafruz Khudaykulova | STAR project | Senior M&E Advisor |
| 55 | Urkarine | Olesia Medvedieva | TB Management and Counteraction Department Public Health Center of the MOH of Ukraine | TB Specialist Doctor |
| 56 | USA | Anna Meltzer | USAID, Office of Infectious Diseases, TB Division | TB Country M&E Advisor |
| 57 | USA | Bridgit Adamou | TB DIAH / UNC | Senior M&E Advisor |

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| 58 | USA | Ezra Tessera | TB DIAH / JSI | Senior TB M&E Technical Adviser |
| 59 | USA | Sevim Ahmedov | USAID, Bureau for Global Health, TB Division | TB/HIV, Prevention, and M&E Team Lead |
| 60 | USA | Upama Khatri | TB DIAH / JSI | Senior M&E Technical Advisor |
| 61 | Uzbekistan | Bakhtiyar Babamuradov | USAID TB-Free Uzbekistan Activity, Abt Associates | Chief of Party |
| 62 | Uzbekistan | Fazlkhan Abdugapparov | Republican Specialised Scientific and Practical Medical Centre of Phthisiology and Pulmonology, MoH Uzbekistan | National Coordinator |
| 63 | Uzbekistan | Flora Salikhova | USAID / Uzbekistan | Health Project Management Specialist |
| 64 | Uzbekistan | Khasan Safaev | Republican Specialised Scientific and Practical Medical Centre of Phthisiology and Pulmonology, MoH Uzbekistan | M&E Coordinator |
| 65 | Uzbekistan | Marat Kaliev | STAR project | Senior TB Advisor |
| 66 | Uzbekistan | Nikoloz Nasidze | STAR project | Senior TB Advisor |
| 67 | Uzbekistan | Shokhsanam Alimjanova | Republican Specialised Scientific and Practical Medical Centre of Phthisiology and Pulmonology, MoH Uzbekistan | Project Manager |
| 68 | Uzbekistan | Timur Ibragimov | USAID / Uzbekistan | M&E and Learning Specialist |
| 69 | Uzbekistan | Turaev Laziz | Republican Specialised Scientific and Practical Medical Centre of Phthisiology and Pulmonology, MoH Uzbekistan | Head of National Research Laboratory |
| 70 | Uzbekistan | Usmonjon Mikhmanov | USAID TB-Free Uzbekistan Activity, Abt Associates | MEL Specialist |

## Appendix 2. Agenda

| **4 Oct** | | *Runtime* | **8:15 Hours** |
|---|---|---|---|
| Time TBS | Duration hh:mm | Agenda Item | Presenter / Facilitator |
| | | | |
| **Opening** | | | |
| 9:00 AM | 00:30 | Check in and registration of participants, welcome coffee | |
| 9:30 AM | 00:15 | Welcoming remarks, introductions, general housekeeping | Conference faculty |
| 9:45 AM | 00:30 | Opening remarks | **Tamar Gabunia** • Deputy Minister, Ministry of IDPs, Labour, Health and Social Affairs of Georgia (MoILHSA)<br><br>**Irma Khonelidze** • Deputy Director General, National Center for Disease Control and Public Health (NCDC)<br><br>**Zaza Avaliani** • Director, National Center for TB and Lung Diseases (NCTLD)<br><br>**Stephanie Mullen** • Project Director, The TB Data, Impact Assessment and Communications Hub (TB DIAH)<br><br>**Giorgi Kuchukhidze** • Joint Infectious Diseases Unit (JID), WHO Regional Office for Europe<br><br>**Silviu Domente** • WHO Representative and Head of WHO Country Office Georgia<br><br>**Sevim Ahmedov** • TB/HIV, Prevention, and M&E Team Lead, USAID, Bureau for Global Health, TB Division |
| 10:15 AM | 00:15 | Review of the Conference format and objectives | TB DIAH |
| **Session 1** | **Country Updates: Progress towards the National Strategic Plans, Global Targets, Challenges, Success Stories, and Plans** | | |
| 10:30 AM | 00:30 | Armenia | **Naira Khachatryan** • Acting Director of the National Center for Pulmonology of the MoH of the Republic of Armenia |

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| 11:00 AM | 00:30 | Georgia | **Maka Danelia** • Manager, The Global Fund TB Program, NCDC |
| 11:30 AM | 00:15 | Coffee Break | |
| 11:45 AM | 00:30 | Kyrgyzstan | **Cholpon Nurgazieva** • DS-TB coordinator, Department of Strategic Development and International Cooperation, National Center of Phthisiology. |
| 12:15 PM | 00:30 | Moldova | **Andrei Corloteanu** • Head of the NTRP Coordination Department, Institute of Phthisiopneumology "Chiril Draganiuc" |
| 12:45 PM | 01:00 | Lunch | |
| 1:45 PM | 00:30 | Tajikistan | **Bobojon Pirmahmadzoda** • Director, Dushanbe City Center for Protection of Population from TB, MoH and Social Protection of the Population of the Republic of Tajikistan |
| 2:15 PM | 00:30 | Uzbekistan | **Khasan Safaev** • M&E Coordinator, Republican Specialised Scientific and Practical Medical Centre of Phthisiology and Pulmonology, MOH Uzbekistan |
| 2:45 PM | 00:30 | Ukraine (hybrid) | **Olesia Medvedieva** • TB Specialist Doctor, Public Health Center of the MoH of Ukraine |
| 3:15 PM | 00:15 | Coffee Break | |
| 3:30 PM | 01:00 | Poster Gallery Walk | Country Teams |
| **4:30 PM** | 00:45 | **Feedback Session** | Country Teams and Organizers |
| | | | |
| **5 Oct** | | *Runtime* | **8:35 Hours** |
| | | | |
| **Opening** | | | |
| 9:00 AM | 00:30 | Check in and registration of participants, welcome coffee | |
| 9:30 AM | 00:15 | Reflections from the Day 1 | Conference faculty |
| **Session 1** | **Technical Updates: USAID** | | |
| 9:45 AM | 00:30 | USAID Global TB Strategy, Implementation Status, Results Framework Implementation | **Sevim Ahmedov** • TB/HIV, Prevention, and M&E Team Lead, USAID, Bureau for Global Health, TB Division |
| 10:15 AM | 00:20 | Discussion and Q/A | |
| 10:35 AM | 00:15 | Coffee Break | |
| **Session 2** | **Technical Updates: Performance-based Monitoring and Evaluation Framework (PBMEF)** | | |

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|---|---|---|---|
| 10:50 AM | 01:15 | Updated edition of PBMEF, Key Changes and Implementation Strategy | **Ezra Tessera** • Senior TB M&E Technical Adviser, TB DIAH |
| 12:05 PM | 00:20 | Discussion and Q/A | |
| 12:25 PM | 01:00 | Lunch | |
| **Session 3A** | **Eastern European and Eurasian (EEE) Center of Excellence (COE) in TB monitoring and evaluation (M&E) and surveillance** | | |
| 1:25 PM | 0:30 | EEE COE in TB M&E and Surveillance: Journey in Implementing the COE Model – a Look Back and Ahead | **Bridgit Adamou** • Senior TB M&E Advisor, TB DIAH<br><br>**Alexander Asatiani** • Senior TB M&E Consultant, EEE Region, TB DIAH<br><br>**Maka Danelia** • Manager, The Global Fund TB Program, NCDC |
| **Session 3B** | **COE Country-level Activities in the Region** | | |
| 1:55 PM | 00:20 | Georgia | TB DIAH National Consultant |
| 2:15 PM | 00:20 | Armenia | TB DIAH National Consultant |
| 2:35 PM | 00:15 | Coffee Break | |
| 2:50 PM | 00:20 | Moldova | TB DIAH National Consultant |
| 3:10 PM | 00:20 | USAID's reflections and vision of implementing the COE model | USAID |
| 3:30 PM | 00:15 | Networking Break | |
| **Session 4** | **Technical Updates: The Global Fund** | | |
| 3:45 PM | 00:30 | Overview of new and updated indicators in the Global Fund Modular framework | **Nino Mdivani** • Specialist, Public Health and M&E, Eastern Europe and Central Asia, Grant Management Division, The Global Fund to Fight AIDS, TB and Malaria |
| 4:15 PM | 00:15 | Discussion and Q/A | |
| **Session 5** | **Technical Updates: The Stop TB Partnership** | | |
| 4:30 PM | 00:30 | The UNHLM TB Targets 2023-2027 and Global Plan to End TB | **Sreenivas A Nair** • Senior Advisor, Country and Community Support for Impact, CCS4i Team |
| 5:00 PM | 00:15 | Discussion and Q/A | |
| **5:15 PM** | 00:20 | **Feedback Session** | Country Teams and Organizers |
| | | | |
| **6 Oct** | | *Runtime* | **9:00 Hours** |
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| **Opening** | | | |
|---|---|---|---|
| 9:00 AM | 00:30 | Check in and registration of participants, welcome coffee | |
| 9:30 AM | 00:15 | Welcome and reflections from Day 2 | TBD |
| **Session 1** | **WHO Consolidated guidance on TB data generation and use Module 1 - TB surveillance** | | |
| 9:45 AM | 00:15 | The overall purpose of TB surveillance and its principles | **Hazim Timimi** • TB Monitoring and Evaluation, WHO Global TB Programme, Geneva, Switzerland |
| 10:00 AM | 00:30 | Definitions related to people with or at risk of TB disease or TB infection, and their contacts.<br>– Prevention of and screening for TB disease<br>– Diagnosis of TB disease<br>– Treatment for TB disease | **Nino Lomtadze** • Consultant, JID, WHO Regional Office for Europe |
| 10:30 AM | 00:15 | Q&A | Facilitators |
| 10:45 AM | 00:30 | The core set of TB data items that should be systematically and continuously collected by surveillance system | **Araksya Hovhannesyan** • Consultant, JID, WHO Regional Office for Europe |
| 11:15 AM | 00:15 | Q&A | Facilitators |
| 11:30 AM | 00:15 | Coffee Break | |
| 11:45 AM | 00:30 | Core TB indicators to report and use (part 1)<br>– Indicator to report and use on a weekly or monthly basis<br>– Indicators to report and use on a quarterly basis | **Ana Ciobanu** • Consultant, JID, WHO Regional Office for Europe |
| 12:15 PM | 00:15 | Q&A | Facilitators |
| 12:30 PM | 00:30 | Core and additional indicators<br>Core TB indicators to report and use (part 2)<br>– Indicators to report and use on an annual basis.<br>Core and additional indicators | **Ana Ciobanu** • Consultant, JID, WHO Regional Office for Europe |
| 1:00 PM | 00:15 | Q&A | Facilitators |
| 1:15 PM | 01:00 | Lunch | |
| 2:15 PM | 00:30 | Illustrative scenarios related to the reporting of people diagnosed with TB, and their treatment initiation and treatment outcomes | **Nino Lomtadze** • Consultant, JID, WHO Regional Office for Europe |

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| 2:45 PM | 00:15 | Q&A | Facilitators |
| 3:00 PM | 00:30 | Common challenges in calculating and reporting TB data and WHO-recommended programmatic indicators (based on 2022 data reported from countries) | **Araksya Hovhannesyan** • Consultant, JID, WHO Regional Office for Europe |
| 3:30 PM | 00:15 | Q&A | Facilitators |
| 3:45 PM | 00:15 | Coffee Break | |
| 4:00 PM | 01:00 | Group work | Country Teams and WHO |
| 5:00 PM | 00:30 | Feedback Session | Country Teams and WHO |
| 5:30 PM | 00:30 | **Conference Wrap-up** | Country Teams, conference organizers and technical partners |
| **6:00 PM** | | **Group Photo** | |



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