SOUTH AFRICA TUBERCULOSIS ROADMAP OVERVIEW, FISCAL YEAR 2024

This is an overview of the USAID/South Africa FY 2024 Tuberculosis (TB) Roadmap, implemented with the FY 2023 budget. The roadmap was developed in consultation with the National TB Program (NTP) and with the participation of national and international partners involved in TB prevention and care in the country.

South Africa has a high incidence of TB and HIV; however, there has been a steady decline in estimated TB incidence, from 418,000 in 2017 to 280,000 in 2022. TB notifications increased in 2022 to 214,295, with a case detection rate of 77 percent. Treatment success rates for drug-susceptible TB (DS-TB) have been between 78-79 percent since 2019, while for rifampicin-resistant/multidrug-resistant TB (RR/MDR-TB) and extensively drug-resistant TB (XDR-TB), success rates have been at 60-61 percent for the last two years. The country's National Strategic Plan (NSP) for TB Elimination aims to eliminate TB by 2025.

The TB response is guided by the National Strategic Plan (NSP) for HIV, TB, and Sexually Transmitted Infections (STIs) and the NTP strategic plan. The NSP aims to provide a broad agenda for government, parastatal, non-governmental, funding, and implementing agencies. The NTP strategic plan aligns with goal 2.7 of the NSP, which aims to strengthen TB diagnosis and support for people with TB while accelerating the scaling up of innovative processes, diagnostic tools, and regimens for diagnosis, treatment, and care. The plan focuses on five foundational pillars associated with the NTP's vision statement:

(1) Communicate and advocate – ensure that TB is a priority across sectors.

(2) Find and link – people with TB are linked to care within one week.

(3) Treat and retain – people with TB have access to high-quality treatment and support.

(4) Prevent and prepare – TB prevention is valued as much as treatment; and

(5) Monitor and assess – real-time TB dashboards are used in every province. The following targets are outlined in the draft NTP strategic plan.

The proposed FY 2023 USAID TB budget for South Africa is $20 million. With this level of funding, USAID will support the following technical areas.

REACH

TB diagnosis

Despite the countrywide rollout of the GeneXpert MTB/RIF Ultra as the initial TB diagnostic test, only 62 percent of cases notified in 2021 were tested with rapid diagnostics at the time of diagnosis, a slight increase from 61 percent of cases notified in 2020. Additionally, poor

adherence to the national TB diagnostic algorithm continues to be a challenge. Other programmatic challenges include poor-quality sputum samples, which affect the timeliness of laboratory testing and TB diagnosis, with up to 10 percent of samples at some sites rejected due to poor quality or insufficient volume. To improve TB diagnosis, USAID/SA will implement the following interventions using FY 2023 funds:

- Providing technical support to implement recommendations from the TB Diagnostic Network Assessment (TB DNA).

- Improving the quality of TB screening, including routine use of mobile digital chest X-rays (DCXR) with computer-aided detection (CAD).

- Increasing appropriate screening and diagnostic tools and strengthening functional specimen transport networks and quality laboratory management systems.

- Scaling up rapid diagnostic tests and diagnostic monitoring tools, including advocacy for appropriate testing algorithms.

- Supporting strategies and approaches to increase the diagnosis of TB in children, including the uptake of new tools for TB diagnosis in children.

- Supporting strategies and approaches to increase DR-TB case findings focusing on efforts to increase the coverage and usage of GeneXpert or other rapid tests that detect rifampicin resistance.

- Training clinicians on DR-TB diagnosis and management to improve second-line drug susceptibility testing (DST).

- Providing technical support to improve accurate reporting on TB core indicators.

Engaging all care providers
In FY 2024, USAID/SA will prioritize the following interventions:

- *Increasing facility-based case finding:*

  o Scaling up the use of testing modalities that do not rely on symptoms or sputum e.g., uLAM, and novel diagnostics for children and adults.

  o Testing all priority populations for TB, e.g., People Living with HIV (PLHIV), people with previous TB, and people with recent household contact who attend health facilities regardless of TB symptoms (targeted universal TB testing).

  o Continuing implementing the Find cases Actively, Separate safely, and treat Effectively (FAST) approach as part of the hospital package of care.

o Institutionalizing implementation of the NTP quality improvement (QI) change package, which focuses on addressing gaps in the TB case finding cascade.

o Scaling up TB case-finding approaches in clients in chronic care, including clients with hypertension and diabetes.

o Intensifying bi-directional screening and testing for TB and COVID-19; and

o Providing technical support to rapidly roll out the national TB contact management register, prioritizing high-volume facilities to improve reporting on TB contact investigation (TBCI).

- *Engaging non-NTP providers and sites (public and private) as part of public-private mix (PPM):*

  o Using pilot public-private mix (PPM) models to effectively engage private providers, strengthen referral pathways, and improve compliance with the national TB diagnostic algorithm; and

  o Providing technical support to improve reporting on laboratory-diagnosed TB clients from private sector laboratories to the NHLS to strengthen the national TB Diagnostic network.

Community TB care delivery

To focus on impact, the draft of the NTP strategic plan clearly defines key populations to be prioritized for community-based screening and testing. These include men, children under five years of age, people living in informal settlements, PLHIV, household contacts of people with TB, and people previously treated for TB. To increase coverage of community-based TB case-finding activities and scale up community TB care delivery, USAID will implement the following interventions:

- Scaling up contact investigation with community-based sputum collection and use of digital chest X-rays with computer-aided detection.

- Conducting mass education, population-based advocacy campaigns, and other efforts in social and behavior change communication (SBCC).

- Strengthening referral pathways between primary health care facilities and community-based teams to improve identification and referral of community members with TB symptoms to diagnostic facilities, specimen collection, and provision of transport where feasible to improve access to diagnosis.

- Measuring TB stigma and implementing interventions to alleviate such stigma.

- Implementing gender-focused interventions to improve uptake of community-based TB screening and testing among men.

- Piloting various community-based TB models to enable tailored interventions for the different vital populations.

CURE

Drug-susceptible TB (DS-TB) treatment

FY 2023 funds will be used to implement the following interventions:

- Scaling up person-centered interventions to improve treatment adherence (counseling, nutritional support, ancillary medications, and economic strengthening) and minimize loss to follow-up, pre- and post-initiation of treatment.

- Implementing approaches that improve the management of individuals with TB, including systems for completed referrals between hospitals and primary healthcare facilities and technology or other innovations for treatment reminders and notifications.

- Providing technical support for rolling out child-friendly treatment formulations and optimizing facility processes to improve enrollment and treatment success of pediatric populations.

- Scaling up models that enable the provision of TB treatment to clients in their households and communities from initiation through treatment completion, including interventions that provide medication through external pick-up points.

- Providing technical support to address gaps in the TB care cascade at the facility level to improve the quality of TB care.

- Providing technical support for the introduction of the four-month treatment regimen, including training of healthcare and community healthcare workers on the new treatment regimen.

- Capacity building and strengthening links between primary health care facilities and community-based services to improve care for individuals, particularly children, with all TB forms.

- Integrating management of significant comorbidities (e.g., diabetes, HIV), other risk factors (e.g., malnutrition, smoking), and mental health in TB treatment.

- Developing and implementing strategies that will reduce catastrophic costs for individuals with TB and their families.

DR-TB treatment

USAID will use FY 2023 funds to implement the following interventions:

- Identifying barriers to finding individuals with MDR-TB. USAID will scale up interventions to intensify screening of DR-TB household contacts and scale up Rifampicin-alert interventions.

- Support scaling up of and expanded use of new drugs and regimens.

- Continuing supporting implementation of second-line drug sensitivity testing in supported districts. USAID/SA will support the scale-up of the bedaquiline, pretomanid and linezolid (BPaL) and bedaquiline, pretomanid, Linezolid and Moxifloxacin (BPaL/M) roll-out in supported districts. Additionally, USAID will implement lessons learned from the USAID-funded BPaL-CAP that is ending in June 2023.

- Improving the quality of care of DR-TB services provided at centers of excellence and decentralized DR-TB units.

- Continuing supporting the Pharmacovigilance Monitoring System (PviMS) implementation and integration into the Active Drug Safety and Monitoring (aDSM) system.

- Conducting DR-TB mortality audits to identify contributory factors to high mortality in supported districts and implement targeted interventions.

- Conducting and institutionalizing cohort reviews to improve DR-TB case management.

- Support training, mentorship through peer-driven telemedicine, and technical support to improve the quality of DR-TB services at all levels of care

PREVENT

Prevention

Using FY 2023 funds, USAID will implement the following interventions to improve IPC implementation and increase TPT coverage among childhood and adult contacts, including other high-risk populations defined in the National Department of Health (NDoH) TPT guidelines:

- Implementing recommendations from the LTBI study to introduce testing for LTBI among healthcare workers and the support implementation of the TB occupational health policy.

- Conducting training and support implementation of the TPT guidelines to expand the provision of TPT to other high-risk groups and the introduction of other regimens, including 3HP and 3RH.

- Scaling up Infection Prevention and Control (including improved administrative and environmental controls, the use of personal protective equipment, health care worker surveillance and safety measures, and interventions to interrupt the chain of transmission in high-risk settings or among high-risk populations).

- Providing technical support to improve the capturing of information on TPT and accurate reporting on TPT coverage and completion.

- Supporting creation activities to rapidly increase TPT uptake among eligible high-risk groups.

INNOVATE

Research

USAID will continue to fund the following research studies using FY 2023 funds:

- *BEAT TB (Building Evidence for Advancing New Treatment for Drug-Resistant Tuberculosis) -* BEAT TB is an open-label, multi-center, randomized, controlled trial comparing the efficacy and safety of a study regimen consisting of bedaquiline (BDQ), delamanid (DLM), linezolid (LNZ), levofloxacin (LVX), and clofazimine (CFZ) to the current South African Standard of Care for the treatment of rifampicin-resistant tuberculosis (RR TB). Enrollment has been completed. The remaining period will be used to follow up enrolled clients as per the study protocol. The study ends in June 2024.

- *Supporting, Mobilizing, and Accelerating Research for Tuberculosis Elimination SMART4TB –* USAID will provide coordination support to ensure the full implementation of activities based on the technical objectives. The support includes planning, coordination, and monitoring. Funds allocated to this mechanism in FY 2023 will support the technical area (TA3) operational research through the TB Think Tank. USAID will support the two clinical trials to be conducted in South Africa to evaluate the safety and efficacy of new drugs in treatment regimen combinations for the treatment of TB for adults (special attention to pregnant women) and children, including the following:

- PRISM-TB- Randomized controlled trial to improve the treatment of rifampin-resistant TB by identifying both the right regimen and right duration, which depends on an individuals' baseline risk of treatment failure and relapse in two to three sites in South Africa at 170 individuals per site.

- SMILE-TB - Treatment-shortening drug-susceptible TB treatment trial in children with a stratified medicine approach in 2-3 sites in South Africa at 125 individuals per site; and

- Early-Stage Investigator (ESI)—The program's main objective is to train and support young investigators at the SMILE and PRISM sites to develop, implement, and lead their studies aligned with their national and local TB research priorities.

Scale up of new tools

Using FY 2023 funds, USAID/SA will scale up the following digital treatment adherence and support the following technologies:

- Video Directly Observed Therapy (VDOT) and the comprehensive adherence package, which includes the use of pillboxes.

- Digital chest X-rays with computer-aided detection to increase the TB diagnostic yield among clients with subclinical TB.

SUSTAIN

Commitment and Sustainability

USAID will prioritize the following interventions:

- Conducting a review to monitor progress in implementing the TB Partnership Statement.

- Providing technical support at the national, provincial, and district levels for implementing the NTP strategic plan.

- Providing technical support to operationalize the Multisectoral Accountability Framework for TB (MAF-TB).

- Improving mechanisms and activities to promote inclusiveness and involvement of the civil society and political stakeholders in the TB response through supporting the TB Caucus (network of political representatives) and other relevant provincial councils/committees to implement their mandate.

- Implementing a government-to-government (G2G) partnership to strengthen TB program oversight, strategic information support, improve the quality of TB care and program management, policy/implementation support, supply chain management, and capacity building.

Capacity and functioning systems

Procurement and supply chain management (PSM)

USAID continues to play a proactive role in harmonizing efforts to improve policy and stewardship, financing, human resources, management, and other core system elements aligned with the national health system and development strategies. USAID partners that work at the facility, district, provincial, and national levels will support efforts to improve TB supply chain

management and pharmacovigilance for second-line drugs. USAID will prioritize the following interventions:

- Providing technical support to improve quantification, forecasting, procurement, distribution, and regulatory systems for TB medicines and supplies.

- Using early warning systems for stock levels.

- Using the PharmacoVigilance Monitoring System (PViMS) for second line.

- Using Active TB Drug Safety Monitoring and Management (aDSM).

- Providing training for healthcare workers for effective DR-TB treatment and patient safety monitoring.

Monitoring and evaluation (M&E) and Health Management Information Systems (HMIS) and implementation of the Performance-Based Monitoring and Evaluation Framework (PBMEF)
Improving TB data quality remains a priority for the NTP. Using FY 2023 funds, USAID will implement the following interventions:

- Continuing supporting the management of individuals with DR-TB, reporting and surveillance system (EDRWeb).

- Strengthening the collection, management, and use of high-quality TB data at all levels for programmatic decision-making (e.g., target setting, planning, etc.).

- Providing technical assistance and training of TB managers, data capturers and clinicians on the use of data for programmatic and funding decision-making.

- Strengthening TB information systems functionalities to link seamlessly with overall health information systems and insurance-based data flows, ensuring ownership and access to TB data will not be compromised.

In addition to the interventions above, the ten core indicators of the Performance-Based Monitoring and Evaluation Framework (PBMEF) were aligned and included in the FY 2020 PPR for the first time. USAID will train implementing partners on the PBMEF to improve accurate reporting on key indicators in supported districts.

Human resources for health (HRH)
South Africa adopted task shifting as an effective strategy for addressing human resource constraints in the health care system. An evaluation of South African facilities that adopted a task-sharing approach between clinical nurse practitioners and medical officers for MDR-TB demonstrated greater treatment success rates than the national average. The main gap in this

approach is the inadequate support supervision and mentoring. Using FY2023 funds, USAID/SA will implement the following interventions:

- Mentoring of Nurse-initiated management of drug-resistant TB (NIMDR) trained nurses to improve compliance with clinical guidelines.

- Providing targeted deployment of data capturers, linkage officers/case managers, and enrolled nurses to address data quality issues, provide TB treatment out of the facility, and improve patient monitoring until treatment completion.

- Continuing building the capability of healthcare workers to provide quality TB services competently, safely, and efficiently by focusing on in-service clinical training and mentoring. Training and mentoring will be customized based on district-specific performance gaps and staff turnover patterns, and this will be integrated into quality improvement interventions, implemented and monitored in USAID-supported districts.