



# SOUTHERN AFRICA

TB AND HEALTH SYSTEMS SUPPORT  
(SATBHSS)  
PROJECT

**June 2019**

# Mid-Term Results Brief



## INTRODUCTION

This mid-term results brief summarizes results and innovations from implementation of the Southern Africa Tuberculosis and Health Systems Support (SATBHSS) project. This brief also outlines lessons learned over the last two and a half years—and highlights priorities and opportunities to scale TB control innovations in Southern Africa.

### Background and regional context

Tuberculosis (TB) remains a major public health and economic concern in Southern Africa. Despite global progress in TB control, the region has the highest per capita burden of TB. Notably, Lesotho and Mozambique have some of the world's highest TB incidence at 665/100,000 and 551/100,000 population respectively.

From a human capital perspective, TB is a primary cause of premature death and disrupts economic potential. TB and TB/HIV are among the top three causes of premature adult mortality across the region. TB tends to impact the most productive segments of the region's population, youth and young adults, who are most predisposed to the key risk factors for TB (namely HIV/AIDS, silica dust in mine settings, smoking, and alcohol). The World Health Organization (WHO) indicated that in 2017 alone, 49,000 and 78,000 deaths occurred due to TB in Mozambique and South Africa respectively.

Southern Africa's TB is compounded by HIV/AIDS, the intra-regional movement of people for labor, and other economic activities facilitating cross-border disease transmission. Within the mining sector, TB prevalence is especially high, given the convergence of many factors, including exposure to silica dust, weak regulation of occupational health practices, unhealthy behaviors such as smoking and alcohol use, and poor living conditions. These factors facilitate the rapid spread of disease and—as a result—more than a third of all new TB cases are associated with mining operations. The cross-border dimensions of socio-economic activity necessitates a regional approach to tackling TB in Southern Africa. To this end, the Southern Africa Development Community (SADC) in 2012 adopted the Declaration on TB in the Mining Sector to guide its regional approach to tackling TB. This declaration provided the impetus for a regional TB response, culminating in a request from four countries—Lesotho, Malawi, Mozambique, and Zambia—for World Bank support.

### About the SATBHSS project

SATBHSS is supporting the region to respond to TB and occupational lung diseases among miners and ex-miners, health care workers, mining communities, high TB burden regions, high HIV/AIDS burden regions, transport corridors, cross-border areas, and labor-sending areas. Besides supporting interventions

directly addressing TB and its determinants, SATBHSS supports critical investments in broader health systems strengthening—an approach necessary to control and eventually eradicate TB.

The SATBHSS project is implemented in Lesotho, Malawi, Mozambique, and Zambia with regional benefit to the whole SADC region. The project is facilitating innovation and country-to-country learning; and joint response to TB and other cross-border outbreaks among project countries and with other neighbouring countries such as the Democratic Republic of Congo (DRC), Tanzania, Zimbabwe, Swaziland, and South Africa.

## MAIN RESULTS AND INNOVATIONS

Regional results and spill over effects. Over the last two and half years of implementation, the SATBHSS project has recorded a number of achievements, including: (i) a 200% increase in notification of TB among miners, including cross-border referrals and enhanced cross-border screening; these improvements are contributing significantly to finding and treating missing TB (and drug-resistant TB [DR-TB]) cases in the region; (ii) enhanced cross-border disease surveillance and response by zoning and enhancing capacities of multi-sectoral teams to effectively respond to outbreaks. The zones have been involved in surveillance and sub-regional joint outbreak investigations of diseases such as the cholera, foot and mouth disease, leptospirosis, and rabies; (iii) enhanced capacity for diagnostics and quality systems improvement of laboratories by collaborating to implement peer regional assessment and laboratory certification through the Stepwise Laboratory Quality Improvement Process Towards Accreditation (SLIPTA) audits. This has led to ISO15189 accreditation of two laboratories in Zambia and significant improvement in SLIPTA performance of laboratories (>60% above two stars) under the network in the other project countries; (iv) countries have collaborated to define a regional benchmark for mine Occupational Health and Safety (OHS) inspection to strengthen primary prevention for occupational lung diseases; and (v) the project initiated regional operational research studies to generate evidence for targeted interventions and enhanced responses.

### Box 1: Regional collaboration for TB, occupational lung diseases, and outbreak response

SATBHSS has leveraged other regional initiatives by collaborating with: the East Africa Public Health Laboratory Networking Project to enhance capacities for laboratory systems and pandemic preparedness and response; the Uganda Supranational Reference Laboratory (Uganda SRL), which provides technical assistance for TB laboratory strategic planning and rolling out WHO recommended diagnostics and drug sensitivity testing (DST); and the Global Fund's TB in the Mining Sector (TIMS) program for TB and occupational lung disease management through One Stop occupational health centers.

## COUNTRY SPECIFIC RESULTS

### LESOTHO

The prevalence of TB in Lesotho—with 655 cases per 100,000 population—is more than the double the WHO emergency threshold (250 cases per 100,000 population) with over 70% co-infected with HIV.

SATBHSS has therefore been supporting the Government of Lesotho to mount a comprehensive multi-sectoral response to the challenge, while leveraging on regional learning and innovation. Specifically, the project has provided innovative and customized interventions for targeting high risk and vulnerable populations, including miners and ex-miners, healthcare workers, and prisoners—all of whom have disproportionately high prevalence of TB.

As a Center of Excellence (COE) for Community TB Management, Lesotho is spearheading performance-based incentives to drive transformative change in traditional approaches to screening, testing, diagnosis, and treatment of TB. Launched this past April, the pilot is expected to advance new technologies to improve areas of persistent challenge, particularly in case detection and treatment success. Lesotho has also established wellness clinics in six hospitals to enhance TB screening among healthcare workers whose TB prevalence is double that of the general population. **Cross-border collaboration** between Lesotho and South Africa has been intensified on disease surveillance and response with a focus on high-priority outbreaks. **Interventions for TB screening at the TEBA points of care for miners and ex-miners** have led to an increase of 214% of TB cases detected among this target group. In the second phase of implementation, the roll-out of the community TB screening and intensified use of mobile x-rays followed by treatment will be game changers in identifying the missing cases.

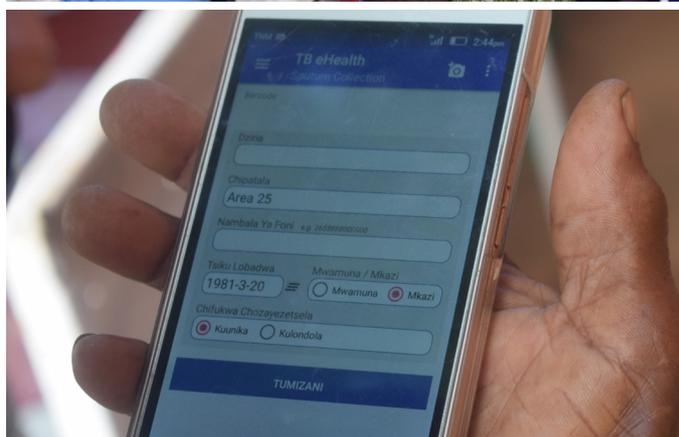
Through SATBHSS project support, the Government of Lesotho initiated inspection of mines for improving compliance with mine health and safety standards. These interventions have yielded important results on the exposure levels of silica dust in mining operations and prompted intensified review of policies to strengthen the regulation of the sector.



An inspector in Lesotho preparing for field visit

### MALAWI

The burden of TB among people living with HIV (PLHIV) in Malawi remains very high. WHO data shows that in 2017, 3,500 TB deaths occurred among HIV positive patients, who make up 70% of TB patients in the country. Through the SATBHSS project, remarkable progress has been made in establishing an **innovative COE, which is rolling out a one-of-a-kind e-health platform for community TB care**. The platform has helped to strengthen community TB disease surveillance through use of current technologies to collect and transport sputum and track the journey of sputum from collection point, to laboratory, and back to the patient with results. This platform has helped improve the quality of information on TB prevalence and helps facilitate treatment and follow-up for positive cases. The e-platform is currently being linked to the national health management information system, which will help facilitate routine data collection on TB, especially for ‘hard to find’ cases typically found through the kinds of community TB screenings supported through this COE.



A community volunteer in Malawi showcasing the e-health platform

Through the COE, more than **70 new sputum collection points** have been established with community volunteers deployed to support sputum collection, linking patients to care and following up on treatment. Further to these interventions, **mobile (X-ray) diagnostic units** are being utilized to reach key populations and prioritized areas for improved screening and case finding. These interventions have led to an improvement in treatment success to a current 88% from 82% in 2016.

## MOZAMBIQUE

In Mozambique, the last three years have shown progress on the number of new cases of TB notified. At 90%, the treatment success rate has surpassed project targets. The Government of Mozambique is prioritizing community case finding and community screening campaigns to further identify missing cases of TB. In addition, improved sputum sample transportation is being scaled up to harness the benefits of GeneXpert machines located in strategic facilities throughout the country. Mozambique has implemented **tele-mentoring** for case presentations and review by medical practitioners across provinces. In this regard, ECHO technology has been established in four provinces where 186 DR-TB clinical cases have been discussed and reviewed by medical practitioners. Interventions on TB and/or HIV diagnosis and



*Sputum sample transport system in Mozambique*

treatment for Mozambican miners on either side of the Ressano Garcia border with South Africa have been initiated, leading to TB screening of 11,042 miners between September 2018 and March 2019.

## ZAMBIA

Zambia's TB incidence rate of 361/100,000 population is above the WHO emergency rate of 250 cases per 100,000. The project has contributed to improved case finding that has been matched with an increase in treatment success rate, which is now at 90% for drug sensitive TB (reaching the WHO target of 90%) and 71% for DR-TB. As part of **supporting diagnostics services**, two laboratories supported by the project reached the gold **standard ISO 15189 accreditation**. Zambia has employed an innovative approach to DR-TB management using **geospatial mapping of DR-TB patients** to map hotspots; this is assisting in contact tracing and screening. The deployment of DR-TB nurses at the community level to follow up DR-TB patients has contributed to an increase in treatment success rates.

As a COE for OHS, Zambia has taken lead in the review of OHS policy, legislation, and regulation.

There has been an increase in the number of current and ex-miners screened for TB and silicosis by the COE at the Occupational Health and Safety Institute (OHSI). Furthermore, as part of strengthening primary **prevention of occupational lung disease**, the Mine Safety Department (MSD) inspected 68.1% of mines for compliance with OHS regulations in the targeted districts in 2018.

## OPPORTUNITIES TO BRING TO SCALE THE INTERVENTIONS

Despite country-level progress on TB prevention and control, the WHO estimates that substantial numbers of TB cases are still being missed; thus, countries need strategies targeting at-risk populations to capture missing cases. Without such efforts, countries face the possibility of a resurgence in TB incidence and prevalence, and a failure to achieve Sustainable Development Goals to eradicate TB by 2030. In this regard, the following priorities were agreed to during the MTR as key cross-cutting high impact interventions for scale up for the remaining period:

- (i) intensified case finding of missing cases through scaling Active Case Finding (ACF) among most vulnerable groups (miners, ex-miners, diabetics, PLWHA, their families, and health care workers) using more sensitive screening tools such as digital CXR, further increasing access to GeneXpert;
- (ii) improving treatment outcomes (to significantly reduce TB mortality) through enhanced quality assurance/quality improvement for TB management and improved patient tracking and patient support;
- (iii) improving cross-border TB care, including continuum of care;
- (iv) expanding cross-border disease preparedness and response interventions; and
- (v) implementing International TB Standards of Care and scaling up primary prevention for occupational lung diseases. The project aims to implement at scale, decentralize service delivery, and adopt more technologies and innovations during the implementation period to realize and surpass SATBHSS goals.