SMRU.
Shoklo Malaria Research Unit

มูลนิธิ เดอะ บอร์เดอร์แลนด์ เฮลท์
The Borderland Health Foundation

ANNUAL TUBERCULOSIS REPORT

2025

Aim

Shoklo Malaria Research Unit (SMRU) TB program aims to improve access to comprehensive TB services for marginalized populations along the Thailand–Myanmar border and to strengthen TB control in the region.

Objectives

1

To improve case detection of TB, TB-HIV, and MDR-TB by reaching hard-to-reach populations.

2

To enhance successful treatment outcomes through comprehensive care package.

3

To strengthen effective cross-border referral collaboration.

Core Activities

Abbreviation: DOTS, Directly Observed Treatment, Short-course.

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About This Report

This report provides TB summaries of Shoklo Malaria Research Unit (SMRU) for calendar year 2025. These data reflect the most complete information available as of May, 2026.

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2025 AT A GLANCE

PROGRAM PERFORMANCE

6,653
SYMPTOM SCREENINGS

6,572
CHEST X-RAY SCREENINGS

2,492
PRESUMPTIVE CASES

2,404
GENEXPERT TESTS PERFORMED

PROGRAM ACHIEVEMENT

654
NUMBER OF DIAGNOSED TB CASES

476
NUMBER OF TB CASES ENROLLED IN SMRU

61
NUMBER OF LATENT TB INFECTION CASES ENROLLED

51
NUMBER OF TB–HIV CO–INFECTION CASES ENROLLED

Diagnosed TB: TB cases that are diagnosed clinically or bacteriologically.

Enrolled TB: A TB case that has been registered and started on anti-TB treatment under SMRU.

Background

SMRU TB Program has been providing TB care and prevention services for marginalized, undocumented migrants at the Thailand-Myanmar border, as well as, ethnic minorities in hard-to-reach area since 2010. The funding is supported by Global Fund TB grant for Thailand and Myanmar.

Coverage Area

The TB program covers Tak Province, Thailand (estimated population: 139,678; IOM, 2024), and Kayin State, Myanmar (estimated population: 240,000). One TB clinic is located in Mae Ramat District, Tak Province, Thailand, and the other in Myawaddy District, Kayin State, Myanmar.

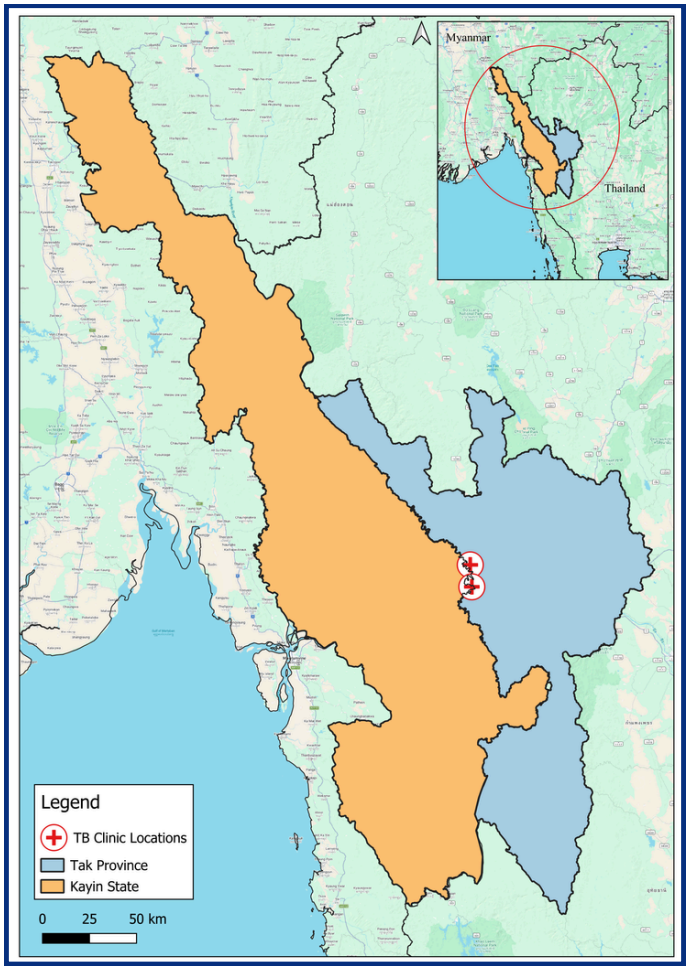

Figure 1: Map of Thailand-Myanmar Border Showing Locations of SMRU TB Clinic Sites.

Core Activities

SMRU implements a comprehensive TB program that includes TB case finding, diagnosis, treatment, and patient-centered care for individuals with TB, TB-HIV co-infection, and drug-resistant TB (DR-TB), particularly multidrug-resistant TB (MDR-TB). SMRU conducts TB case finding through -

- passive case finding (PCF),
- active case finding (ACF), including contact investigation (CI), and
- community-based screening activities

to improve early detection and reduce TB transmission in the Thailand–Myanmar border region.

Case Finding Activities

Passive Case Finding

In 2025, a total of 1,810 presumptive TB cases were screened across all SMRU clinics and Mae Tao clinic. Of these, 1,762 (97%) underwent chest X-ray imaging, and 1,692 (94%) received GeneXpert testing. A total of 611 TB cases were diagnosed, resulting in a case detection rate of 34%. Among the diagnosed cases, 434 patients (290 males and 144 females) were enrolled in SMRU TB Program. Of these, 411 (95%) had drug-sensitive TB (DS-TB), while 23 (5%) had multidrug-resistant TB (MDR-TB).

Among the 611 diagnosed TB cases, 177 (29%) were not initiated on treatment under SMRU TB Program. Of the total diagnosed TB cases, 19% (117/611) were referred to partner organizations for continued care and treatment, 8% (46/611) were classified as initial loss to follow-up, and 2% (14/611) died before treatment initiation.

Case Finding Activities

Passive Case Finding

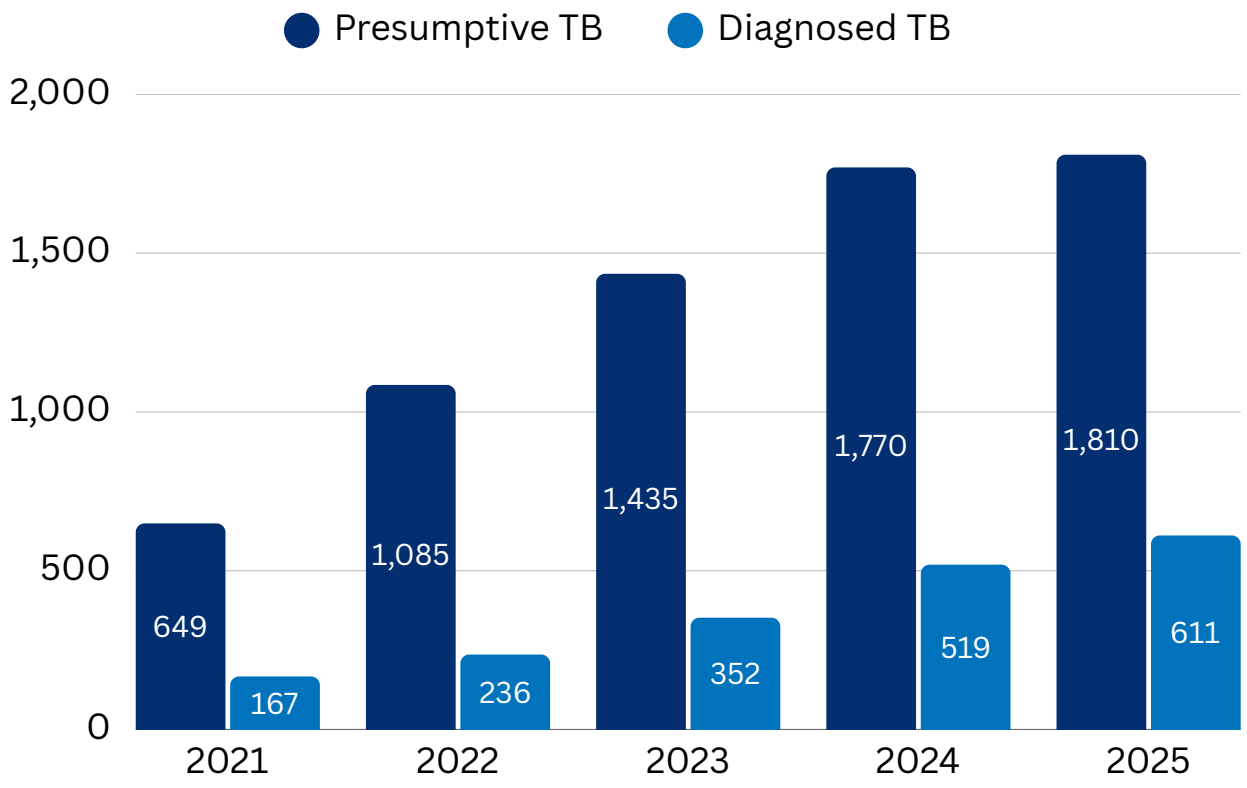

Figure 2: Trends in Presumptive and Diagnosed TB Cases in SMRU Clinics, 2021–2025

Active Case Finding and Contact Investigation

In 2025, active case finding was conducted among 849 contacts of TB patients, 38 diabetic patients, 138 people living with HIV (PLHIV), 368 healthcare workers, and 432 other patients*. Among contacts, 1% (12/849) were diagnosed with TB. In addition, 5% (23/432) of other patients were diagnosed with TB. TB Preventive Therapy (TPT) for latent TB infection (LTBI) was provided to 59 contact children aged 5 years and under and 2 PLHIV patients.

Other patients*: People with previous TB, chronic lung disease, immunosuppressive conditions or therapy, or other medical and social conditions associated with an increased risk of TB.

Case Finding Activities

Community Outreach TB Case Finding Using Mobile CXR

SMRU have strengthened collaboration with local stakeholders and adapted case-finding strategies for Thailand-Myanmar border TB control. SMRU has integrated community engagement to mobilize communities to participate in TB screenings, facilitate early case detection, and find missing cases within the communities.

During 2025, TB outreach teams have screened 3,155 migrants and villagers in community outreach screenings in Mae Ramat district of Thailand and in the villages along the border of Myawaddy district in Myanmar. These activities resulted in the identification of 8 TB cases (0.3% yield rate) in the community during 2025.

Profile of TB Cases

Drug-Sensitive TB

There were 450 drug-sensitive tuberculosis (DS-TB) patients enrolled in SMRU in 2025, indicating nearly a threefold increase compared with 2021 (N = 153). Of all enrolled DS-TB patients in 2025, 375 patients (83%) were bacteriologically confirmed TB, while 75 patients (17%) were clinically diagnosed TB cases.

Overall, 88% (394/450) of enrolled DS-TB patients were newly diagnosed with TB, while 12% (56/450) had a previous history of TB. Among enrolled DS-TB cases, 95% (427/450) were pulmonary TB, whereas 5% (23/450) were extrapulmonary TB.

Drug-Sensitive TB

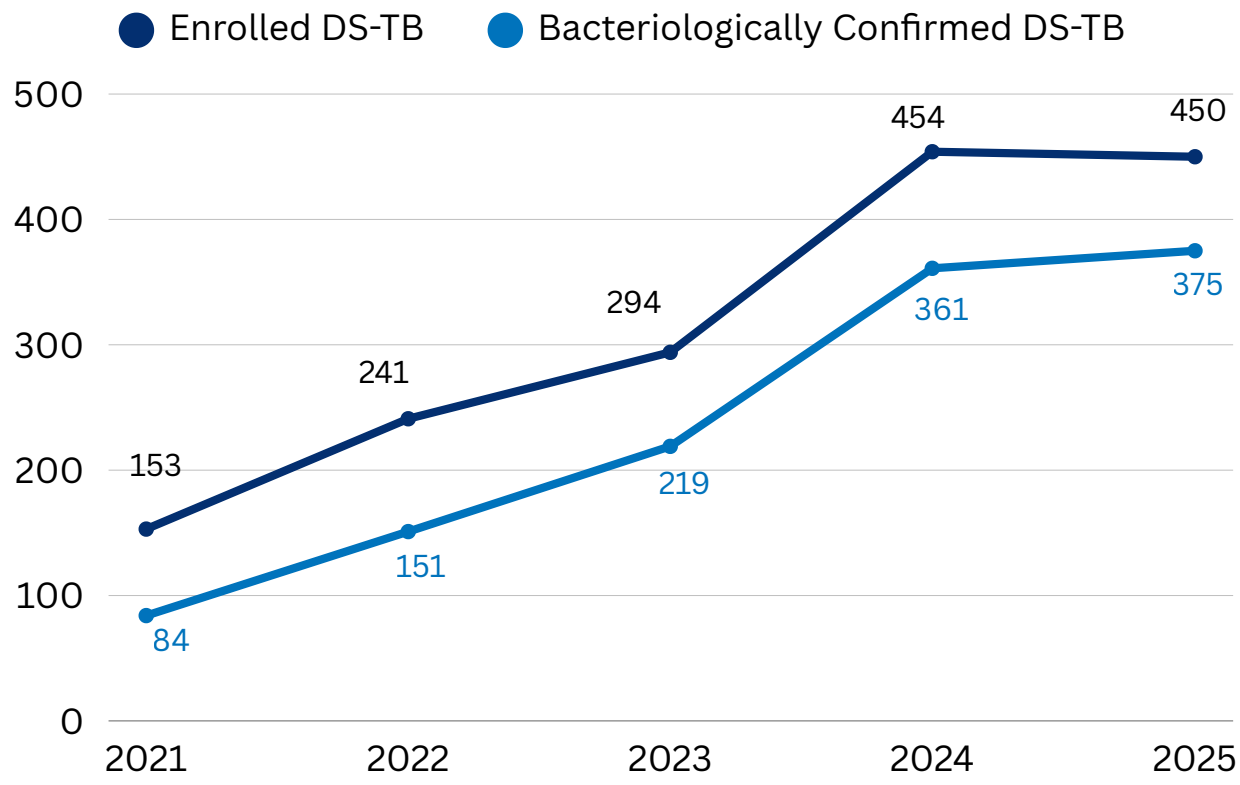

Figure 3 . Trends in Enrolled DS-TB and Bacteriologically Confirmed Pulmonary TB Cases, 2021–2025

Demographic Characteristics

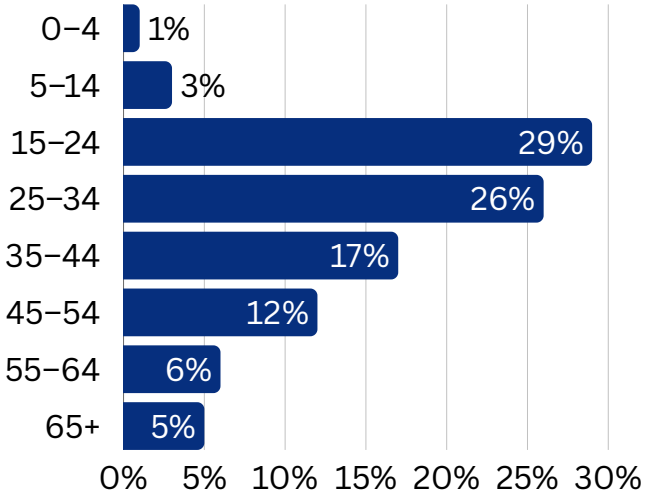

Figure 4: Percent of Enrolled DS-TB Cases by Age Groups, 2025.

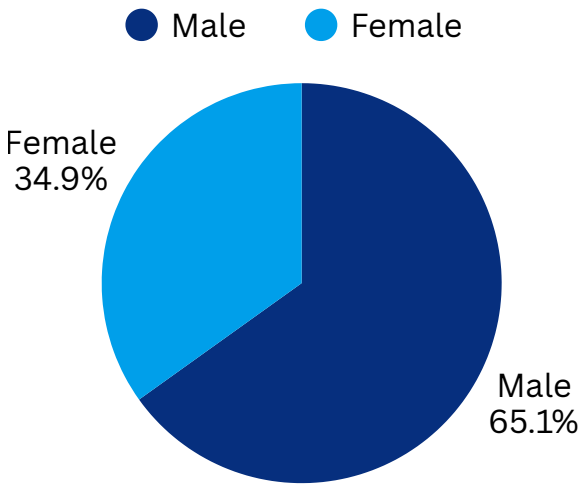

Figure 5: Percent of Enrolled DS-TB Cases by Sex, 2025.

Clinical Characteristics

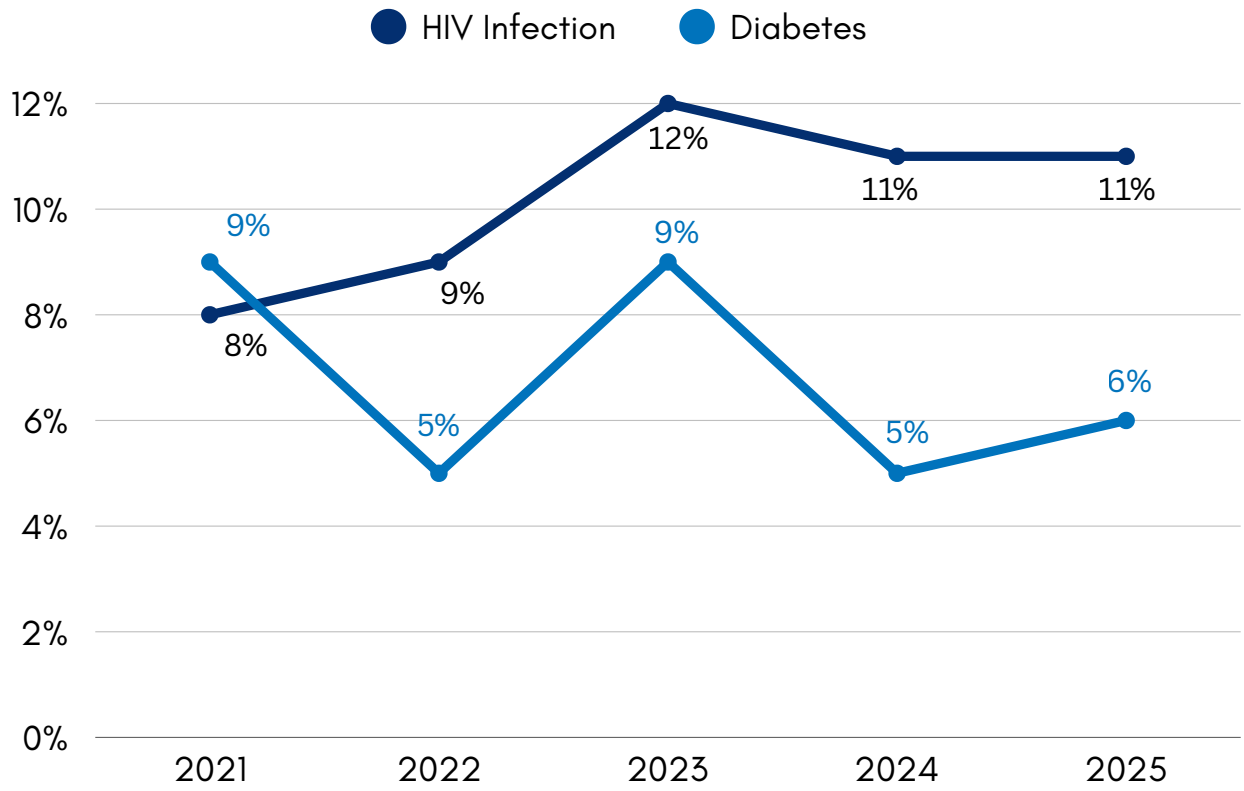

Figure 6. Trends in HIV and Diabetes among Enrolled DS-TB Cases, 2021–2025

HIV Infection by Sex (N=54)

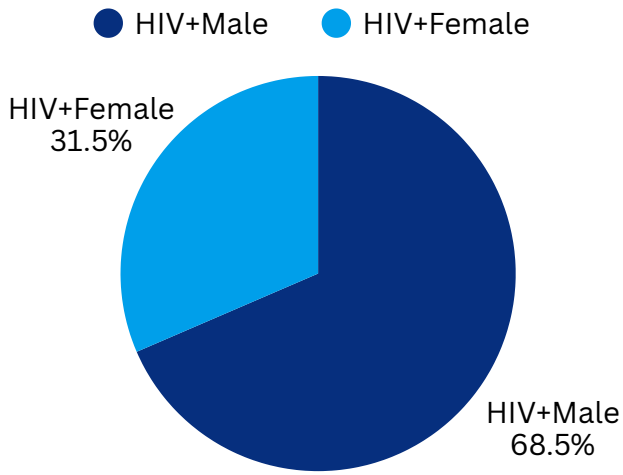

Figure 7: Percent of Enrolled TB-HIV Co-infection by Sex, 2025.

Diabetes by Sex (N=27)

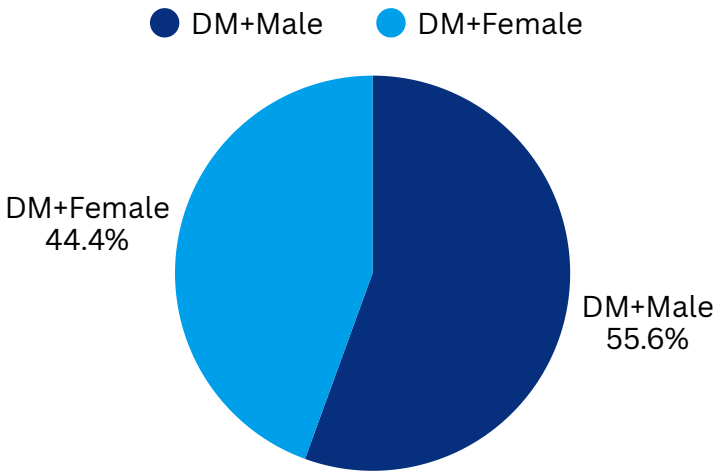

Figure 8: Percent of Enrolled TB-DM by Sex, 2025.

DS-TB Treatment Outcomes

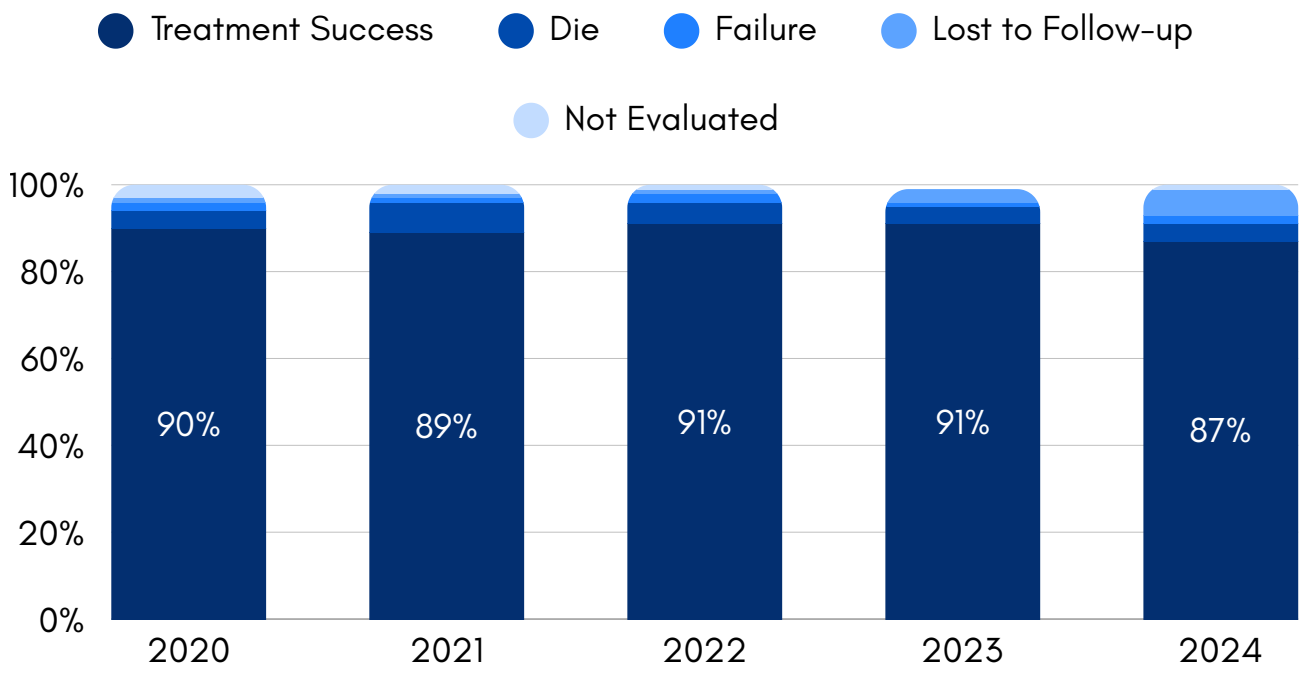

Figure 9: Treatment Outcomes of Enrolled DS-TB Patients (2020–2024 Cohort): Focus on Treatment Success Rate and Mortality Rate.

Compared with 2020, the treatment success rate decreased from 90% (253/280) to 87% (397/454) in 2024. During the same period, the mortality rate remained at 4% (17/454), treatment failure remained at 2% (7/454), loss to follow-up increased from 1% (3/280) to 6% (25/454), and the proportion of cases not evaluated decreased from 3% (8/280) to 2% (8/454).

Drug-Resistant TB

Molecular tests, such as the GeneXpert MTB/RIF assay, are used for all presumptive TB patients to rapidly detect rifampicin resistance. All patients with rifampicin-resistant TB then undergo GeneXpert MTB/XDR and phenotypic drug susceptibility testing to confirm additional drug resistance.

Demographic and Clinical Characteristics

Among the 26 DR-TB patients enrolled in SMRU during 2025, 81% were male and 19% were female. The majority of patients (81%) were aged 15–54 years, while 19% were aged over 54 years. 54% of patients were newly diagnosed TB, whereas 46% had a previous history of taking anti-TB treatment. HIV co-infection was reported in 7.6% of patients.

DR-TB Treatment Outcomes

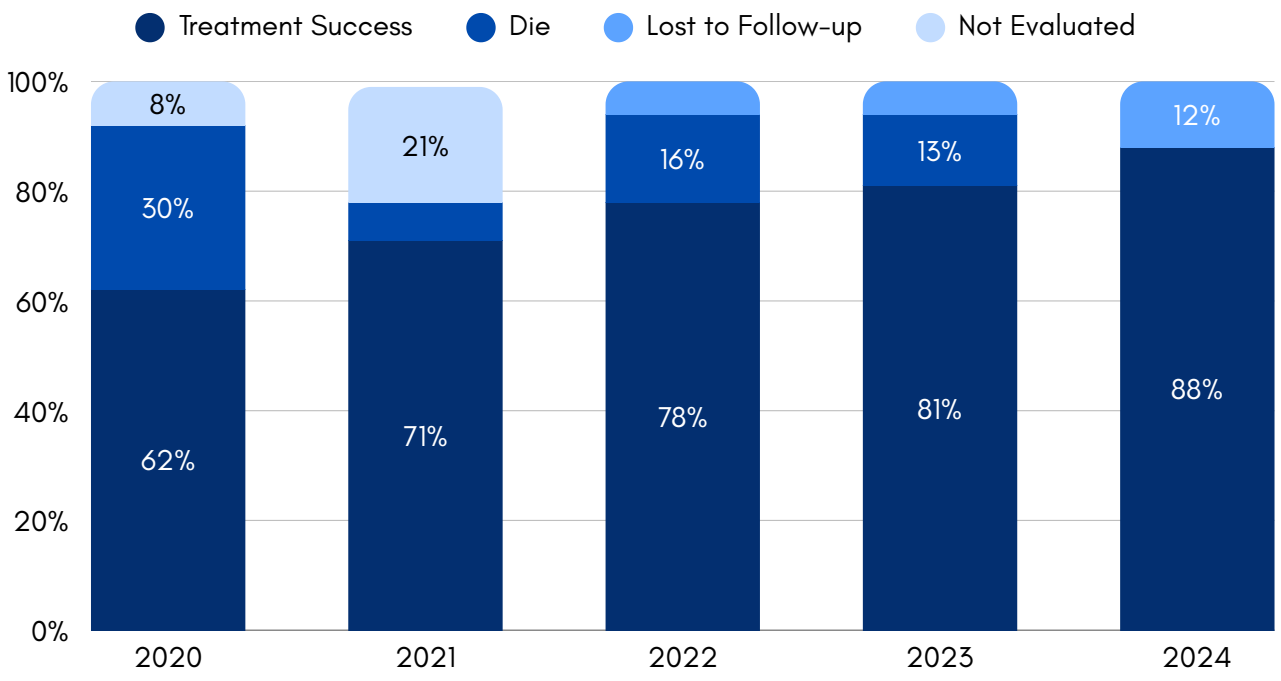

Figure 10. Treatment Outcomes of Enrolled MDR-TB Patients (2020–2024 Cohort): Focus on Treatment Success Rate and Mortality Rate.

Treatment success rate among MDR-TB patients improved from 62% (8/13) in 2020 to 88% (15/17) in 2024. Over the same period, the mortality rate declined from 31% (4/13) to 0%, and the proportion of cases not evaluated decreased from 8% (1/13) to 0%. However, loss to follow-up became an increasing concern, rising from 0% in 2020 to 12% (2/17) in 2024.

POST-TREATMENT TB FOLLOW-UP (2025)

102

POST-TREATMENT TB PATIENTS

Completed treatment between **2020 and 2024** were interviewed in 2025 about their current health status and working conditions.

GOOD HEALTH

86%

(88/102)

of patients reported being in good health.

EMPLOYED

60%

(61/102)

of patients are employed.

PREFERRED SMRU CARE

86%

(88/102)

of patients stated that they preferred SMRU clinics for TB care.

MAIN CHALLENGE

Chronic Cough

was the main reason reported for poor health and unemployment.

23%

(23/102)

KEY MESSAGE

These findings highlight the importance of post-treatment follow-up.

LEARN MORE AT

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