Government of the Kingdom of Lesotho

Ministry of Health

NATIONAL TB OPERATIONAL PLAN

TO IMPROVE

TB TREATMENT COVERAGE RATE

&

TB TREATMENT SUCCESS RATE in DRUG SUSCEPTIBLE TB PATIENTS

2024/2028

Table of Contents

Executive Summary

According to the WHO global TB report (2023), Lesotho is among the 30 high-burden countries for tuberculosis and the 30 high-burden countries for TB/HIV in the World. The estimated TB incidence is 661/100,000, with a treatment coverage of only 37% in 2023, less than the global target of 90%. The HIV prevalence is 22%, and an incidence of 4500 new infections per year. The TB/HIV coinfection is 56%. About 95% of PLHIV are on ART compared to 100% of the global target. The uptake for TPT for PLHIV is 66%, while 27% of household contacts of bacteriologically positive TB cases are on TPT compared to the 100% target. MDR TB is still high, with a treatment coverage rate of only 22% and a treatment success rate of 74%, according to the WHO global TB report of 2023. The TB epidemic in Lesotho is still of public health importance.

The TB Operational Plan is a collaborative response by the National Tuberculosis and Leprosy Programme (NTLP) and TB stakeholders to address the eight priority areas identified by the Global Fund's Technical Review Panel in Lesotho's GC7 funding request. **This plan specifically focuses on two key objectives: increasing TB treatment coverage and improving treatment success rates for both drug-susceptible.** It is an excerpt from the TB/HIV National Action Plan aligned to the National TB Strategic Plan of 2023 -2028. The NTLP and TB Stakeholders refined the plan during a three-day meeting in Lesotho from September 4 - 6, 2024.

The overall objective of this National TB Operational Plan is to guide the country's efforts towards achieving the following ambitious targets by 2028:

Specific Objectives

I. **Increase TB treatment coverage**: Screen and diagnose TB among key populations to raise TB treatment coverage from 45% in 2024 to 66% by the end of 2028 for drug-susceptible TB cases, through enhanced diagnostic services and targeted community outreach programs.

II. **Improve TB treatment success**: Initiate all diagnosed TB patients on treatment and improve treatment success rates from 76% in 2023 to 90% by the end of 2028 for all TB patients, by strengthening patient follow-up, adherence support, and ensuring a consistent supply of medications.

Although the NTLP and TB stakeholders have initiated several activities, some still need to be implemented at scale or with fidelity. There is a need for the team to deliberately and systematically introduce layers of evidence-based interventions to achieve the set targets of 85% treatment coverage and 90% treatment success rate. The proposed interventions Specific to TB treatment coverage include:

1. **Targeted Stewardship and Oversight:** Introduce leadership, coordination, and resource management tools and strategies to ensure sustained and effective TB outcomes.
2. **Targeted Detection and Service Expansion for High-Risk Groups**: This intervention includes expanding the reach of evidence-based, innovative screening and diagnostic approaches for TB case detection to unreached vulnerable populations.
3. **Targeted Operational Efficiency for Laboratory Supplies and Medicines:** This intervention includes streamlining TB healthcare to achieve high-quality operational performance of TB processes.

Specific to treatment success rate, to improve the TB treatment success rate from 77% to 90%, the team will focus on reducing death rates by 15% and minimizing cases of loss to follow-up of 4% and non-evaluated at 2%. Since mortality is responsible for 77% of the TSR gap, an important next step is identifying and addressing the most typical causes of mortality in these patients.
Key interventions include:

1. **Reduction in mortality for improved TB Treatment Outcomes**

Implement comprehensive screening, timely treatment, management of comorbidities, death audits, and shorter treatment regimens to detect TB early, manage cases effectively, and reduce mortality rates.

2. **Reduction in Loss to Follow-up for Improved TB Treatment Outcomes**

Strengthen patient retention through root cause analysis, appointment tracking, community-based dispensing, and digital tools like SMS and video DOTS to ensure patients adhere to and complete their TB treatment. In addition to the interventions above, the CSO engagement, multisectoral accountability framework, and technical assistance will be critical for implementation.

In conclusion, the team should intentionally implement evidence-based interventions at scale and with fidelity. Technical assistance in different areas, such as MAF and Quality improvement, will be needed to support the implementation of these interventions. This plan will be monitored by process and outcome indicators, as laid out in the monitoring and evaluation framework.

Acknowledgement

The national TB operational plan was developed through a consultative and participatory process involving stakeholders, including field visits and a three-day stakeholders meeting.

The NTLP, through the MOH, acknowledges all individuals and institutions that supported the development of this operational plan.

Dr. Maama Llang and Dr. Anatole Mayema are responsible for the initial guidance in meetings with Global Fund and the consultant and overall guidance of the work planning activity.

The Global Fund in-country Coordinator PMU - MoF Project Management Unit Mme Sefako Nkala, Ntate Mosa Ntelo, for guiding the process and ensuring funds are available for this activity.

The NTLP staff who joined the field visits to the three districts and DHMTs of Maseru, Berea, and Mafeteng and the health facilities of Mefeteng Hospital, Matelile Health Centre, Sebedia Health Centre, Maluti Adventist Hospital, Qualing Filter clinic, Thamae Health Centre

We thank the organizations for participating in the courtesy call and three-day meetings. Dr Den Boon Saskia from WHO HQ made a presentation overview of TB globally and focused on case findings and best practices in the districts of Nigeria and Uganda. These different institutions included MoH, NTLP, Baylor, EGPAF, JHPIEGO, USAID/CDC, NTRL, MOH Supply Chain, LENEPWA, and the districts,

1. Background

According to the WHO global TB report (2023), Lesotho is among the 30 high-burden countries for tuberculosis and the 30 high-burden countries for TB/HIV in the World. The estimated TB incidence is 661/100,000, with a treatment coverage of only 37% in 2023, less than the global target of 90%. The HIV prevalence is 22%, and there is an incidence of 4500 new infections per year. The TB/HIV coinfection is 56%. About 95% of PLHIV is on ART, compared to 100% of the global target. The uptake for TPT for PLHIV is 66%, while 27% of household contacts of bacteriologically positive TB cases are on TPT compared to the 100% target. MDR TB is still high, with a treatment coverage rate of only 22% and a treatment success rate of 74%, according to the WHO global TB report of 2023. The TB epidemic in Lesotho is still of public health importance.

The Ministry of Health of Lesotho developed a national TB strategic plan for 2023-2028, with a monitoring and evaluation plan. As summarized in Table 1, the national TB strategic plan includes two goals, five objectives, and a set of 17 interventions to improve the results of the country's TB epidemiological situation. This plan mainly focuses on expounding objectives two and three of the national TB strategic plan.

Table 1: Goals, objectives and interventions of the NSP 2023 - 2028.

Goal 1: Reduce TB burden by scaling up TB prevention, diagnosis, and care through a people-centred approach.
Objective 1: Scale up TB prevention interventions to reach 95% of eligible people.
Interventions
1.1: Enhance coverage for TB preventative therapy.
1.2: Enhance TB vaccine coverage.
1.3: Reduce TB risk factors and barriers to TB services through a multisectoral approach.
Objective 2: Increase TB detection rate and linkage into care to 95%
Interventions
2.1: Find the missing people with TB.
2.2: Support linkage into TB care and support services for people with TB
Objective 3: Enhance support and quality of care to achieve TB treatment success rate of 95%
Interventions
3.1: Provide integrated quality care and support to people with TB.
3.2: Reduce the impact of TB to affected people.
3.3: Provide post-TB care and support.
Goal 2: Strengthen structures and support systems for integrated, efficient, and
Objective 4: Strengthen structures and support systems for TB programme.
Interventions
4.1: Human resources and community systems strengthening for TB services.
4.2: Strengthen TB programme health systems structures for efficiency, resilience, and pandemic preparedness.
4.3: Strengthen airborne infection control measures.
4.4: Invest in Information systems and digital solutions for TB programme.
4.5: Strengthen procurement systems and supply chain management for TB programme.
4.6: Evaluate for impact and guide innovation and research for TB.
4.7: Lead resource mobilization and coordination of the TB programme
Objective 5: Intensify communication and advocacy for TB.
Interventions
5.1: Enhance TB advocacy and communication with communities and other stakeholders.
5.2: Reinforce partnerships and collaborations for TB Programme.

The MOH submitted a GC7 funding request to the Global Fund technical review panel (TRP). The TRP identified priority issues requiring strategic action and developing a Tuberculosis operational plan. The issues raised by TRP are as follows highlight what the plan should look like:

1. Specifies the expected achievement of TB treatment coverage and success rate in Year 1, Year 2, and Year 3 for each target population and geographical area,
2. Explain in detail how the target populations will be reached and how each intervention will be strategically implemented to achieve the expected outcomes in each target population and geographic area,
3. Provides a method to ensure that the progress in each target population and geographical area is monitored and evaluated on an annual basis,
4. Establishes a mechanism to provide technical support to the areas that have not achieved the expected outcomes, including sharing good practices from the regions that have achieved them
5. Outlines what technical assistance will be needed to achieve expected outcomes.
6. Guide roll out of MAF-TB and inclusion of enablers to achieve the set targets.
7. Give clear guidance to the CSO providing integrated community TB services.
8. Disseminate the operational with the Ministry's Senior Management as part of advocacy.

With the support of NTP and a stakeholder working group, a consultant reviewed the existing documents and developed the Tuberculosis operation plan. The plan has been aligned with objectives 2 & 3 of the TB national strategic plan 2023-2028 and the national TB monitoring and evaluation plan to monitor and evaluate the implementation and impact of these strategic plans. This plan extracts objectives 2 &3 of the TB NSP plan. It describes how stakeholders will implement the proposed interventions of the funding request/grant and lead to the expected outcomes of 66% in TB treatment coverage (70% for MDR/RR-TB) and b) 90% in TB treatment success rate (90% for MDR/RR-TB) in 2028.

The overall objective of this National TB operational plan is to guide the country's efforts in achieving the following ambitious outcomes by 2028:

Specific Objectives

III. **Increase TB treatment coverage**: Screen and diagnose TB among key populations to raise TB treatment coverage from 45% in 2024 to 66% by the end of 2028 for drug-susceptible TB cases, through enhanced diagnostic services and targeted community outreach programs.

IV. **Improve TB treatment success**: Initiate all diagnosed TB patients on treatment and improve treatment success rates from 76% in 2023 to 90% by the end of 2028 for all TB patients, by strengthening patient follow-up, adherence support, and ensuring a consistent supply of medications.

The interventions will take place in the community and health facility and will be coordinated by the districts DHMT and the National level. it is imperative to describe the structures of these two entities.

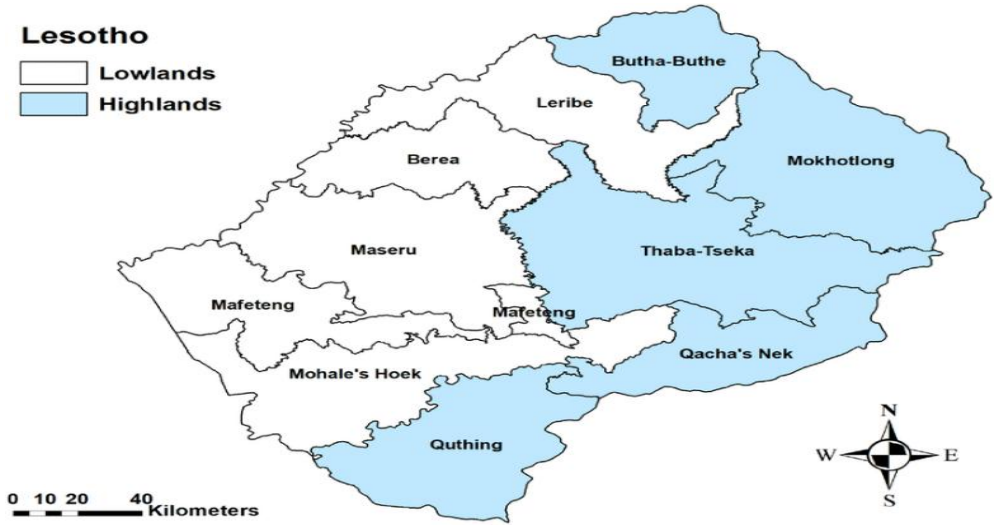
National TB/Leprosy program

The National TB /Leprosy Program is a programme within the Disease Control Unit of Ministry of Health. It is led by the National TB Program manager with a Deputy program manager in charge of TB/HIV and the CDS Manager. The NTLP has other staff that are supported by partners including community TB officer, 3 monitoring and evaluation officers, and a child hood TB officer. A new officer has been seconded to the TB program by USAID to support Global Fund operations.

Districts

The country is divided into 10 administrative districts with the DHMT which coordinates TB/HIV activities within the district. There are 5 highland and 5 lowland districts. Figure 1, the map of Lesotho shows highlands in blue while the low lands are in white. The total population of the country is about 2,3 million people. The populations are high in low lands and therefore more likely to have more people with TB that have not been diagnosed. The highlands have low populations and hard to reach areas and needs to be given special attention. There are about 6,000 village health workers (VHWs).

Figure1: Map of Lesotho and the 10 administrative districts



The health care system in Lesotho

Lesotho health system is structured into three levels: primary healthcare clinics or health centers. general hospitals, and specialized hospitals. There are health posts which are structures which healthcare workers from health centers utilize for outreach and community level Village Healthcare Workers (VHW).

Ownership of health facilities

- 42%; (115/274) - owned by government,
- 29% (79/274) - owned by the Christian Health Association of Lesotho (CHAL)
- 1% (4/274) - owned by the Lesotho Red Cross
- 28% (74/274) - owned by the private sector.

Primary health care (PHC) is provided by resident nurses or nurse practitioners working in the 261 health centers and clinics, each of them serving 6000-10 000 population. The general hospitals at district level serve as referral centers for patients from the health centers as well as centers for coordination and supervision. Note that the health centers are also supported by more than 6000 village health workers (VHWs).

Developing and Implementing Partners: There are several partners that support the Ministry of health to implement TB HIV activities these include Global Fund, USAID/CDC also funding implementing partners like EGPAF, Baylor College of Pediatric Medicine, JPHIEGO, Partners in Health and CSOs like LENEPWA.

Although several activities have been initiated by the NTLP and TB stakeholders, they are not implemented at scale and with fidelity. There is need for the team to deliberately and systematically introduce layers of evidence-based interventions to achieve the set targets of 66% treatment coverage and 90% treatment success rate.

2. Tuberculosis Treatment Coverage

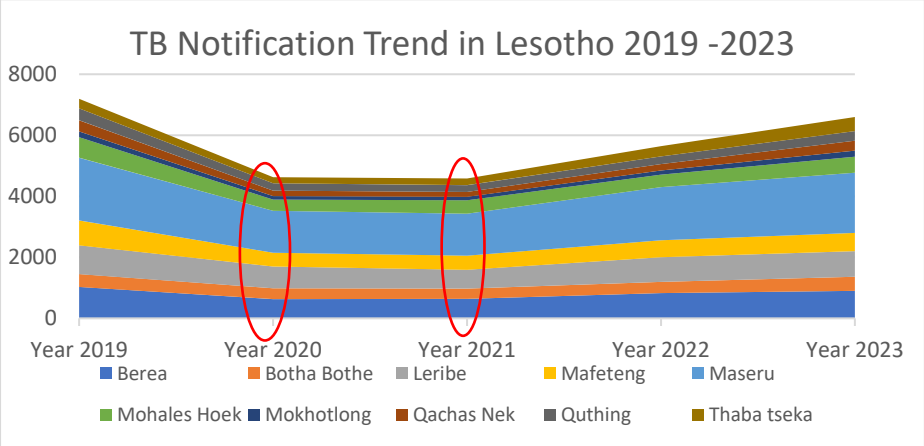
According to the WHO global TB report (2023), Lesotho is among the 30 high-burden countries for tuberculosis and the 30 high-burden countries for TB/HIV in the World. The estimated TB incidence is 661/100,000. The treatment coverage for susceptible TB patients was only 37% in 2023, less than the global target of 90% (WHO, 2023). Drug resistance is still high, with a low treatment coverage rate of only 22%, according to the WHO global TB report of 2023. The TB treatment coverage was greatly affected during the COVID-19 pandemic, dropping from 7,195 in 2019 to 6,601 in 2023.

Definitions:

- **TB Case Notification:** Number of new and relapse TB cases notified in a given year, per 100 000 population. The term "notification" means that TB is diagnosed in a patient and is reported within the national surveillance system, and then on to WHO
- **Tuberculosis case detection rate (all forms**) is the number of new and relapse tuberculosis cases notified to WHO in a given year, divided by WHO's estimate of the number of incident tuberculosis cases for the same year, expressed as a percentage.
- **TB Treatment Coverage:** Number of new and relapse cases that were notified and treated, divided by the estimated number of incident TB cases in the same year, expressed as a percentage.

COVID-19 Effects on TB Case Notification: The TB care services were affected during the COVID-19 epidemic with a reduction in TB cases notified. Lesotho is still recovering from the COVID-19 effects. The current national case notification levels at 6,601 in 2023 are not yet back to the 7,195 people with TB that were notified in 2019 before COVID-19. However, there is consistent recovery at the national level, as shown in Figure 2, with a deficit of only 594 people with TB by the end of 2023. The program expects that with intensified TB case-finding efforts, full recovery might be achieved by the end of 2024

Figure 2: TB case notification in Lesotho 2019 - 2023



A further review of the data by district shows that three districts fully recovered beyond the 2019 levels by the end of 2023. The three districts are Butha Buthe, Mokhotlong, and Thaba Tseka. Butha Buthe, with 421 people detected with TB in 2019 to 465 people detected with TB in 2023, Mokhotlong with 187 people detected with TB in 2019 to 199 people detected with TB in 2023, and Thaba Tseka, with 313 people with TB in 2019 to 462 people detected with TB in 2023. These are highland districts with hard-to-reach populations yet with complete recovery. The recovery has been slow in other districts, mainly the lowland districts (Maseru, Beria, Mefeteng, Leribe, Mohales Hoek) and some highland districts (Qacha's Neck & Quthing). However, it is expected to continue, and full recovery is expected by the end of 2024. See Figure 3.

Figure 3: TB case notification by district 2019-2023

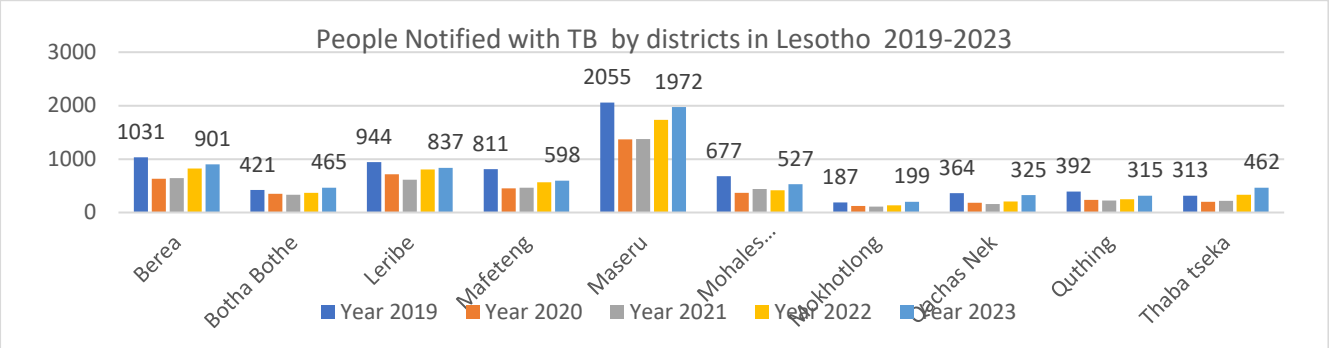
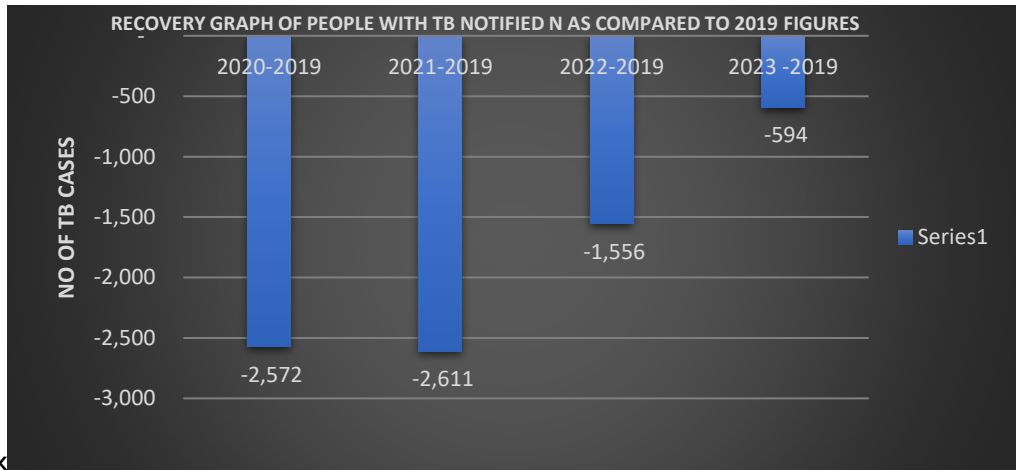


Figure 4 shows the recovery at the national level by year. By the end of 2023, only 594 people were missing to reach the 2019 notification levels. Following community campaigns that were conducted between Jan – May 2024, an additional 928 missing people with TB were found. Full recovery is expected by the end of 2024. The country conducted intensified TB case-finding efforts targeting hot spots to ensure continued recovery. Suppose this plan is implemented with a focus on all the targeted populations and the involvement of stakeholders. In that case, it is expected to drive case notification beyond 2019 and achieve full recovery in 2025.

Figure 4: TB Notification recovery by year 2020-2023



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<u>Interventions to Improve TB Treatment Coverage Rate in Lesotho 2024 - 2028.</u>

The country will have to make firm choices to increase TB case notification quickly despite limited resources. A Gantt chart is attached indicating the schedule of implementation of each activity, responsible persons.

The following interventions should receive greater attention for implementation so that the country can move toward realizing the target of 66% treatment coverage by the end of 2028.

1. **Targeted Stewardship and Oversight**
    1. **Secure adequate funding**: Ensure sufficient financial resources from the government, the Global Fund, and TB partners to support the implementation of evidence-based interventions. Funds should be pegged onto TCR and TSR activities to ensure followed up, implementation, monitoring and evaluation.
    1. **Appoint/Nominate a national focal person (NFP)**: Designate a dedicated focal person at the national level who will be responsible for the overall planning, implementation and monitoring case detection rates and treatment outcomes to improve accountability for results. These could be two separate people one in charge of TCR and another in charge of

TSR. The NFP should be assigned targets for TCR and TSR to follow at national level and district levels in coordination with DHMTs and health facilities.

2. **Strengthen the joint TB/HIV working group**: There is already an existing TB/HIV working group that holds quarterly meetings to discuss various aspects of TB initiatives, ensuring a coordinated approach to addressing the challenges. The members of this working group include a diverse range of technical professionals from the National Tuberculosis Program (NTP) and various departments within the Ministry of Health (MOH). Their expertise is complemented by representatives from key implementing partners such as USAID, the Centers for Disease Control and Prevention (CDC), and the Program Management Unit (PMU). This multidisciplinary composition allows for a comprehensive exchange of ideas and best practices, fostering collaboration among all stakeholders involved in tuberculosis control. The NFP should strengthen the working group by ensuring community activities are part of the discussions, the team meets on a weekly basis and has a strict agenda with action points that are followed up.
3. **Leverage data for performance tracking:** The NFP should work with M&E and technical teams to produce and review heat maps, dashboards, and GIS maps for hot spots quarterly to track performance across the TB care continuum and facilitate planning and performance reviews. Identify high-population districts where intensive Systematic TB case finding could be done to reach 80% of the target in communities and at health facilities. Table 2 shows the districts in Lesotho and their respective populations. Lowlands have a population of more than 150,000 in Mohales Hoek to 586,695 in Maseru. Highlands have a population of about 78,089 in Quach's Nek to 123,956 in Butha–Buthe.

Table 2: Districts TB related statistics

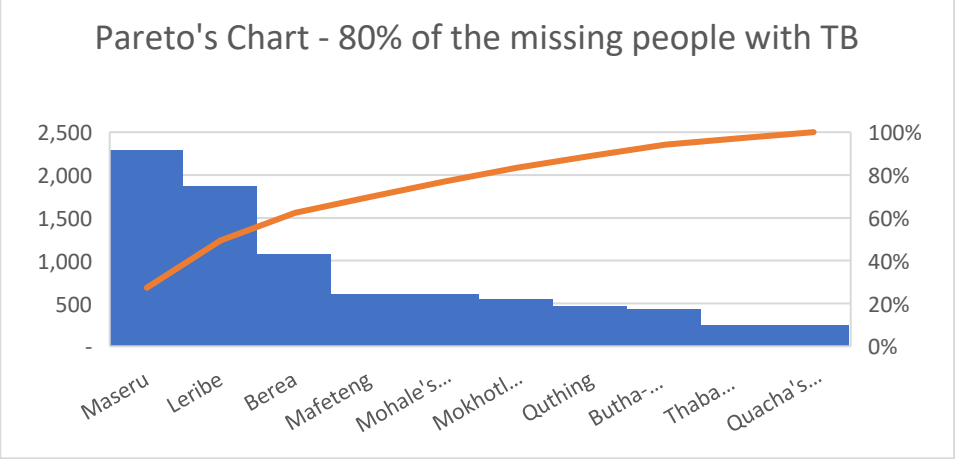
District	Terrain	2023 Total Population	Estimated Incident TB cases by district*	TB patients Detected in 2023 (n)	TB patients Detected in 2023 (%)	People missed with TB	People missed with TB (%)
Maseru	Lowland	586,695	4,264	1,972	46%	2,292	54%
Leribe	Lowland	372,325	2,706	837	31%	1,869	69%
Berea	Lowland	271,715	1,975	901	46%	1,074	54%
Mafeteng	Lowland	166,620	1,211	598	49%	613	51%
Mohale's Hoek	Lowland	156,394	1,137	527	46%	610	54%
Butha-Buthe	highland	123,956	901	465	52%	436	48%
Quthing	highland	108,482	788	315	40%	473	60%
Mokhotlong	highland	102,185	743	199	27%	544	73%
Thaba Tseka	highland	97,421	708	462	65%	246	35%
Quacha's Nek	highland	78,089	568	325	57%	243	43%
Total		2,063,882	15,000	6,601	46%	8,399	56%

Estimated Incident TB cases by district - This is based on the target of 15,000 in the TB NSP 2023-2028 projected from prevalence survey estimates (incidence rates) and tailored to each of the district populations of 2023.*

Using the population in Table 2 and the Pareto chart shown in Figure 5 can be used in identifying the district that is missing 80% of the target and taking the 20% of the highland districts that will give us 80% of the TB case notification. From Table 2, taking high-population, lowland districts of Maseru, Leribe, Berea, Mafeteng, and Mohales Hoek and conducting systematic TB case finding will help contribute to the target of 80% of missing people with TB. These districts should be the first to benefit from community screening, and the team should use hot spot mapping to decide the

hotspots in each of the districts where to focus. The team will expand efforts to the other districts, contingent upon securing sufficient funding. This phased approach will enhance community awareness and improve access to services, ultimately reducing TB prevalence in these key areas. This method should be carefully considered to ensure no one is left behind, especially in hard-to-reach districts.

Figure 5: Pareto's chart showing the districts with 80% missing cases.



4. **Conduct weekly review meetings**: Implement weekly review meetings of input and process indicators to promote cross-learning among health facilities through platforms like Echo sessions. The results of screening at health facility and community level should be discussed in these meetings. The results from the engaged CSO will be shared with the NTLP for review and validation based on stipulated timelines.
5. **Enhance quality improvement initiatives**: The NFP will work with the NTLP and QA department to strengthen quality improvement efforts in all health facilities, initiating projects focused on improving case-finding at the facility and community levels.

2. Targeted Detection and Service Expansion for High-Risk Groups:

Target high-risk populations: The NFP should work with the NTLP and DHMTs should continuously identify populations at high risk of TB, such as those with increased exposure, behavioral/biological risk factors, and limited access to healthcare. The district management team, together with health facilities/communities and support of the national level and partners, should review the TB high-risk populations in Table 3 as highlighted in the NSP 2023-2028 and ensure all target populations are included and the numbers are estimated. During the 3-day workshop, the teams quantified the target populations and estimated the numbers at national and district levels. This work is still in its infancy and must be built on by ensuring accurate populations. Illustrative indicators are highlighted in the monitoring and evaluation section. Annex 3 has details of interventions for improving TB screening and diagnosis and treatments success among the key populations.

The country will prioritize TB interventions based on key populations at higher risk of infection. TB screening will utilize the traditional WHO 4-Symptom Screening (4SS), enhanced by digital chest X-rays (CXR) and artificial intelligence (AI) for improved detection. Screening will occur during any healthcare encounter, with specific protocols for inmates, including assessments upon entry, exit, and quarterly check-ups involving sputum collection and CXR/AI.

Targeted initiatives will focus on the key populations listed in table 2 including miners, ex-miners, their households, and surrounding communities, utilizing mapped outreach through local organization but also leveraging on the 2 existing occupational health clinics arranged for them. Additionally, factory workers will be reached through awareness and screening campaigns towards their work places using mobile digital CXR/AI and sputum samples collection. This comprehensive approach aims to enhance TB management and effectively address the needs of high-risk populations.

Table 3: Key population breakdown in Lesotho

Key Populations for TB		Breakdown of Key Populations for TB	Estimated Key Population at National level	Annual Target population for screening for TB 2024-2028
People at the increased risk of developing TB due to behavioural or biological factors	1	PLHIV	244,177	100%
	2	Undernourished	327,556	90%
	3	Diabetes	48,400	90%
	4	Silicosis/Miners/Ex-miners	200,000	90%
	5	Smoking	ND	90%
	6	Alcoholics	ND	90%
	7	Injection drug users	150	90%
People who have increased exposure to TB	1	OPD	1,300,245	100%
	2	IPD (BoS report 2022)	18,336	100%
	3	Children	635,249	90%
	4	TB contacts	19,946	100%
	5	Peri urban communities	ND	90%
	6	Health care professionals	ND	100%
	7	Inmates	2,216	100%
	8	Staff members in Inmates etc	ND	100%
	9	Miners and their households	ND	100%
	10	Ex-miners and their households	ND	100%
	11	Public transport operators and their assistants	ND	100%
People who have limited access to quality services	1	Migrants	9,700	100%
	2	highlanders	510,133	100%
	3	Mental health conditions	ND	90%
	4	Physical disabilities	ND	90%
	5	Older People	ND	90%

The teams will quantify all target populations(baseline)and micro plan using the national TCR and TSR Gannt chart template to reach all of them periodically. They should also conduct systematic TB screening within these communities.

1. **Expand TB case notification efforts**: Broaden case detection efforts to include subclinical TB, using diagnostic algorithms like digital chest X-rays coupled with artificial

intelligence technology and GeneXpert testing to identify cases before they become infectious.

2. **Optimize health facility patient flow**: Refine patient flow at health facilities by implementing dual screening processes with clear outcome indicators to track progress. The teams should continue with systematic screening at the gate in all health facilities, and the health workers should do secondary TB screening within the consultations/clinics, IPD, and other wards to ensure all targeted patients are screened. TB screening is typically conducted at the gate and entry points, but recognizing the limitations of this approach, we propose an emphasis in strengthening the "Double Screening" strategy. This involves conducting TB assessments both at entry points and within consulting rooms and departments visited by patients. In consulting rooms, healthcare providers can engage patients in more detailed discussions about their health, allowing for better symptom disclosure and identification of at-risk individuals. This two-tiered approach increases the likelihood of detecting cases that might otherwise be missed and facilitates timely referrals for further diagnostic testing. By implementing double screening, we aim to improve TB detection rates and enhance patient care, ultimately contributing to more effective control and reduction of TB transmission in the community.
3. **Engage the private sector in TB management**: Involve private clinics in TB screening, diagnosis, and treatment to improve case detection and management across public and private healthcare systems. The NTP will engage 13 TB screeners through the Global Fund to enhance TB detection efforts in high-volume private healthcare facilities as part of the Public-Private Mix (PPM) initiative strengthening. These screeners will receive comprehensive training while also supporting facilities in strengthening their reporting processes. Additionally, a dedicated TB private sector focal person (PS-FP) officer will be engaged and placed at the central level as the focal person to oversee coordination of TB activities across the private facilities.
4. **Highland Districts:** These are hard-to-reach areas, and a plan will need to reach all hard-to-reach area including using choppers and horses. A special intervention should map out similar populations in highland districts to conduct systematic TB screening. The districts should also be zoned into lowlands and highlands.
5. **Conduct contact Investigation** – systematic for a period of 2 years, after every 3 months and ensure treatment is initiated in those who turn positive and provide TPT to the children and close and household contacts of TB patients.

3. **Targeted Operational Efficiency for the Laboratory supplies and medicines**

1. **Strengthening the implementing point-of-care tests for tuberculosis (TB) and decentralizing testing sites (Xpert machines**) in more high-volume healthcare facilities can significantly improve turnaround times for diagnosis and treatment. This approach allows patients to access testing closer to care, reducing transportation barriers and wait times.
2. **Reduce turnaround time for diagnostics**: Improve the tracking and delivery system for health facilities without GeneXpert machines to minimize the turnaround time for test results. There is already a standard operating procedure for improving turn around and close monitoring should be done.
3. **Laboratory and supplies:** Ensure all facilities have adequate supplies for lab testing, cartridges, TB LAM, imaging supplies, maintenance of equipment, including the GeneXpert, and sputum induction.

4. **Sample movement:** The sample movement system should continue but be reviewed to ensure its efficiency in delivering the sputum to the GeneXpert sites in a timely manner.
5. **Laboratory supplies and Medicines:** The team should work with the NTRL and MOH supply chain team to ensure timely quantification, procurement and distribution of Laboratory supplies and medicines to health facilities. The NTRL should consider laboratory supplies and drugs for campaigns in the general procurement process.

Treatment Outcomes/ TB Treatment Success Rate

Background
The treatment success rate for both susceptible TB and DR-TB in Lesotho is still suboptimal and has remained below 82% since 2019 which is below the global target of 90% (WHO, 2023). The treatment success for the new and relapse cases is currently 76 % as per the WHO global report 2023. For PLHIV it is 76% while for DR-TB 74% (WHO, 2023),

Definition of Treatment Success Rate
Is the percentage of notified TB patients who were successfully treated. The target is for drug-susceptible and drug-resistant TB combined, although outcomes should also be reported separately.

Why a suboptimal treatment success rate?
The attributes of low TB treatment success include high death rates, with a range of 11% to 6% from 2019 to 2022. Loss to follow-up with a range of 4 to 8% and not evaluated of less than 2% from 2019 to 2022 translates into 77% of the TSR gap being due to mortality and 23 % being due to loss to follow-up. During our visit to the health facilities, we observed that most deaths in the three districts of Maseru, Berea, and Mafeteng occur in the initial phase. The associated cause of death includes late start on treatment, loss to follow up and restarting treatment, and comorbidities like HIV and cryptococcal meningitis. The health workers further said that the patients live long distances (more than 5 km) from health facilities, yet they may not have the means to transport them to the health facilities. The health workers raised the issue of malnutrition; this leads to patients not taking treatment on empty stomachs. Additional causes of death in DR TB patients include side effects of some medicines, including toxicity and anemia. The health facilities have started conducting death audit reviews, and the teams need to strengthen this activity. Since mortality is responsible for 77% of the TSR gap, an important next step is identifying and addressing the most typical causes of mortality in these patients.

<u>Interventions to Improve TB Treatment Success Rate</u>

1. Reduction of Mortality for Improved TB Treatment Outcomes

Use mortality audit data to identify the root causes of 80% of TB deaths in the last 12 months. Prioritize interventions to address the most typical root causes.

1. **To reduce deaths due to late start of treatment, systematically screening for and treating TB in target Populations, including PLHIV.**

    - **Urine LAM Testing**: Expansion of use of TB LAM and Genexpert simultaneously for people living with HIV (PLHIV) to improve the diagnosis of TB. The country has updated its tuberculosis (TB) guidelines to improve screening and treatment for people living with HIV (PLHIV). Key advancements include the use of the TB-LAM assay, which allows for rapid TB detection through a urine sample. If the TB-LAM test is positive, treatment can be initiated immediately, enhancing patient outcomes. Additionally, the updated guidelines incorporate the Xpert MTB/RIF test, which identifies the type of TB and checks for resistance to rifampicin. This dual diagnostic approach enables tailored treatment strategies, improving management of both drug-sensitive and drug-resistant TB

    - **Timely Treatment Initiation**: Examine patients promptly and initiate treatment as soon as results are available (within 3-4 days or 6-7 days for those distant from facilities with GeneXpert).

- **Frequent TB Screening for PLHIV**: Screen PLHIV with low CD4 counts and poor viral suppression every 14 days compared to the standard 28-day interval to avoid late diagnosis. This recommendation needs to be discussed among the AHD team to ensure the patients are followed up in communities or are asked to come to the health facility.

2. **To reduce deaths due to comorbidities, institutionalize the evaluation of TB patients** for comorbidities such as HIV, diabetes, and cryptococcal meningitis. Once identified, initiate treatment timely. It will be crucial to conduct pre-treatment assessment and baseline investigations at an appropriate time. The AHD package is widely available and implemented across the country, enhancing the HIV response through comprehensive services that include prevention, diagnosis, treatment, and support. This integration allows for coordinated care, improving health outcomes and reducing transmission rates. The HIV program and some of their partners, including NGOs and international agencies, support the AHD program and are actively involved in the TB/HIV Technical Working Group (TWG).
3. **To reduce deaths due to loss to follow-up**, The four regimen first line treatment is still expensive its prudent to strengthen the use of drug-resistant TB (DR-TB) cases to improve treatment success rates.
4. **To reduce deaths due to malnutrition,** introduce options for patients admitted with TB to access food, e.g., through a social services desk or the hospital's provision of food. This intervention should be implemented through the MAF collaboration as well to address the issue among those who do not require hospital admission.
5. **To reduce deaths due to drug side effects**, continue monitoring the patients and implementing pharmacovigilance efforts to report timely the side effects but also take action to substitute the offending medicines.

2. Reduction in Loss to Follow-up for Improved TB Treatment Outcomes.

Although loss to follow-up is responsible for 23% of the gap at the national level, the following are the proposed interventions for populations where it remains a significant problem.

1. **Root Cause Analysis for Loss to Follow-up**: The NTLP M&E team should develop a tool to assess factors contributing to loss to follow-up and implement measures to reduce such cases. The NTLP M&E team should establish a system to predict loss to follow-up in new and existing patients by conducting initial assessments to identify high-risk patients and taking proactive steps to ensure their treatment adherence.
2. **Appointment Tracking**: : The NTLP M&E team should introduce a missed appointment tracking system to monitor and follow up with patients at risk of loss to follow up on their TB treatment. These are patients who have missed any appointments in the last 12 months.
3. **Community Dispensing by Village Health Workers (VHWs)**: To improve treatment adherence and ensure patients living in remote areas have access to periodic medication dispensing through VHWs. This activity is part of the routine community activity and will be monitored through the existing monitoring and evaluation system.
4. **Strengthen DOT to improve TSR**: The country is planning to implement DAT with smart pill boxes as the country have acquired about 700 devices. Encourage Directly Observed Therapy (DOTS) to ensure patients, especially those at risk of being lost to follow-up, adhere to and complete their treatment. This is an intervention that is just beginning.

3. Multisectoral Accountability Framework (MAF)

Background: Ending TB needs the mobilization of several government officials including presidents and prime ministers, members of parliament, mayors, and community administrators – to work with the government, civil society organizations, the private sector, and individual citizens in a long-term effort to diagnose, treat and prevent TB. The WHO has developed guidance to coordinate several stakeholders under the multisectoral Accountability Framework. This intervention requires South-South collaboration on capacity-building in countries and strategic regional initiatives. Many countries, including Lesotho, are adopting this MAF. The Prime Minister's office, which is responsible for coordinating government business, coordinates this with the multi-department agencies.

MAF Interventions

1. The MAF plan should be finalized and launched.
2. The Office of the Prime Minister (OPM) should take the lead, with NAC being the secretariat and the Deputy Minister leading the steering committee.
3. The committee should identify MAF stakeholders and invite them to regular meetings Quarterly/ semiannual meetings (It is essential that the first meetings are frequent and later the frequency is reduced)

4. Civil Society Organizations: Guidance to TB Activity Implementation

Background

During the 2023/2024 community campaigns, the Ministry of Health engaged health professionals hired by the MOH under the Southern Africa TB Health System Strengthening (SATBHHS)project under world Bank that engaged VHWS and clinicians. Through the community intervention, the teams identified an additional 932 TB patients. The MOH and the districts have appreciated this intervention, and it needs to continue. In any given district, the CSO will work with the CBOs, Districts Administrators, VHWs and DHMTs…in order to prepare for sustainability. However, the challenge has been that funds are inadequate to engage the CSOs, CBOs, and village health workers. What seems prudent is to engage the CSOs only to engage HRS, the mobile vans, the clinicians, and VHWs.

Intervention

1. Engage a CSO(s) to manage community activities. The CSO needs to have the following abilities:
    - Recruit, supervise, and manage human resources such as screeners, contact tracers, radiographers, drivers, nurses and doctors, and VHWs for the activity.
    - Deploy and maintain vehicles and equipment for cars, Xray mobile vans, etc
    - Ability to report all the data back to MoH.
    - The CSO should have the capacity to manage funds and no history of fraud.
2. Plan to visit/engage with Namibia and South Africa, which are using CSOs to implement similar campaigns, to learn lessons to adopt during implementation.

5. Technical Assistance (TA) for Lesotho

Technical assistance is a crucial programming component to ensure that the teams impart skills to the health workers and the targets achieved. The technical assistance will arise from the areas that need implementation.

1. Quality Improvement Approach: This operational plan will need focused quality improvement at all levels, so there is need to work with the QA depart and NTLP to institute QA among the health facilities and community activities to improve TB treatment coverage and TB treatment success rate.

2. Multisectoral Action Framework: There is a need to operationalize MAF and therefore technical assistance team needs to work with the team on the ground to ensure adequate implementation.
3. Hot spot mapping and predictive analytics: In order to ensure laser focused activities there is need to conduct hot spot mapping. TA needs to be procured to ensure hotspots are mapped and focused interventions are implemented.
4. M&E System: Procure TA to strengthen the monitoring and evaluation system focusing on the new needs of data collection especially for data on targeted high risk populations..

6. Advocacy to MoH

The MOH leadership and OPM will be crucial in setting the tone and, therefore, need to be on board to ensure all inputs are in place and all processes happen to ensure sustainable outcomes. Meetings at this level need to be highly structured, result-oriented, and with results. The OPM needs to continue engaging all agencies in the MAF meetings. The DG and Ministers continue to be engaged for the MoH to have that high-level support.

Intervention

1. Institutionalize systematic TB screening among target populations.
2. Operationalize the MAF by ensuring a steering committee is in place, regularly deliberates on TB issues, and ensures stakeholders streamline TB activities in their work.
3. The MAF team should mobilize additional funding from the private sector to support TB interventions in the country. Funds mobilized may be in cash or in kind e.g., Telecommunications supporting TB communication through messages to the general population, Schools supporting screening for TB among the students and Factories supporting routine screening of TB among their workers. Such TB activities could become routine in the different agencies.
4. Track UNHLM targets and advise the stakeholders and the country.

7. Monitoring and Evaluation

The country has developed an M&E framework with clear indicators. Harmonizing these indicators with this plan may be necessary. Selected input, process, and outcome indicators will be monitored weekly, monthly, quarterly, and annually. The table below shows the proposed achievement of indicators by year.

TB treatment coverage targets		
Year 1	2023	37%
Year 2	2024	45%
Year 3	2025	54%
Year 4	2026	75%
Year 5	2027	85%
	2028	66%
TB treatment success rates targets		
Year 1	2023	77%
Year 2	2024	80%
Year 3	2025	83%

Year 4	2026	85%
Year 5	2027	90%

Below are the illustrative indicators for the key populations.

Illustrative Indicators for Key Population

These indicators will need to be tailored to the existing M&E data collection tools and data bases. A revision may be needed in the existing M&E system to ensure these indicators can be are captured.

1. People Living with HIV (PLHIV):

- TB Case Detection:
  - Indicator: Proportion of PLHIV screened for TB.
  - Numerator: Number of PLHIV screened for TB.
  - Denominator: Total number of PLHIV attending healthcare facilities.
- TB Treatment Success:
  - Indicator: Percentage of PLHIV with TB who successfully complete TB treatment.
  - Numerator: Number of PLHIV with TB who successfully complete treatment.
  - Denominator: Total number of PLHIV diagnosed with TB.

2. Undernourished Individuals:

- TB Case Detection:
  - Indicator: Proportion of undernourished individuals screened for TB.
  - Numerator: Number of undernourished individuals screened for TB.
  - Denominator: Total number of undernourished individuals receiving healthcare or nutrition services.
- TB Treatment Success:
  - Indicator: Percentage of undernourished TB patients who successfully complete treatment.
  - Numerator: Number of undernourished TB patients who successfully complete treatment.
  - Denominator: Total number of undernourished individuals diagnosed with TB.

3. Diabetes Patients:

- TB Case Detection:
  - Indicator: Proportion of diabetes patients screened for TB.
  - Numerator: Number of diabetic patients screened for TB.
  - Denominator: Total number of diabetic patients attending healthcare facilities.
- TB Treatment Success:
  - Indicator: Percentage of diabetic TB patients who successfully complete treatment.
  - Numerator: Number of diabetic TB patients who successfully complete treatment.
  - Denominator: Total number of diabetic patients diagnosed with TB.

4. Miners:

- TB Case Detection:
  - Indicator: Proportion of miners screened for TB.
  - Numerator: Number of miners screened for TB.
  - Denominator: Total number of miners working in the mining sector.
- TB Treatment Success:

    - Indicator: Percentage of miners who successfully complete TB treatment.
    - Numerator: Number of miners who successfully complete treatment.
    - Denominator: Total number of miners diagnosed with TB.

5. Inmates:

- TB Case Detection:
    - Indicator: Proportion of inmates screened for TB.
    - Numerator: Number of Inmates screened for TB.
    - Denominator: Total number of Inmates in the correctional system.
- TB Treatment Success:
    - Indicator: Percentage of Inmates with TB who successfully complete treatment.
    - Numerator: Number of Inmates who successfully complete TB treatment.
    - Denominator: Total number of Inmates diagnosed with TB.

6. People Who Use Drugs (PWUD):

- TB Case Detection:
    - Indicator: Proportion of PWUD screened for TB.
    - Numerator: Number of PWUD screened for TB.
    - Denominator: Total number of PWUD attending rehabilitation or healthcare facilities.
- TB Treatment Success:
    - Indicator: Percentage of PWUD with TB who successfully complete treatment.
    - Numerator: Number of PWUD with TB who successfully complete treatment.
    - Denominator: Total number of PWUD diagnosed with TB.

7. Out-Patient Department (OPD) Attendees:

- TB Case Detection:
    - Indicator: Proportion of OPD attendees screened for TB.
    - Numerator: Number of OPD attendees screened for TB.
    - Denominator: Total number of OPD attendees.
- TB Treatment Success:
    - Indicator: Percentage of OPD patients with TB who successfully complete treatment.
    - Numerator: Number of OPD patients with TB who successfully complete treatment.
    - Denominator: Total number of OPD patients diagnosed with TB.

8. In-Patient Department (IPD) Patients:

- TB Case Detection:
    - Indicator: Proportion of IPD patients screened for TB.
    - Numerator: Number of IPD patients screened for TB.
    - Denominator: Total number of IPD patients admitted to hospitals.
- TB Treatment Success:
    - Indicator: Percentage of IPD patients with TB who successfully complete treatment.
    - Numerator: Number of IPD patients with TB who successfully complete treatment.
    - Denominator: Total number of IPD patients diagnosed with TB.

9. Children:

- TB Case Detection:

    - Indicator: Proportion of children under 5 years old screened for TB following contact tracing.
    - Numerator: Number of children under 5 screened for TB.
    - Denominator: Total number of children under 5 who are close contacts of TB cases.
- TB Treatment Success:
    - Indicator: Percentage of children with TB who successfully complete treatment.
    - Numerator: Number of children who successfully complete TB treatment.
    - Denominator: Total number of children diagnosed with TB.

10. TB Contacts:

- TB Case Detection:
    - Indicator: Proportion of household contacts screened for TB.
    - Numerator: Number of household contacts of TB cases screened for TB.
    - Denominator: Total number of household contacts identified.
- TB Treatment Success:
    - Indicator: Percentage of TB contacts who successfully complete treatment.
    - Numerator: Number of TB contacts who successfully complete treatment.
    - Denominator: Total number of TB contacts diagnosed with TB.

11. Peri-Urban Communities:

- TB Case Detection:
    - Indicator: Proportion of individuals in peri-urban communities screened for TB.
    - Numerator: Number of individuals screened for TB in peri-urban areas.
    - Denominator: Total number of individuals living in peri-urban communities.
- TB Treatment Success:
    - Indicator: Percentage of peri-urban TB patients who successfully complete treatment.
    - Numerator: Number of peri-urban TB patients who successfully complete treatment.
    - Denominator: Total number of peri-urban TB patients diagnosed with TB.

12. Health Workers:

- TB Case Detection:
    - Indicator: Proportion of health workers screened for TB.
    - Numerator: Number of health workers screened for TB.
    - Denominator: Total number of health workers at risk of TB exposure.
- TB Treatment Success:
    - Indicator: Percentage of health workers with TB who successfully complete treatment.
    - Numerator: Number of health workers with TB who successfully complete treatment.
    - Denominator: Total number of health workers diagnosed with TB.

13. Public Transport Operators and Assistants:

- TB Case Detection:
    - Indicator: Proportion of public transport workers screened for TB.
    - Numerator: Number of public transport workers screened for TB.
    - Denominator: Total number of public transport operators and assistants.
- TB Treatment Success:

    - Indicator: Percentage of public transport workers with TB who successfully complete treatment.
    - Numerator: Number of public transport workers with TB who successfully complete treatment.
    - Denominator: Total number of public transport workers diagnosed with TB.

14. Migrants:

- TB Case Detection:
    - Indicator: Proportion of migrants screened for TB.
    - Numerator: Number of migrants screened for TB.
    - Denominator: Total number of migrants attending health services.
- TB Treatment Success:
    - Indicator: Percentage of migrants with TB who successfully complete treatment.
    - Numerator: Number of migrants with TB who successfully complete treatment.
    - Denominator: Total number of migrants diagnosed with TB.

15. Highlanders:

- TB Case Detection:
    - Indicator: Proportion of highland residents screened for TB.
    - Numerator: Number of highland residents screened for TB through outreach services.
    - Denominator: Total number of individuals residing in highland regions.
- TB Treatment Success:
    - Indicator: Percentage of highland TB patients who successfully complete treatment.
    - Numerator: Number of highland TB patients who successfully complete treatment.
    - Denominator: Total number of highland residents diagnosed with TB.

16. Individuals with Mental Health Conditions:

- TB Case Detection:
    - Indicator: Proportion of individuals with mental health conditions screened for TB.
    - Numerator: Number of individuals with mental health conditions screened for TB.
    - Denominator: Total number of individuals receiving mental health care services.
- TB Treatment Success:
    - Indicator: Percentage of individuals with mental health conditions who successfully complete TB treatment.
    - Numerator: Number of individuals with mental health conditions who complete TB treatment.
    - Denominator: Total number of individuals with mental health conditions diagnosed with TB.

17. Physically Disabled Individuals:

- TB Case Detection:
    - Indicator: Proportion of physically disabled individuals screened for TB.
    - Numerator: Number of physically disabled individuals screened for TB.
    - Denominator: Total number of physically disabled individuals receiving healthcare.
- TB Treatment Success:
    - Indicator: Percentage of physically disabled individuals with TB who successfully complete treatment.
    - Numerator: Number of physically disabled TB patients who successfully complete treatment.

- Denominator: Total number of physically disabled individuals diagnosed with TB.

18. Older People:

- TB Case Detection:
  - Indicator: Proportion of elderly individuals screened for TB.
  - Numerator: Number of elderly individuals screened for TB.
  - Denominator: Total number of elderly individuals attending healthcare services.
- TB Treatment Success:
  - Indicator: Percentage of elderly TB patients who successfully complete treatment.
  - Numerator: Number of elderly TB patients who successfully complete treatment.
  - Denominator: Total number of elderly individuals diagnosed with TB.

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9. Annexes:

Annex: 1: Lesotho TB Profile – Global TB report 2024

Tuberculosis profile: Lesotho

Population 2022: 2.3 million

Estimates of TB burden*, 2022

	Number	(Rate per 100 000 population)
Total TB incidence	15 000 (8 900-23 000)	661 (386-995)
HIV-positive TB incidence	9 200 (4 700-15 000)	397 (205-651)
MDR/RR-TB incidence**	600 (310-880)	26 (13-38)
HIV-negative TB mortality	1 400 (870-2 000)	60 (38-88)
HIV-positive TB mortality	2 400 (1 400-3 700)	105 (60-162)

Estimated proportion of TB cases with MDR/RR-TB*, 2022

New cases	3.5% (3.1-3.9)
Previously treated cases	6.2% (5-7.7)

Universal health coverage and social protection*

TB treatment coverage (notified/estimated incidence), 2022	37% (24-63)
TB patients facing catastrophic total costs, 2019	19% (15-25)
TB case fatality ratio (estimated mortality/estimated incidence), 2022	26% (13-42)

TB case notifications, 2022

Total new and relapse	5 599
- % tested with rapid diagnostics at time of diagnosis	91%
- % with known HIV status	96%
- % pulmonary	92%
- % bacteriologically confirmed ^	66%
- % children aged 0-14 years	6%
- % women (aged ≥15 years)	31%
- % men (aged ≥15 years)	63%
Total cases notified	5 670

TB/HIV care in new and relapse TB patients, 2022

	Number	(%)
Patients with known HIV status who are HIV-positive	3 017	56%
- on antiretroviral therapy	2 872	95%

Drug-resistant TB care**, 2022

% of bacteriologically confirmed TB cases tested for rifampicin resistance - New cases ^	92%
% of bacteriologically confirmed TB cases tested for rifampicin resistance - Previously treated cases ^	85%
Laboratory-confirmed cases - MDR/RR-TB (without pre-XDR-TB/XDR-TB) ^^	107
Patients started on treatment - MDR/RR-TB (without pre-XDR-TB/XDR-TB) ^^^	134
Laboratory-confirmed cases - pre-XDR-TB or XDR-TB ^^	3
Patients started on treatment - pre-XDR-TB or XDR-TB ^^^	3
MDR/RR-TB cases tested for resistance to any fluoroquinolone	102

Treatment success rate and cohort size

	Success	Cohort
New and relapse cases registered in 2021	77%	4 508
Previously treated cases, excluding relapse, registered in 2021	69%	67
HIV-positive TB cases registered in 2021	76%	2 496
MDR/RR-TB cases started on second-line treatment in 2020	74%	111
Pre-XDR-TB/XDR-TB cases started on second-line treatment in 2020	0%	2

TB preventive treatment, 2022

% of HIV-positive people (newly enrolled in care) on preventive treatment	66%
% of household contacts of bacteriologically-confirmed TB cases on preventive treatment	27% (26-28)

Funding for TB

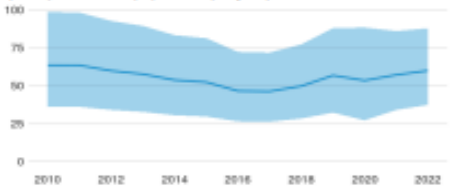
Funding for TB, 2022 (US$ millions)	3
- % domestic funding	63%
- % international funding	37%
National TB budget, 2023 (US$ millions)	13
- Funding source, domestic	35%
- Funding source, international	15%
- Unfunded	51%

Incidence, New and relapse TB cases notified, HIV-positive TB incidence

(Rate per 100 000 population per year)

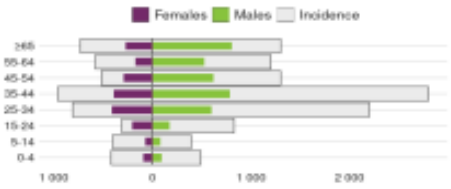
HIV-negative TB mortality

(Rate per 100 000 population per year)



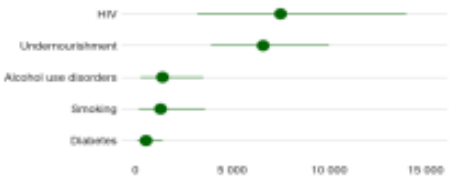
Incidence, Notified cases by age group and sex, 2022

(Number)



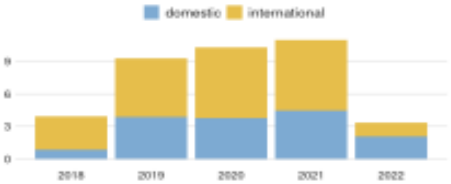
Cases attributable to five risk factors, 2022

(Number)



Funding for TB

(US$ millions)



Annex 2: Key High risk and vulnerable populations and interventions

People who have increased exposure to TB due to where they live or work	Prisoners, miners, hospital visitors, health care workers and community health workers. People who: • live in urban slums • live in poorly ventilated or dusty conditions • are in contact with TB patients, especially children • work in overcrowded environments • work in hospitals or health care settings
People who have limited access to quality TB services	Migrant workers, women in settings with gender disparity, children, migrants, refugees or internally displaced people, and illegal miners. People who: • are from tribal populations or indigenous groups • are homeless • live in hard-to-reach areas • live in homes for the elderly • have mental or physical disabilities • face legal barriers to access care
People at increased risk of TB because of biological or behavioral factors that compromise immune function	People who: • live with HIV • have diabetes or silicosis • undergo immunosuppressive therapy • are undernourished • use tobacco • suffer from alcohol-use disorder • inject drugs

Source: Stop TB Partnership [16]

Annex3: Interventions by high-risk populations

1. **Miners:** Miners, particularly in Lesotho and the Southern African Development Community (SADC) region, are highly vulnerable to tuberculosis (TB) due to their working conditions. Mining, both industrial and artisanal, involves prolonged exposure to silica dust, which can lead to silicosis—a condition that increases the risk of developing TB by 30 times. In South Africa, for example, TB incidence among miners has been recorded at 2,500–3,000 cases per 100,000 individuals, far exceeding general population rates. According to the World Bank report he TB incidence rate among miners and ex-miners in Lesotho remains extraordinarily high, with estimates indicating it is approximately 2,500 to 3,000 cases per 100,000 people. This rate is about 10 times higher than the World Health Organization's emergency threshold, largely due to factors such as prolonged exposure to silica dust, poor ventilation in mines, and limited access to consistent healthcare upon returning to Lesotho from mining jobs in South Africa

a) **Why Miners**

- The dusty environments and crowded living quarters of miners make them more susceptible to respiratory diseases, including TB.
- Many miners migrate for work, complicating access to consistent healthcare and adherence to TB treatment.

- In mining areas, the overlap between TB and HIV is significant, as both conditions are prevalent and mutually reinforcing. This is also a factor for health integration.
- Due to the nature of their work, miners may avoid seeking medical care out of fear of losing income or their jobs. The lack of healthcare infrastructure in mining communities further isolates them from timely diagnosis and treatment.

b) How to support them in;

TB Case Detection	TB Treatment Success
- Peer educators can gain the trust of miners, especially in informal artisanal mining sectors where workers may be hesitant to seek formal medical care. - Raise awareness through on-site health talks and the distribution of educational materials on TB symptoms and the importance of screening. - Deploy mobile diagnostic units equipped with GeneXpert machines directly to mining sites. This allows for rapid, on-the-spot TB testing, reducing the need for miners to travel long distances for diagnosis. - Beyond miners, peri-mining communities where families of miners and sex workers often live should also be screened. Women and children in these communities are also at high risk for TB due to poor living conditions and limited healthcare access.	- Upon diagnosis, miners should be linked to treatment immediately. Use mobile health platforms to send reminders and updates about treatment progress, ensuring that those diagnosed stay on track with their medications. - Utilize CHWs and peer educators to follow up with miners during treatment, providing adherence support and checking on side effects. They can visit miners' homes or work sites to ensure regular medication intake. - Utilizing DSM models to support treatment adherence plans but also direct engagement of TB patients in self support programs.

2. People Living with HIV (PLHIV):

These are highly susceptible to tuberculosis (TB) due to their weakened immune systems. In Lesotho, where both HIV and TB are prevalent, co-infection rates are significant. Approximately 9% of global TB cases are attributed to PLHIV, and in Lesotho, co-infection rates are even higher.

- PLHIV are at much higher risk of contracting tuberculosis (TB) due to their compromised immune systems.
- High TB-HIV Co-infection Rates in countries like Lesotho, where both HIV and TB are widespread, a significant proportion of TB patients are also living with HIV.

- TB is often more difficult to diagnose in PLHIV, as the usual symptoms may be masked or confused with other infections. This can lead to delayed diagnosis, during which time the disease can progress or be transmitted to otherss
-

Intervention

TB Case Detection	TB Treatment Success
- Integrate TB screening into routine HIV care services to ensure that PLHIV are regularly tested for TB. - Provide access to GeneXpert machines, which allow for quick and accurate TB diagnosis, at facilities serving PLHIV. - Deploy mobile screening units and community health workers to conduct TB testing in areas with high HIV prevalence, ensuring that even those who do not visit clinics are reached.	- Offer integrated TB and HIV treatment services to ensure that PLHIV can access both treatments in one location, reducing barriers to care. - Use peer educators and community health workers to provide continuous support to PLHIV undergoing TB treatment, ensuring adherence through regular check-ins, treatment reminders, and counseling - .

3. <u>Undernourished individuals;</u>

These can be located especially in resource-limited settings like Lesotho, are highly vulnerable to tuberculosis (TB). It is estimated that 327,556 individuals are malnourished at country level making it a key population.

Undernutrition is a key risk factor for TB infection. Malnourished individuals are not only more susceptible to contracting TB but are also more likely to progress from latent TB infection to active TB disease. The weakened immune response due to a lack of essential nutrients such as proteins, vitamins, and minerals makes them highly vulnerable.

Intervention

TB Case Detection	TB Treatment Success

- Targeted Screening in High-Risk Areas. Focus on areas with high rates of malnutrition, such as rural and impoverished regions, for TB screening. - Incorporate nutritional assessments into TB screening programs, especially in areas with high undernutrition rates. - Partner with organizations providing food aid or nutritional support to ensure TB screening is included in their services, thus reaching undernourished individuals.	- Provide supplemental feeding programs to individuals undergoing TB treatment. This will help improve their nutritional status and overall health, increasing their chances of successfully completing TB treatment. - Implement integrated TB and malnutrition care services. Ensure that TB patients receive both medical treatment and nutritional rehabilitation, which will help speed up recovery and reduce treatment failures. - Utilize CHWs to regularly monitor the health of undernourished TB patients, ensuring that they adhere to both their TB medication and nutritional plans. Home visits by CHWs can help provide follow-up care and deliver food supplements to those unable to access healthcare facilities.

4. <u>Smoking Community:</u>

Smoking damages the lungs and weakens the immune system, making individuals more vulnerable to infections, including tuberculosis (TB). Smoking is known to increase the risk of developing TB by 2-3 times, and it also worsens the progression of TB among those already infected.

Due to the damage caused to their respiratory system, smoking reduces lung function leading to a higher likelihood of respiratory infections, including TB.

Intervention

TB Case Detection	TB Treatment Success
- Identify smokers as a high-risk group for TB during routine health check-ups, especially in areas with high TB prevalence. Smoking history should be part of TB screening protocols, with smokers receiving priority for TB testing. - Integrate smoking cessation programs into TB screening campaigns to reduce TB risk in smokers. Provide education on the link between smoking and TB,	- Smokers undergoing TB treatment should receive counseling, nicotine replacement therapy, and ongoing support to quit smoking, as this will enhance their lung health and improve TB treatment outcomes. - Closely monitor TB patients who smoke for treatment

encouraging smokers to quit as part of their overall health improvement.	adherence and lung health. - Engage former smokers and community health workers to support current smokers in both TB treatment adherence and smoking cessation.

5. Alcoholics:

They often live in marginalized conditions, sometimes experiencing homelessness or residing in poor ventilated environments, which increases their risk for TB exposure. Additionally, the behavioral effects of alcoholism, such as neglecting healthcare, further compound this risk.

Alcohol use disorders often have limited access to healthcare services due to stigma, discrimination, or legal and financial barriers. The impact of alcohol on physical health, including weakened immunity and poor nutrition, raises the risk of TB infection, and the social isolation that accompanies alcoholism can delay diagnosis. Additionally, alcohol consumption may interfere with the consistent intake of TB medications, complicating treatment adherence.

Intervention

TB Case Detection	TB Treatment Success
- Utilizing peers from recovery communities may foster trust and increase participation in screening programs. - TB screening should be integrated into rehabilitation programs and services where alcoholics already seek help. This includes shelters, addiction centers, and places they frequent. Health workers should be sensitized to avoid stigmatizing behavior when treating alcoholics with TB. - Alcoholics often need a holistic approach to address their alcohol use disorder along with TB treatment. Providing integrated care services, including counseling and social support for alcohol dependence, alongside directly observed treatment (DOT) for TB can improve treatment outcomes. - Incentives such as food packages or	- Use DOT to ensure medication adherence, which is crucial for TB treatment success. This approach involves healthcare workers directly observing patients taking their medication. - Provide additional support such as case management, peer support groups, and social services to help alcoholics manage their TB treatment alongside their addiction treatment. - Advocate for policies that support integrated care models and address the needs of alcoholics in TB prevention and treatment programs.

financial motivation, as well as regular counseling sessions, can promote adherence to the full course of TB medication.	

6. Drug Injection Users:

This practice puts them at a significantly increased risk of contracting various infectious diseases, including tuberculosis (TB).

IDUs are at higher risk of contracting TB due to the higher likelihood of exposure to environments where TB is prevalent, such as shared housing or unsanitary conditions. The use of injection drugs, especially when mixed with other substances, can weaken the immune system, making IDUs more susceptible to TB

Intervention

TB Case Detection	TB Treatment Success
- Implement targeted TB screening programs within harm reduction centers, needle exchange programs, and drug rehabilitation facilities. - Engage with communities and organizations that work with IDUs to facilitate screening and education about TB. - Ensure that TB screening and diagnostic services are confidential to encourage IDUs to seek help without fear of stigma or legal repercussions. -	- Implement DOT to ensure IDUs adhere to their TB treatment regimen. This involves healthcare workers observing patients as they take their medication to improve compliance. - Offer flexible treatment schedules and locations to accommodate the needs and circumstances of IDUs. - Train healthcare providers on the specific needs of IDUs, including how to engage with this population effectively and empathetically.

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7. OPD/IPD:

OPDs/IPD provide a range of services, including diagnostics, treatment, and follow-up care.OPDs play a crucial role in the healthcare system, offering accessible care for patients with various health issues, including tuberculosis (TB). At National level, Lesotho has reported 1,300,245 OPD patients and 18,336 IPD patients.

High patient volumes backed up with a more accessible entry point for patients who may not have access to specialized TB clinics or inpatient services. OPDs are well-positioned to provide ongoing monitoring and follow-up care for TB patients, ensuring they receive necessary treatment and support.

Intervention

TB Case Detection	TB Treatment Success

- Implement routine TB screening protocols for all patients presenting with respiratory symptoms or at risk factors in OPDs/IPD. - Provide training for OPD staff on TB symptoms, risk factors, and effective screening techniques. Equip them with necessary tools for TB diagnostic tests. - Establish clear referral pathways for suspected TB cases from OPDs to specialized TB clinics or diagnostic centers for further evaluation and confirmation. - Ensure coordination between OPDs and TB treatment centers to facilitate timely and accurate diagnosis.	- Implement DOT in OPD settings where feasible, ensuring that TB patients receive their medication under observation to enhance adherence. - Provide training and resources for OPD/IPD staff to manage TB medication effectively, including monitoring for side effects and interactions. - Assign case managers or designated staff members to support TB patients throughout their treatment journey, addressing any barriers to adherence. - Foster collaboration between OPDs and other departments or healthcare services involved in TB care to ensure a cohesive approach.

8. <u>Children:</u>

National Lesotho report reflected 635,249 cases and this adds on the challenges include diagnosing TB in children, as symptoms can be non-specific and similar to those of other common childhood illnesses. Additionally, children may have difficulty adhering to treatment regimens.

Children's immune systems are still developing, making them more susceptible to infections, including TB. The disease can also have severe consequences for children, including higher risks of severe forms of TB, such as disseminated TB or TB meningitis, and potential long-term impacts on growth and development.

Intervention

TB Case Detection	TB Treatment Success

- TB screening for children who are contacts of TB patients or present with symptoms suggestive of TB, such as prolonged cough, weight loss, or fever. - Use age-appropriate diagnostic tools and protocols, such as child-friendly sputum collection methods and pediatric-specific diagnostic tests., stool testing for children	- Provide TB medications in child-friendly formulations, such as liquid or dispersible tablets, to improve adherence and palatability. - Ensure regular follow-up visits to monitor the child's response to treatment, manage any side effects, and adjust treatment as needed. - Collaborate with child health services, schools, and community organizations to support TB prevention and treatment efforts for children.

9. Peri Urban Communities:

These areas often experience rapid population growth and development but may lack adequate infrastructure and services.In Lesotho, peri-urban communities are characterized by a mix of residential, commercial, and industrial activities, with varying levels of access to healthcare and other essential services.

They often face challenges related to overcrowding, inadequate housing, and limited healthcare access, which can contribute to the spread of infectious diseases like tuberculosis (TB).Inadequate healthcare infrastructure and services in peri-urban areas can lead to delays in TB diagnosis and treatment, exacerbating the TB burden.High levels of mobility and transient populations in peri-urban areas can complicate TB control efforts and tracking of cases.

Intevention

TB Case Detection	TB Treatment Success
- Collaborate with local community organizations, faith-based groups, and businesses to facilitate TB screening and raise awareness in peri-urban communities. - Strengthen local health clinics and outreach services to provide accessible TB screening and diagnostic services in peri-urban areas.	- Provide flexible treatment options and support to accommodate the needs of patients in peri-urban areas, including extended clinic hours and transportation assistance. - Offer comprehensive care that includes TB treatment, management of comorbidities, and addressing social determinants of health such as nutrition and housing. - Collaborate with local government agencies, NGOs, and community

	organizations to enhance TB control efforts and address broader social and economic factors affecting peri-urban communities.

10. **Health care professionals:** They are essential for implementing TB control strategies but can face challenges such as high patient loads, resource constraints, and occupational health risks.

a) **Why healthcare professionals;** Healthcare professionals are pivotal in the early detection, diagnosis, and treatment of TB. Their expertise directly impacts patient outcomes and the effectiveness of TB control programs. Healthcare professionals are at risk of contracting TB due to their exposure to infectious patients, making it essential to provide them with appropriate protective measures and support.

b) **Intervention**

TB Case Detection	TB Treatment Success
- Provide continuous training on the latest TB guidelines, diagnostic methods, and management strategies. This includes workshops, seminars, and online resources. - Ensure healthcare facilities are equipped with the necessary diagnostic tools, such as sputum smear microscopy, chest X-rays, and molecular diagnostics like GeneXpert. - Develop and disseminate clear protocols and guidelines for TB case detection, including procedures for screening, testing, and referring patients. - Implement quality assurance mechanisms to ensure adherence to TB detection protocols and improve diagnostic accuracy.	- Equip healthcare professionals with tools and strategies for managing complex cases, including those with drug-resistant TB or co-morbid conditions. - Promote a multidisciplinary approach to TB treatment, involving collaboration among healthcare providers, including doctors, nurses, pharmacists, and social workers. - Implement and reinforce occupational health and safety measures to protect healthcare professionals from TB infection. This includes providing personal protective equipment (PPE) and ensuring proper infection control practices.

11. **Inmates/Staff:** The confined and overcrowded nature of many prisons, coupled with limited access to healthcare and poor living conditions, increases the risk of TB

transmission among Inmates. Prison staff face occupational hazards related to TB exposure, which can be exacerbated by inadequate infection control measures.

a) **Why Inmates/Staff;** Both Inmates and staff require targeted TB prevention, detection, and treatment strategies due to the high risk of TB and potential for outbreaks within the prison system. Addressing TB in prisons is crucial for overall TB control efforts, as uncontrolled outbreaks can spill over into the community, increasing the broader public health burden.

b) **How to support them in;**

TB Case Detection	TB Treatment Success
- Implement routine TB screening for all Inmates upon entry into the prison system and periodically throughout their incarceration. This includes symptom questionnaires, chest X-rays, and TB tests. - Improve prison ventilation and hygiene practices to reduce the risk of TB transmission. Ensure that cells and common areas are well-ventilated and cleaned regularly. - Establish isolation facilities for Inmates with active TB to prevent transmission to others and ensure proper medical care.	- Implement occupational health and safety measures to protect prison staff from TB exposure. Provide personal protective equipment (PPE) and ensure proper infection control practices. - Collaborate with public health authorities, NGOs, and other stakeholders to enhance TB control efforts in prisons and ensure comprehensive care for Inmates and staff. - Ensure that prisons are adequately resourced to handle TB cases, including access to diagnostic tests, medications, and infection control supplies.

12. **<u>Public transport operators and their assistants:</u>** Public transport operators and their assistants often work in environments with high passenger turnover and limited ventilation, which can facilitate the spread of airborne diseases like tuberculosis (TB).

a) **Why this population:** Due to the crowded and confined nature of public transport settings, operators and assistants are at higher risk of TB exposure and transmission.

b) **How to support them in;**

TB Case Detection	TB Treatment Success

- Implement routine health checks for public transport operators and their assistants, including screening for TB symptoms and providing access to diagnostic services. - Set up on-site or mobile health clinics at major transport hubs or terminals to provide convenient screening and diagnostic services for transport workers.	- Offer flexible treatment schedules or support services to accommodate the work hours of public transport workers, such as early morning or late evening clinic hours. - Ensure that public transport operators and their assistants have access to appropriate protective measures and information on reducing occupational health risks related to TB. - Collaborate with transport companies, unions, and public health authorities to develop and implement TB control strategies tailored to the needs of public transport workers.

13. **<u>Migrants:</u>**

National level report reflected a total of 9,700 migrants in Lesotho. They may face a range of challenges related to their health and well-being due to factors such as unstable living conditions, irregular employment, and limited access to healthcare services. They often live in high-density, informal settlements or work in sectors with high TB exposure risk, making them vulnerable to TB infection and transmission. Addressing TB among migrants is crucial to preventing the spread of TB to the broader community, as they often have high mobility and can easily transmit TB to new locations.

a) Intervention

TB Case Detection	TB Treatment Success
- Partner with local organizations and community leaders to conduct TB screening drives in migrant communities, ensuring that services are accessible and culturally appropriate. - Provide targeted health education to migrants about TB symptoms, prevention, and available services. Use multilingual materials and culturally sensitive messaging to reach diverse migrant populations. - Offer flexible clinic hours and support services to accommodate the work schedules and mobility of migrants.	- Address legal and financial barriers to accessing TB care by providing information on patients' rights, assisting with documentation, and offering financial assistance or subsidies for treatment. - Provide information on how to navigate the healthcare system and access TB treatment. Offer assistance with appointment scheduling, transportation, and other logistical support.

Provide options for treatment at locations that are convenient for them.	- Implement effective tracking systems to manage patient information, treatment adherence, and follow-up appointments, especially for migrants who may move frequently.

14. Highlanders:

The highlanders in Lesotho inhabit the mountainous regions of the country, typically above 1,800 meters in altitude. These areas are characterized by rugged terrain, limited infrastructure, and difficult access to healthcare services. The rugged terrain and harsh weather conditions limit access to healthcare services, contributing to delays in diagnosis and treatment of TB. Highlanders have limited access to healthcare services, leading to higher rates of undiagnosed and untreated TB.

Intervention

TB Case Detection	TB Treatment Success
- Utilize community health workers who are familiar with the terrain and local culture to conduct active TB case finding in remote areas. CHWs can identify symptomatic individuals and refer them for diagnosis.	- In areas with mobile network coverage, use SMS-based systems to remind people of screening campaigns and TB symptoms. - For very remote areas, explore the use of telemedicine to offer remote consultations with healthcare providers, reducing the need for patients to travel.

15. Mental Health Conditions: Mental health care services are limited, with a scarcity of trained professionals, facilities, and awareness about mental health conditions. As a result, individuals with mental health conditions often go undiagnosed and untreated, leading to further deterioration of their overall health and increasing vulnerability to infectious diseases like TB. Mental health conditions can negatively affect a person's ability to adhere to TB treatment regimens, increasing the risk of treatment failure or drug-resistant TB.

a) Intervention

TB Case Detection	TB Treatment Success
- Develop integrated screening initiatives that check for both TB and mental health conditions in health centers, particularly in areas where mental health issues are common.	- Adopt integrated care models where mental health services are provided alongside TB treatment. This can be done through co-locating mental health services in

- Train healthcare providers to recognize the signs and symptoms of mental health conditions alongside TB. - Reducing stigma surrounding mental illness will encourage earlier detection of TB among these individuals.	TB clinics, ensuring that both conditions are managed together. - Individuals with mental health conditions may struggle with medication adherence due to cognitive impairment, lack of motivation, or confusion. Introduce support systems, such as Directly Observed Treatment, Short-course (DOTS), to ensure that patients follow through with their TB treatment regimens. - Involve caregivers and family members in the treatment plan to provide emotional support, ensure that medications are taken as prescribed, and monitor the patient's mental health throughout treatment.

16. Older People:

Older people are more likely to suffer from co-morbidities like HIV, chronic respiratory diseases, and diabetes, which can mask TB symptoms or complicate its diagnosis.Those who worked as migrant laborers, especially in mines or other high-risk occupations, are at increased risk of TB due to their past exposure to poor living and working conditions. TB cases among older men are often under-reported due to challenges in diagnosis (e.g., atypical symptoms) and limited health-seeking behavior.

Intervention

TB Case Detection	TB Treatment Success
- Work with community leaders and families to promote awareness about TB among older men. Family involvement is crucial, as many older men may need encouragement to seek help and follow through with health services. - Provide tailored health education to older men on the specific symptoms of TB, especially distinguishing between TB and symptoms related to aging or other chronic diseases.	- Simplify treatment regimens for older men who may have difficulty remembering to take multiple medications or suffer from cognitive decline. Regular follow-ups and reminders, possibly through phone calls or SMS, can also help. - Involve family members, caregivers, or community groups in the care of older men undergoing TB treatment. Providing social and emotional support can increase adherence and improve treatment

	outcomes.

Annex 3: Global Estimates of Number of TB Cases Attributable to Selected Risk Factors, 2020 (Source GTR 2021)

Risk Factor	Relative Risk (Uncertainty Interval)		Exposed (Millions)	Population Attributable Fraction (%)	Attributable TB Cases (Millions, Uncertainty Interval)	
Alcohol use disorders	3.3	2.1–5.2	291	8.1	0.74	0.30–1.3
Diabetes	1.5	1.3–1.8	496	3.1	0.37	0.15–0.68
HIV infection	18	15–21	38	7.6	0.74	0.65–0.83
Smoking	1.6	1.2–2.1	1050	7.1	0.73	0.25–1.5
Undernourishment	3.2	3.1–3.3	637	15	1.9	1.3–2.6

Sources: Imtiaz S et al. Eur Resp Jour (2017); Hayashi S et al. Trop Med Int Health (2018); Lönnroth K et al. Lancet (2010); World Bank Sustainable Development Goals. Database (http://datatopics.worldbank.org/sdgs/); WHO Global Health Observatory (https://www.who.int/gho); and WHO Global TB Programme.

Annex 4: Program Essentials for Global Fund Supported Services

1. TB screening and diagnosis
1.1 Systematic TB screening is provided for those at highest risk (key and vulnerable populations), including using Chest X-rays with or without computer-aided detection (currently recommended for people aged 15 years and older).
1.2 Multiyear plan to achieve universal use of rapid molecular assays as the initial test to diagnose TB for all people with presumptive TB, with implementation on track.
1.3 All people with bacteriologically confirmed TB are tested for at least rifampicin resistance and for those with RR-TB further tests are conducted to rule out resistance to other drugs.
1.4 TB diagnostic network operates efficiently to increase access to testing and includes specimen transportation, maintenance of equipment, connectivity solutions, biosafety, quality assurance and supply system.
2. TB treatment and care
2.1 Child-friendly formulations, all-oral regimens for DR-TB, and 4-month regimen for non-severe, DS-TB are used for TB treatment in children.
2.2 People with DR-TB receive shorter, all-oral regimens or individualized longer treatment regimens as recommended by WHO and people-centered support to complete their treatment.
3. TB prevention
3.1 TB preventive treatment (including shorter regimens) is available for all eligible people living with HIV (adults and children) and for all eligible household contacts of people with bacteriologically confirmed pulmonary TB.
4. TB/HIV collaborative activities
4.1 All people living with HIV with active TB are started on ARV treatment early as per recommendations.
5. Cross-cutting areas
5.1 Establish, progressively scale-up and maintain a comprehensive, real-time, digital case-based TB surveillance systems and ensure analysis and use of TB data for decision-making at all levels of TB services.
5.2 Prioritized interventions are informed by cascade analysis throughout the pathway of TB care, including for TB preventive treatment.
5.3 Engagement of private health care providers is on a scale commensurate with their role in the provision of TB services.
5.4 Decentralized, ambulatory, community- and home-based, people-centered services are provided across the continuum of TB care.
5.5 All TB programming must be human rights-based, gender-responsive and informed by and respond to analysis of inequities; and include stigma and discrimination reduction activities for people with TB and TB-affected populations; legal literacy and access to justice activities; as well as support for community mobilization and advocacy and community-led monitoring for social accountability.

Source: Global Fund TB information note

Annex 5: People Met During the Field Visit

Names of people Met during the Lesotho National TB Operational Planning Visit.			
S/N	**Name**	**Title**	**Contact**
1	Dr. Lucy Mapoota Masoabi	Director Clinical services	
	Dr. Mahlape Titii Moleko	MoH Director	
2	Dr. Maama Lhang	NTLP Programme Manager	
3	Dr. Mayema Anatoli	TB/HIV MO/Deputy PM NTLP	57604779
4	Dr. Tabitha Ntolo Moshoeshoe		tmoshoeshoe@pedaids.org
	NTLP Meeting 26/08/2024		
1	Palesa Ntene	Community TB officer	58847075
2	Kutloano Morienyane	M&E unit	58497459
3	Momosuoe Leputhing	ATBA	
4	Thato Raleting Letsie	M&E	
5	Moipone Leteba	CDS Manager	
6	MPHO KHESA	Childhood TB officer	
7	Mphetens Khethens	M&E officer	
	PMU -GF Meeting		
1	Sefako Nkaala	Coordinator PMU - MoF Project management Unit	
2	Mosa Ntelo		
	WHO Meeting 1st September 2024		
1	Dr. DEN BOON, Saskia		denboons@who.int
2	Dr. Sirak HAILU BANTIEWALU	NPO TB/HIV Hepatitis	sirakk@who.int
	Mefeteng District		
1	Lisemelo Adam	TB Coordinator	
2	Nkareng Rammoneng	TB Officer	
3	Thato Raleting Letsie	Lead M&E NTLP	
4	Mampho Mafereka	PHN Mefeteng	
5	Matseliso Ntefe	CDNS	
	Matelile Health Centre		
1	Moliehi Mokokomali	RNM (HIV/ART Focal person)	
2	Lesoli Malesoli	RNM (TB Focal Nurse)	
3	Lerato HLAPISI	Nurse Incharge	
4	Mayema Anatoli	TB/HIV MO/Deputy PM NTLP	57604779
	SEBEDIA Health Centre		
1	Mpho Marabe	Nurse Incharge	58015839
2	Nomsa Plaki	TB CO	58932102
3	Kutloano Morienyanne	PHEO	58497459
4	Moipone Leteba	CDS Manager	59168326
5	Palesa Ntene	Community TB officer	58847075

Names of people Met during the Lesotho National TB Operational Planning Visit.			
6	Mayema Anatoli	TB/HIV MO/Deputy PM NTLP	57604779
	Maluti Adventist hospital: August 29, 2024		
1	Mothonyama Tukula	RN	58087993
2	Relebohile Matlatsu	Data clerk	57184388
3	Likentso Kuleile	Data clerk	58406931
4	Nomsa Plaki	TB CO	58932102
5	Palesa Ntene	Community TB officer	58847075
6	Moipone Leteba	CDS Manager	591683216
7	Kutloano Morienyanne	PHEO	58497459
8	Mayema Anatoli	TB/HIV MO/Deputy PM NTLP	57604779
	Maseru DHMT: August 29, 2024		
1	Tilo Namane	Dr	53810988
2	Mosene Makhele	DMO	56701097
3	Kholu Malefau	PHN TBCO	56300704
4	Mphetens Khetens	M&E Officer	56133423
	Qualing Filter clinic August 29, 2024		
1	Matlotlo Mojara	Nurse Incharge	59511415
2	Malintle Sebotsa	TB focal person	58511822
	THAMAE Health Centre: August 29, 2024		
1	Ngoaajane Nyange	Nurse	69251257
2	Rleng Selia	Nurse incharge	62777493
3	Macup Peshoane	Data clerk	58904380
4	Mahlape Makampo	TB screener	63840407
5	Matscreletso Mokhothu	Nurse	63525263
6	**MOH Director QA/QI**		
1	Dr. Limpho Maile	MOH Director QA/QI	
	CDC /USAID		
1	Makakanelo R Pule	USAID TB/HIV Specialist	mpule@usaid.gov
2	Matela Mpe	CDC TB/HIV Specialist	Jkm4@cdc.gov
3	Fred M. Asiimwe	CDC Senior Technical Advisor	VxV5@cdc.gov / 58884036
	Partners in Health		
1	Meseret Asfaw	MDR TB officer	mtamirat@pih.org / 5170262
2	Afom Andom	Chief Medical Officer	aandom@pih.org/ 56988304
	EGPAF		
1	Dr. Samson Lanje	Senior TB/HIV Advisor	
	MoH - Supply Chain		

Names of people Met during the Lesotho National TB Operational Planning Visit.			
1	Tumelo Mo Phebe	Director Supply chain	
	CSO Lenepwa: September 02, 2024		
1	Rankoletsi Bokaako		rbokaako@lenepwha.org.ls
	Baylor College of Medicine Children'sChildrens Foundation Lesotho: September 02, 2024		
1	Dr.Mosa Molapo Hlasoa	Project Director	
	National TB reference Laboratory (NTRL) 16/09/2024 September 2, 2024		
1	Mooko Matobo	NTRL In chargeIncharge	