Kingdom of Eswatini

MINISTRY OF HEALTH

NATIONAL STRATEGIC PLAN FOR TUBERCULOSIS

2024 – 2028

ESWATINI FREE OF TB BY 2035

Foreword

It is with immense pleasure and a deep sense of purpose that I present to you the 2023-2028 National Tuberculosis Control Strategic Plan. This is a comprehensive roadmap for tackling one of the persistent health challenges that continues to cause morbidity and mortality in our country. Notwithstanding the noteworthy and steady progress that our country has made in reducing the burden of TB disease, TB remains a disease of public health concern in our settings. The World Health Organization estimates the burden of TB disease to be at 325 cases per 100,000 population.

The Ministry of Health is deeply committed to advancing the well-being nations citizen and ensuring that every individual citizen has easy access to quality TB services and health care in general as close as possible to their doorstep. Our approach to this Strategic Plan is anchored on innovation, best practices and evidence based. In the past TB strategic plan, we conducted the Prevalence Survey and Drug Resistant TB, End Term review, regional Green Light Committee review and Epidemiological reviews provided valuable information that informed the development of this Strategic Plan.

This NSP has absorbed the recommendations by the global strategy enshrined in the End TB Strategy why the WHO. In NSP we are leveraging on the power of new technology and advances in TB diagnosis and treatment. Our strategies in this NSP are hinged on a patient centered approach. We aim to expand TB diagnostic and scale up shorter regimen for both drug sensitive TB and drug resistant TB. This is an effort to diagnose more cases and treat every patient successfully. There by accelerate the decline in both TB incidence and TB mortality. Further, we embrace the spirit of team work and coalition with other related sectors through the proposed multisectoral accountability framework for TB (MAF-TB). We will engage the private sector to join in our TB response in our efforts of providing comprehensive package for TB at the first point of seeking health care.

As we traverse through this journey, we will work tirelessly to ensure that we deliver our vision of TB free Eswatini. By 2035. This NSP is our springboard towards TB elimination. With this NSP we are well guided by the 6 strategic objectives and various interventions that are motivated by the vison of a TB free Eswartini. Considering that scaling up of high-impact TB interventions requires significant human and financial investments, it is necessary to secure sufficient and sustainable financing from domestic and external sources.

Lastly, I extend my sincere gratitude to all the Stakeholders that contributed their technical expertise, time, resources to the development of this Strategic Plan. Your collective effort and resolves serves as a testimony to our greater vision and shared commitment to eliminating TB as a public health threat in our beloved Country, the kingdom of Eswatini. Let us move forward together in this noble agenda and call to eliminate TB and co -create a legacy of TB free Eswatini.

Acknowledgment

This work was made possible through the collaboration between the Ministry of Health through the National TB Control Program and various stakeholders. The Ministry of Health would like to first acknowledge all the contributors to the development of this NSP.

Secondly all the partners, through their Program technical officers and other focal points for Tuberculosis provided valuable information to support the NSP development. Thirdly, we express our sincere gratitude to the World Health Organization for the respective review and comprehensive technical input and guidance to the process of developing this NSP.

This work would not have been successful if it were not for the various technical leads from the WHO, USAID, CDC, and Civil Society organization that provided their technical input and peer reviews of various versions leading to the finalization of the NSP.

Lastly, I would like to acknowledge the National TB Control Program Manager and the team for the strategic leadership and Stewardship provided during the developmental process.

Contributors

Add more names

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Abbreviations

3RH/3HP:	3 months of Rifinar/3 months of rifabutin/Isoniazid preventive therapy
6H:	6 Months of Isoniazid Preventive Therapy
ART:	Anti-Retroviral Therapy
BMU:	Basic Management Unit
CDC:	Centre for Disease Control
CSO:	Civil Society Organisation
CXR:	Chest X-Ray
DOTS:	Daily Observed Therapy
DRS:	Drug resitant Surey
DR-TB:	Drug-Resistant Tuberculosis
DS-TB:	Drug Sensitive Tuberculosis
ECG:	Electrocardiogram
EPTB:	Extra- Pulmonary TB
FBO:	Faith Based Orgnisation
GDP:	Growth Domestic Product
HIV:	Human Immuno Viruss
IPC:	Infection Prevention and Control
LPA:	Line Probe Assay
MDR/RR-TB:	Multi-Drug Resistant /Rifampicine Resistant TB
NCD:	Non-Communicable Diseases
NRH:	National Referral Hospitals
NSP:	National Strategic Plan
NTCP:	National TB Control Programme
PLHIV:	People Living with HIV
PMDT:	Programmatic Management of Drug-Resistant TB
rGLC:	Regional Green Light Committee
RHMs:	Rural Health Mentors
RHMT:	Regional Health Management Team
SDG:	Sustainable Development Goals
SLD	Second line drugs
TB:	Tuberculosis
TPT:	TB Preventive Therapy
USAID:	United States Agency for International Development
WHO:	World Health Organization

Executive Summary

The Kingdom of Eswatini continues to make significant strides in the response to Tuberculosis (TB) towards elimination. In the last two decades, the burden of TB in Eswatini has reduced from 1110/100,000 population in 2002 to 325/100,000 population by end of 2022. Notwithstanding the progress made, TB remains one of the leading causes of morbidity and mortality in the Kingdom of Eswatini. According to the WHO estimates the TB mortality rate is at 62/100,000 in the HIV population and 23/100,000 in the HIV negative population. A higher proportion of TB in Eswatini is associated with HIV. It is for this reason that Eswatini is classified as one of the 30 high TB/ HIV burden countries in the world. TB treatment coverage in 2022 was at 68%, standing below the WHO End TB Strategy recommended target of 90%. Among the TB patients detected and drug-susceptible and drug-resistant TB 85% and 70% are treated successfully respectively. The global goal is to eliminate TB as a public health threat by 2030. The Kingdom of Eswatini has adopted the global End TB strategy developed by the WHO.

This NSP will provide the policy framework by providing strategic intervention for the TB response towards the attainment of the vision of Eswatini-free of TB by 2035 between 2023 and 2028 and contribute to the global campaign of TB elimination. This NSP will run to the towards the end period of the WHO End TB Strategy. Therefore, taking a determined approach, fostering accelerated and robust response in the response to the TB epidemic in Eswatini. In line with above vision this NSP will pursue the following strategic goals; Reduce TB incidence by 40% relative to the 2022 levels, Reduce TB deaths by 50% by 2028 relative to the 2022 levels, Eliminate Catastrophic costs (0%) for recipients of care and their household members.

To achieve above vision and goals the proposed NSP has the following strategic objectives:

- **Strategic Objectives 1:** To achieve 90% TB treatment coverage by 2028
- **Strategic Objective 2:** To strengthen primary and secondary TB prevention services
- **Strategic Objective 3:** To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB
- **Strategic Objective 4:** To improve TB screening, diagnosis, treatment and prevention among children and adolescents
- **Strategic Objective 5:** To improve the quality and utilization of TB Information for decision-making and programmatic actions.
- **Strategic Objective 6:** Strengthen coordination, governance, and human resource capacity for optimal program performance.

This NSP was developed through joint effort and collective characterized by wider consultative process and an all-inclusive approach. The findings of the joint HIV/TB end-term review epidemiological review, regional GLC recommendations have been absorbed in this NSP. This NSP takes on board all the 2023 WHO recommendations as key interventions and main ins a patient-centered approach. This NSP demonstrates ambition through the outlined goals.

Introduction

Tuberculosis (TB) remains a disease of global, regional, and national concern. The Kingdom of Eswatini despite outstanding progress in the TB response. The Kingdom of Eswatini remains classified as a high TB/HIV Burden country by the World Health Organization. According to the 2023 Global TB report, the estimated TB incidence for the kingdom of Eswatini is at 325/100,000 population. With reference to the 2022 World Health Organization Global TB report, it is estimated that in the year 2021, 9.9 million persons were affected with TB of which 56% Men, 11% children, & 8% people Living with HIV (PLHIV). It is also reported that globally more than 500,000 of the TB cases are MDR/RR-TB. The TB mortality across all age groups was estimated to be 1.5 million.

The African region contributes significantly to the global burden of tuberculosis (TB). More specifically 9 of the Sub-Saharan African countries are among the 30 high TB burden countries in the World. In 2021 the World Health Organization (WHO) updated the list of high burden countries for TB, HIV-associated TB (TB/HIV) and drug resistant TB (MDR/RR-TB).

The Covid-19 pandemic had negative effects on the TB response globally, inclusive of Eswatini. The WHO Global TB report of 2022 shows that until 2021 the TB incidence rate for Eswatini was dropping. Due to the reduction in TB treatment coverage from 68% in 2019 to 53% in 2020 and 47% in 2021 brought about by the overwhelming effects of Covid-19 on the broader health sector and not sparing the TB programme. Eswatini experienced and increase in the TB incidence from 342/100,000 in 2020 to 348/100,000 in 2021. Post-covid-19 noticeably Eswatini has recorded a decline in TB incidence from 348/100,000 to 325,000 population.

The has made progress in adopting the WHO recommendations on TB diagnosis, treatment of both Drug susceptible TB and Drug-resistant TB. Genexpert is the 1st line TB diagnostic tool for TB. Access to Genexpert is both at the primary facility with the Xpert and by specimen referral from basic management units (BMU) that may not have a Genexpert on site. Additionally, access to culture and targeted next- generation sequence is available within the country. Both DS TB and DR TB treatment are decentralized. Major gaps identified during the joint end-term review and green light committee review included disruptions in the TB medicines supply chain, constricted coverage of Xpert machines compounded by low-frequency of specimen pick treatment leading to suboptimal treatment coverage for both DS TB and DR TB, 61% and 38% respectively. Huge gaps in childhood TB diagnosis exist, only 5% of the cases of childhood TB are detected out of the 10-15 % WHO benchmark.

Electronic information systems are in existence but have not yet been implemented to full scale. Patient record system is both paper-based and electronic.

This NSP is built on the bedrock and principle of the End TB Strategy and will provide the policy framework for the national vision of a TB Free Eswatini by 2030. The goals of this NSP are Reduce TB incidence by 40% relative to the 2022 levels and reduce TB deaths by 50% by 2028 relative to the 2022 levels and eliminate the catastrophic costs incurred by TB patients and their household members.

The outline of the NSP consists of six associated components as follows:

1. The Core Plan including the contingency plan
2. The Operational Plan
3. The Monitoring and Evaluation (M&E) plan
4. The Technical Assistance (TA) Plan
5. The Budget Plan.

This NSP will cover the implementation period from 2023 to 2028. It is therefore a pivotal instrument as it guides the TB response in Eswatini toward the conclusion of the End TB strategy. The NSP takes a determined approach of implementing the high impact interventions to full scale to improve on TB treatment coverage, TPT coverage for all high-risk populations it has prioritized a patient-centered approach, further will provide strategic guidance in emerging areas of interest to the TB program which includes the approaches Post TB Lung Disease (PTLD).

Summary of the findings from the Situation Analysis

2.1. The Country Context

2.1.1. Geography

The Kingdom of Eswatini is a landlocked country situated in the southern Africa bordered by South Africa and Mozambique. The country has a land surface area of about 17,364 square km. It is divided into four administrative regions; Hhohho, Manzini, Lubombo and Shiselweni, and further subdivided into 59 Tinkhundlas (constituencies) and 385 chiefdoms. While Mbabane is the capital city, Manzini is the largest industrial region. Lubombo is the centre of the commercial agricultural sector situated in the eastern part of the country. The climate and topography are diverse, ranging from a cool and mountainous to a hot and dry, with altitudes ranging between 120 and 2,000 metres above sea level. Eswatini has a monarchical system of government with His Majesty King Mswati III as Head of State and a Prime Minister as the Head of Government which consists of Ministries headed by Ministers and run by Principal Secretaries.

2.1.2. Demographics and Socioeconomic

In 2022, the World Bank estimated Eswatini estimated population to be 1,201,670 people, (and population density of 63 people per sq. km), a 9.02% growth in population since the inception of the past NSP. The current population is distributed as 596,167 (48.58%) males and 605,504 (51.42%) females. Atleast 43% of the total population are children and adolescent. The largest population is in Manzini (32.6%), 29.3% Hhohho, 19.4% Lubombo, and 18.7% Shiselweni. Approximately 25% of the population is in urban areas. Eswatini population is mostly ethnic Swati people, along with a minor section of Zulus and white Africans. Eswatini has a small population of people from neighboring countries working as expatriates. In 2023 life expectancy at birth is projected to be at 61 for male and 66 for females1.

The Kingdom of Eswatini is a Low-Middle Income Country with Growth Domestic product (GDP) per capita of US$4,039.5 in 2023. Despite this status, 59% of the population has been estimated to be living under the international $1.90 poverty line. Youth unemployment increased during the Covid-19 from 47.4 per cent in 2019 to 58.2 per cent in 2021. Literacy levels for adults (% of people aged 15 and above) in Eswatini is high, standing at 89% in 2020. Some Swazi people work in the mines in South Africa, largely it the men that migrate to work in the mines.

2.2. The National Health and Social Care System/ Health Insurance policy frameworks

2.2.1. Leadership and Governance

The health systems of Eswatini are under the auspices of the Ministry of Health, which ensures the existence of strategic policy frameworks. The TB Control Program is under the Department of Public Health. The Ministry of Health through the National TB Control Program is responsible for coordination and overseeing implementation of TB in the country. The National TB Control Programme is responsible for planning, implementing, monitoring, and evaluating of all TB control response activities. The NTCP is accountable for all deliverables for TB response in Eswatini. The National TB Control Program is under the immediate supervision of Director, Public Health, who subsequently is under the responsibility of the Principal Secretary. The Honorable Minister of Health provides political guidance on the implementation of the UN declarations and global commitments towards ending TB.

2.2.2. Health Service Delivery

The Eswatini health sector has a vision "To have a healthy and productive Swati population that live long, fulfilling and responsible lives", with a mission "To build an efficient, equitable, client-centered health system for accelerated attainment of the highest standard of health for all people in the Kingdom of Eswatini", and the overall goal is, "To attain Universal Health Coverage with defined health services".

The country has a health care delivery system consisting of both formal and informal sectors. The Ministry of Health is driving the agenda of providing health services that are comprehensive by providing preventative and curative services that are of high quality, accessible, affordable, equitable and socially acceptable.

The health delivery system with a total of 327 health facilities consists of four tiers:

- Community level: Is made up of a network of community-based services provided by Community Based Health Care Workers, comprising of Rural Health Motivators (RHMs), TB Active case finders, Faith Based Health Care Providers, Traditional Healers, Traditional Birth Attendants (TBAs) and other volunteers providing home-based care, support and treatment.

- Primary health care facilities: Is made of primary health care (PHC) facilities, consisting of clinics and Public Health Units (PHUs), as well as outreach services.

- Health centers and regional referral hospitals: Consists of Health Centers (HCs) and regional referral hospitals (RRHs) providing, basic inpatient, outpatient, maternity, dental, minor surgery, some specialty, staffed by regional medical officers and nurses.

- National referral hospitals: Is made of national referral hospitals (NRHs), two of which are classified as specialty hospitals as they offer specialized care for Non-communicable disease (NCD) and psychiatric services. Patients who can afford paying for health services are referred to South Africa where a higher level of medical care is available.

2.2.3. Health Work Force

- The Human Resource for Health Unit of the Ministry of Health is responsible for providing strategic direction and comprehensive guidance on health workforce planning, management and development in alignment with the country health needs. The HRH strategic plan that is aligned to the global health workforce strategy and the national health sector strategy states the following:

    - Strengthen systems for planning and provision of pre-service and in-service training to ensure quality and needs-based training of health workers.

    - Improve the wellbeing of health workers and strengthen the structure and capacity for HR recruitment, deployment and retention processes.

    - Establish a comprehensive HRH planning and information systems.

    - Strengthen the coordination of in-service training to ensure efficient and effective in-service training.

    - Strengthen delivery of community health services.

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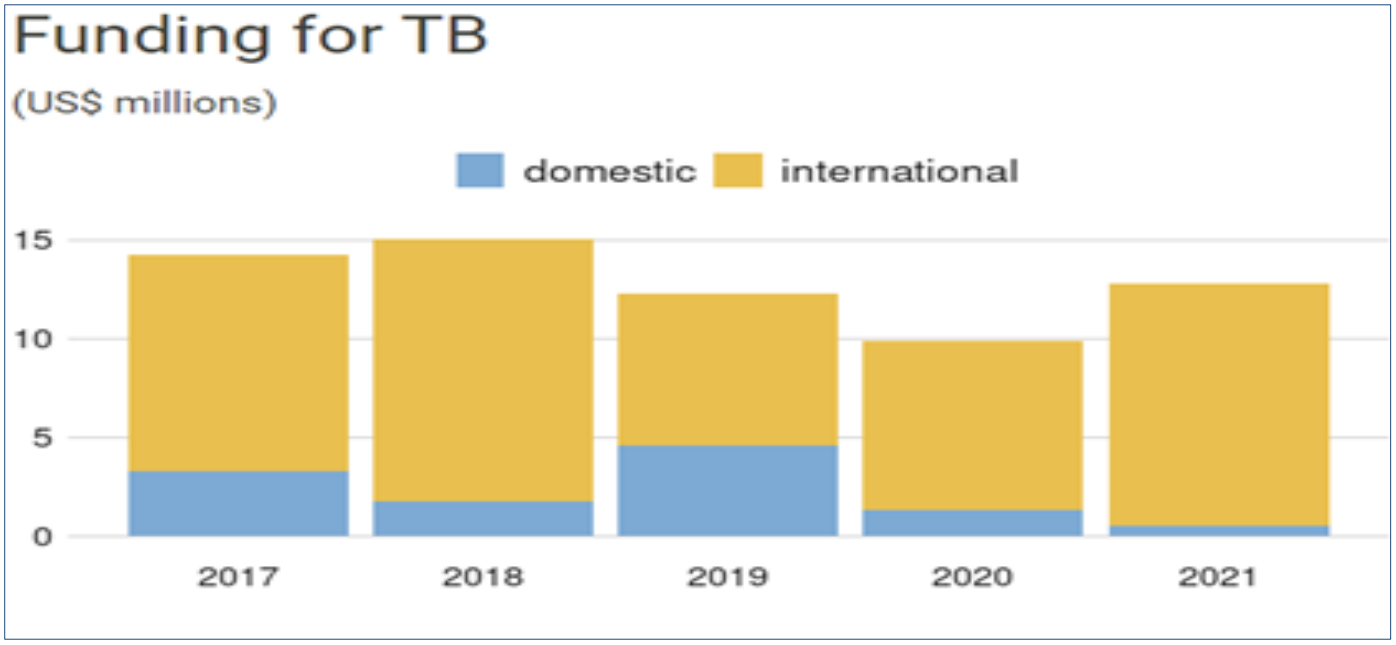
2.2.4. Health System Financing

The government of Eswatini supports the Ministry of Health who in turn supports the National TB Control Program. Government finances human resources, office commodities, DS-TB /DR-TB drugs, supplies, and fuel. The program also receives additional financial support from PEPFAR through its implementing partners in the form of procurement of Laboratory consumables, assets, and technical support for development and printing of guidelines, research, and NCC meetings. WHO also assisted with the development of Guidelines and printing. There is however a significant need for external funding to complement the fiscal budget. The majority of the NTCP funding is from the Global Fund (GFTAM), which is used mostly for the implementation of TB activities, assets, and human resources salary through the TB/HIV grant allocation. Direct funding from the Swazi government include but not limited to the following; infrastructure and equipment, emolumentary salary, procurement of ancillary drugs and second line drug from DR TB. In the period of implementation of the last strategic plan, funding was lowest in 2020. In 2021, Eswatini recorded an increase in the funding of the TB response.

Figure 1: Funding profile for TB in Eswatini



2.2.5. Access to Essential Medicines

2.2.6. Health Information Systems

Health Information Systems ensures the production, analysis, dissemination, and use of reliable and timely information on health determinants, health system performance, and health status. The M&E unit continues to monitor and evaluate program performance to inform the timely response to changing service needs and ongoing institutional adjustment of program inputs to achieve critical results. In 2022, the TB program undertook an End-Term Epidemiological Review and in collaboration with ENAP, has conducted the Joint End-term Programme Review to ascertain the progress of the implementation of the TB NSP (2019-2023). The NTCP has successfully conducted two critical national disease burden surveys recommended by the WHO. These are the 2nd Anti-TB Drug Resistance Survey and for the country's first National TB Disease Prevalence survey. The results from these two important surveys are vital in providing strategic direction for TB elimination in Eswatini. There are still vital research activities to be conducted, including a Patient Pathway Analysis, Catastrophic Costs Survey, and Inventory Studies.

2.3. National Tuberculosis Control Programme

The NTCP is structured at four levels, namely the national, regional, facility, and community levels. At the national level, the Program Manager is supported by the DOTS coordinator, Pediatric & Adolescent TB Coordinator, TB/HIV Coordinator, Advocacy Communication and Social Mobilization Coordinator, National Community Services Coordinator, Laboratory Coordinator, Monitoring & Evaluation Officer, Community Monitoring Evaluation Officer, Monitoring, and Evaluation Advisor, PMDT Coordinators, PMDT Technical Advisor, IT Officer and National Information Officer. IPC National Coordinator

Each region is supported by a TB/HIV Coordinator responsible for the programmatic management of TB and TB/HIV services, supported by Information Officer, TB doctors and nurses. The TB/HIV Coordinators are part of the Regional Health Management Teams (RHMT) in their respective regions.

At the facility level, there are health care workers who are tasked with providing TB services in each of the 149 TB BMUs. These include laboratory personnel, TB screening officers, TB expert clients, HTS counselors, and TB/HIV adherence officers. At the community level provision of TB, services are offered by TB Champions (previously known as Active Case Finders), working in collaboration with Rural health Motivators, TB treatment supporters and other Community-Based Organizations e.g. Non-Governmental Organizations CSO and FBOs.

2.3.1. Coordination and Service Delivery for TB

The NTCP is structured at four levels, namely the national, regional, facility, and community levels. At the national level, the Program Manager is supported by the DOTS coordinator, Pediatric & Adolescent TB Coordinator, TB/HIV Coordinator, Advocacy Communication and Social Mobilization Coordinator, National Community Services Coordinator, Laboratory Coordinator, Monitoring & Evaluation Officer, Community Monitoring Evaluation Officer, Monitoring, and Evaluation Advisor, PMDT Coordinators, PMDT Technical Advisor, IT Officer and National Information Officer. IPC National Coordinator

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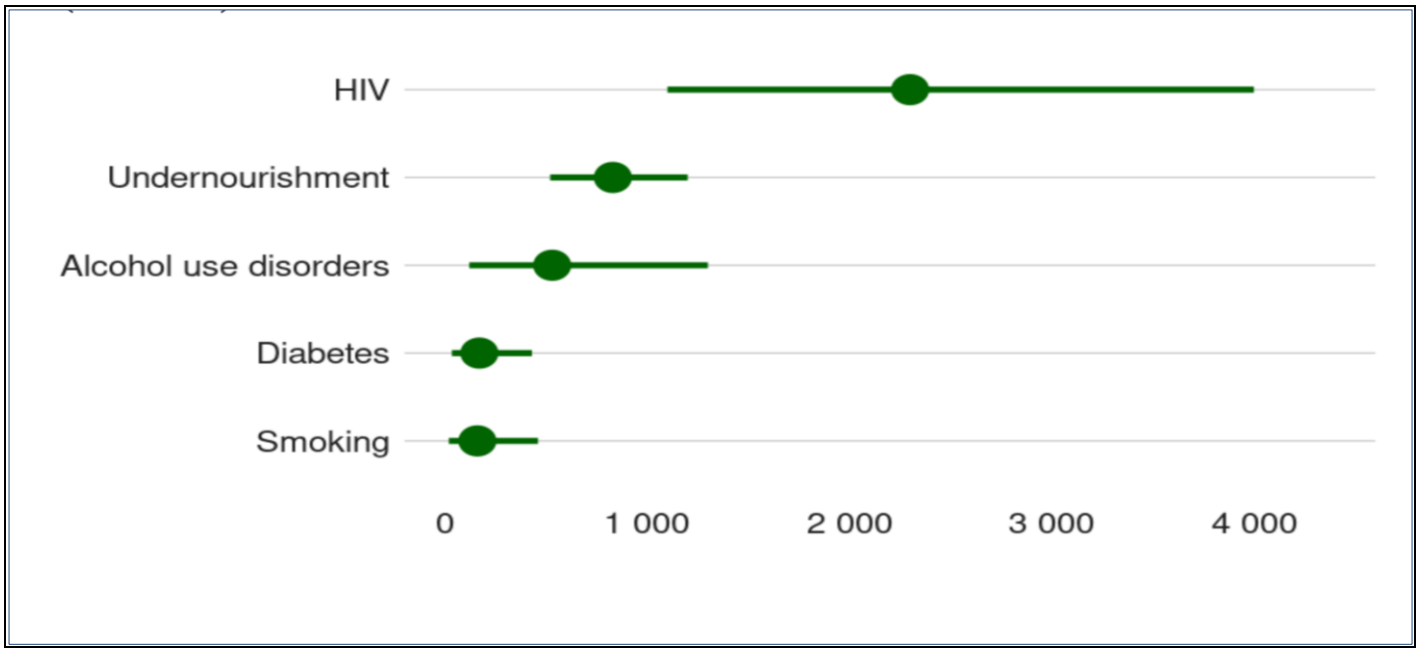
2.3.2. Epidemiology of Tuberculosis

Tuberculosis (TB) remains a significant public health problem, and the United Nations Sustainable Development Goal (SDG) 3.3 seeks to end the TB epidemic by 2030. The End TB Strategy also seeks to end TB by 2035 and therefore defines milestones (for 2020 and 2025) and targets (for 2030 and 2035) for reductions in TB cases, deaths, and catastrophic costs. The targets for 2030 and 2035 are a 90% and 95% reduction in the number of TB deaths respectively, an 80% and 90% reduction in the TB incidence rate, and 0% catastrophic costs compared with levels in 2015. To achieve these targets countries are expected to have reached the following milestones by 2020: 35% reduction in the number of TB deaths, 20% reduction in the TB incidence rate, and having no TB patients and their households face no catastrophic costs as a result of TB disease.

Drivers of TB in Eswatini

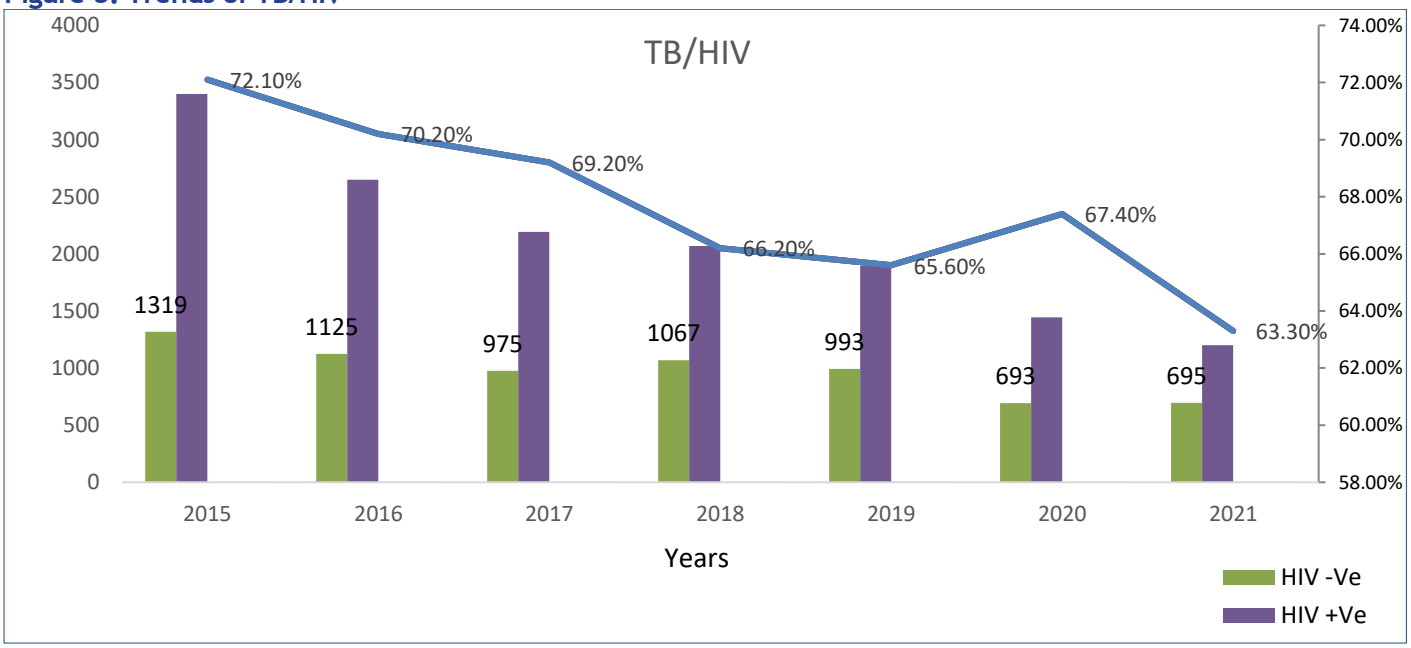
There are five main drivers of TB in the Kingdom of Eswatini. These include HIV, undernutrition, alcoholism, smoking and diabetes. Despite a significant decrease in HIV related TB. PLHIV remain at high risk factor of TB in Eswatini. NCDs such Diabetes remain a significant risk factor for TB in Eswatini, attention and action with respect to Diabetes is therefore required. Social habits such as alcohol intake and smoking are some of modifiable factors that continue to contribute to the burden of TB in Eswatini.

Figure 2:



The kingdom of Eswatini has made tremendous progress in the fight against tuberculosis (TB). Until the devastating effects of the Covid-19 pandemic on the programme. The TB incidence has been dropped from 1590/100,000 in 2010 to 342/100,000 in 2020.

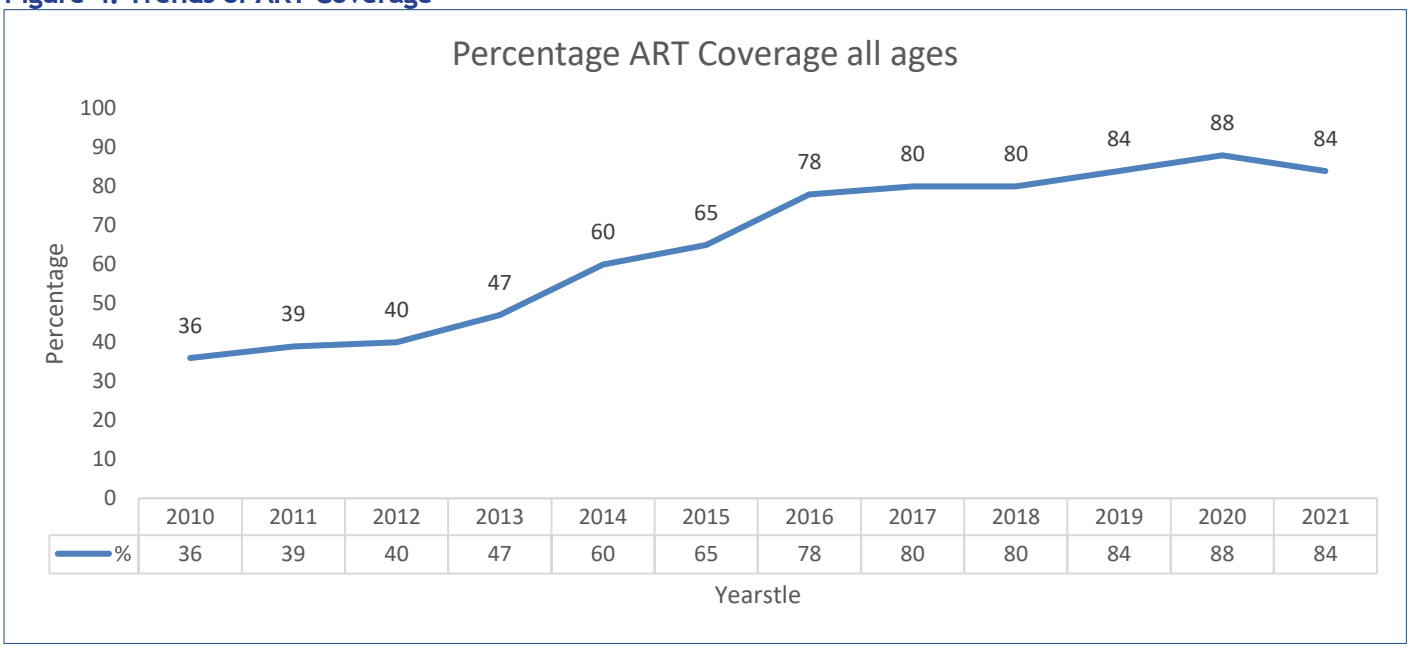
Figure 3: Trends of TB/HIV



According to the 2022 World Health Organization global TB report, the incidence of TB has increased from 342/100,000 in 2020 to 348/100,000 in 2021. The increase in incidence is attributed to the disruptions in TB case finding and care during the two peak years of the Covid-19. TB/HIV coinfection rate has equally dropped from 82%

to 63.3% in the last 11 years in the case of DS TB. TB/HIV co-infection rate in the DR TB patients remains high at 71%.The reduction in the burden of TB/HIV is attributed to the high Art initiations and high viral load suppression rates thereby reducing the risk of TB among PLHIV. Additionaly, Eswatini has prioritised TPT in high risk population including PLHIV, TPT coverage is atleast 70% in PLHIV, the intervention of TPT has contributed to the noted reduction in TB/HIV co-infection rate. Noteworthy noting that Eswatini has accelerated the Art coverage by 2021, 91% of PLHIV were on ART for all ages.

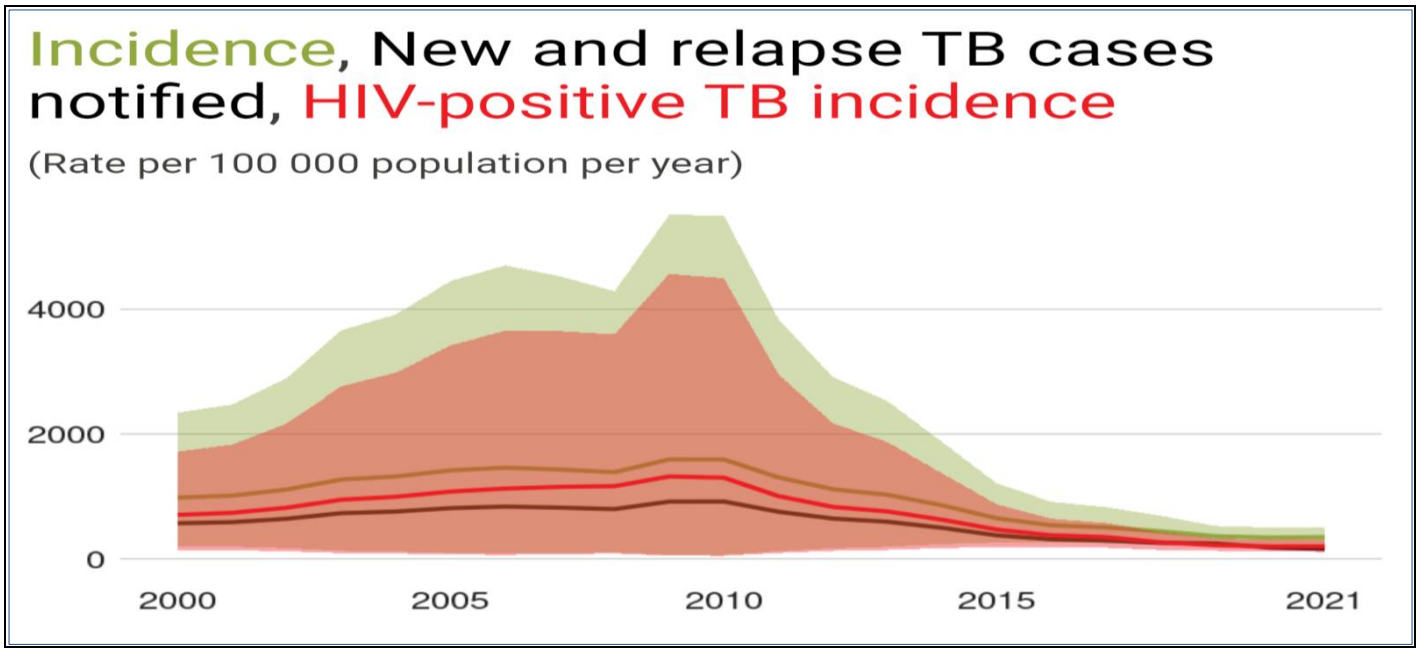
Figure 4: Trends of ART Coverage



Post Covid-19 pandemic the TB programmed in Eswatini has made a rebound in TB treatment coverage which has increased TB treatment coverage from 47% in 2021 to 61% in 2022. Correspondingly, there has been a decline in TB incidence from 348/100,000 to 325/100,000. Childhood TB case detection remains suboptimal, contribution to total cases by childhood TB is only 4.3% out of 10-15% WHO benchmark. Of great concern

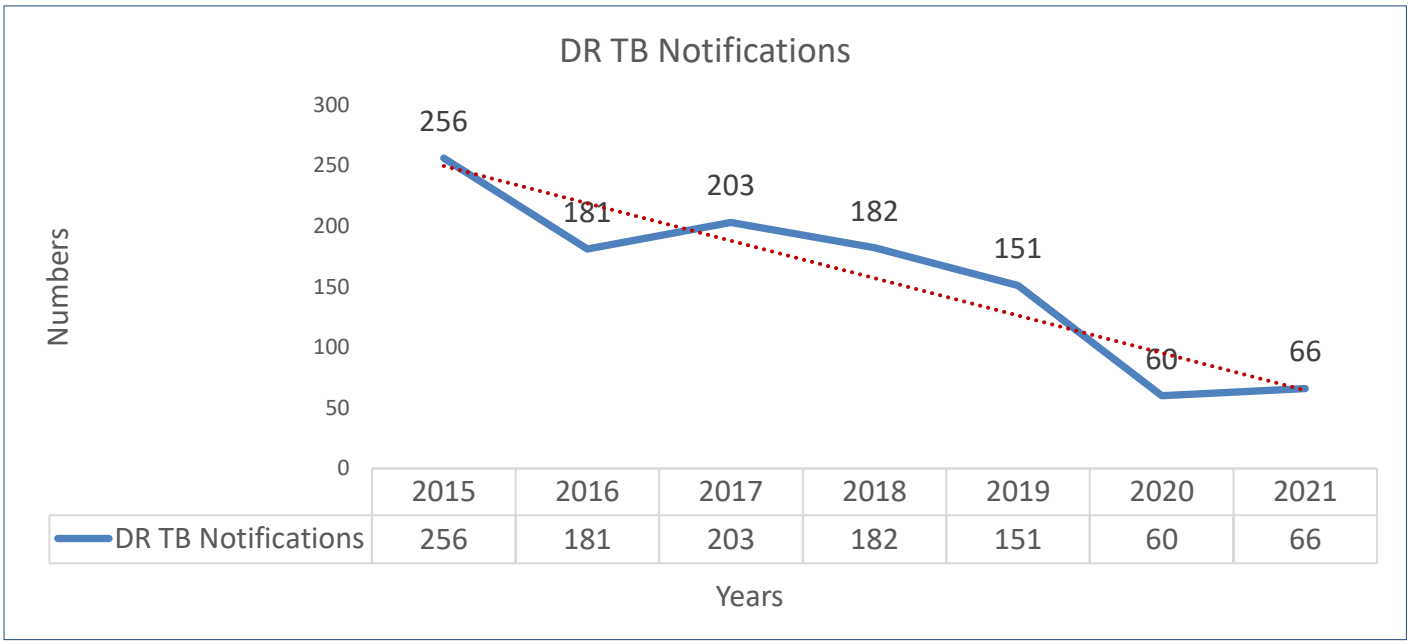
The TB incidence continues to decline as mentioned above, responding to the various interventions among them TPT, successful treatment of active TB cases. Of concern is the continued decline in TB cases detection. At the end of 2022, the TB case notification rate was 198/100,000. Predating to 2018 through to 2022, there has not been any significant reduction in the gap between the estimated incidence and the TB case notification rate. In 2021 bacteriological confirmation dropped from 70.9% in 2020 to 66.2%. This may be the impact of Covid-19 which was at peak in 2021. Overly there was a reduction in the number of specimen collected for TB surveillance and case finding.

Figure 5: Trends of TB Incidence and Notifications



Further, there has been significant progress in the response to drug resistant TB. From the 2019 cohort of MDR/RR-TB, 82% of the patients were successfully treated. The MDR/RR-TB treatment success rate of Eswatini stand above that of the Southern African region and the globe which are 71% and 60% respectively. The GeneXpert MTB/RIF is estimated to be missing 58% of the RR-TB cases. These missed cases harbour a rpoB 491 mutation which make it difficult to be detected by our current GeneXpert.

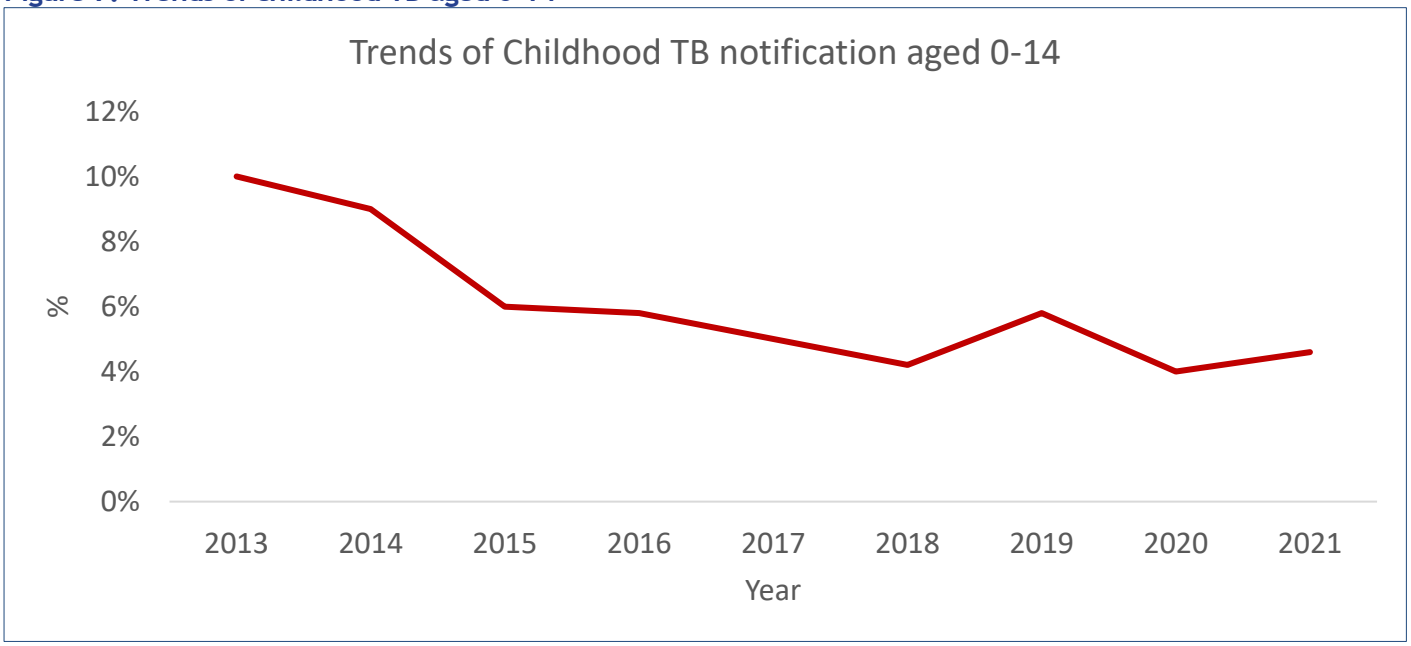
Figure 6: Trends of DR TB Detection



Important to note is that GeneXpert still detects TB very well, the only shortfall is detection of certain variants of Rifampicin resistance. In addition, the DRS revealed that 94% (32 of 34 cases) of the patients with rpoB 491 mutation are also resistant to isoniazid by LPA. Due to above reasons and other unknown reasons, DR TB case detection in Eswatini continues to decline. This warrants further exploration to establish potential factors leading to the continued declines in case detection.

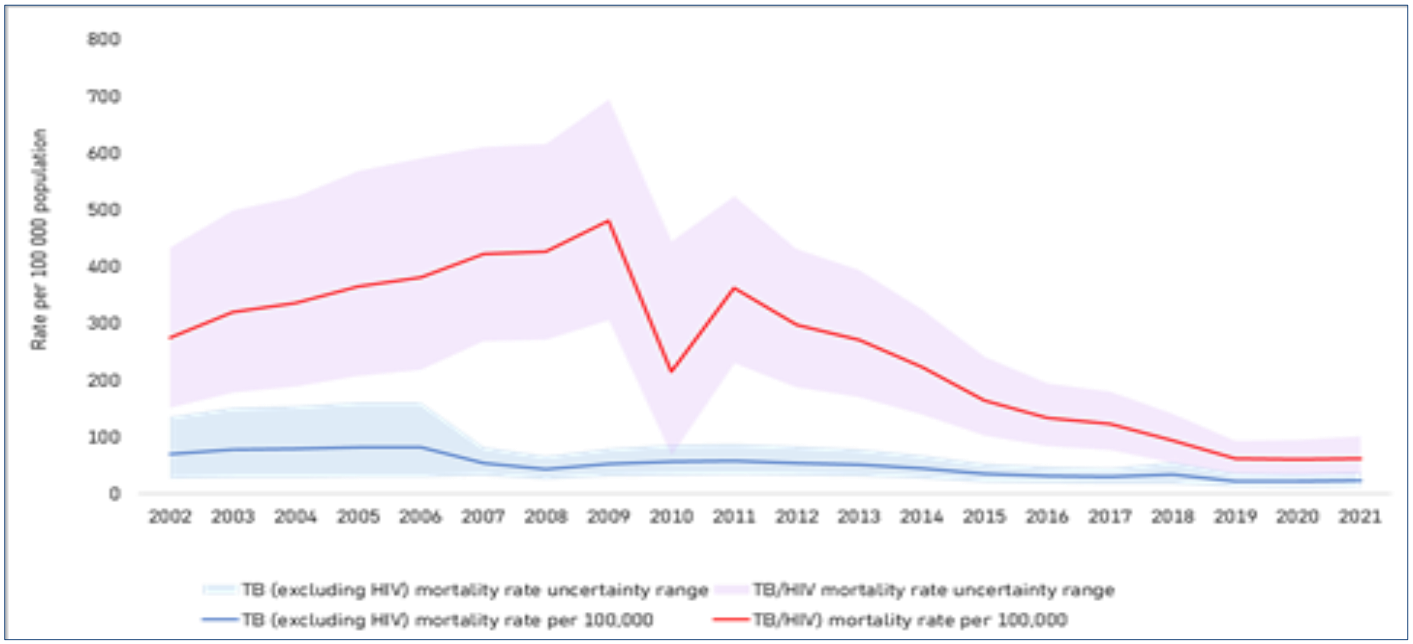
Childhood TB remains an area of concern in the case of Eswatini. The case detection remains below the WHO threshold of 10-15% contribution to total TB cases by the age group of 0-14. In 2013 the country had achieved the WHO benchmark. Since then, the contribution total case by childhood TB has been on the decline. In part this is attributed to suboptimal specimen collection from presumptive childhood TB patients especially the age group of 0-4. Secondly, low skill set in HCWs in clinical evaluation of children for TB.

Figure 7: Trends of childhood TB aged 0-14



The investment in the TB response in the Kingdom of Eswatini has had a positive effect in reducing TB related mortality. The proportional change in the total number of TB deaths between 2015 and 2021 is 55%. A remarkable progress in reducing TB related mortality partly under the past strategic plan. In the last decade, TB mortality rate in HIV negative population remains largely unchanged. The largest reduction in TB related mortality is in PLHIV.

Figure 8: Trends of TB mortality



1.2 Rationale for the Development of the National Strategic Plan

The National TB Strategic Plan (NSP) for Eswatini is a strategic document that provides guidance to all national health authorities in the comprehensive response to TB towards elimination. This NSP puts together and in place the core TB tenets of TB control as recommended by the WHO and translates global, regional, and national commitments into interventions. There has been a renewed effort in the TB response global with newer innovations in TB diagnosis treatment and care, taking an approach centred around community TB case finding, patient-centred care and TB prevention. This strategic plan is a structured road map that will provide strategic guidance to the National TB Control Programme (NTCP) and the corporating and implementing partners in implementing the TB Elimination agenda for the next five years. It is a national policy document for the Kingdom of Eswatini that has well-synthesised objectives, interventions and focused activities towards the realisation of the vision of a TB-free Eswatini by 2035.

The NTCP in 2023 conducted a combined TB and HIV end-of-term review of the performance of the 2018- 2023 TB National Strategic Plan (TB NSP). The end-of-term review revealed best practices achievements, some challenges, and systematic gaps in respective thematic areas of the TB programme. The outbreak of the COVID-19 pandemic derailed the program's efforts thereby negatively affecting the performance of the program's strategic plan. Part of the aim of this strategic plan is first to ensure the best practices and achievements are sustained. Secondly, to derive appropriate and laser-focused interventions to respond to the already known and identified challenges and gaps for optimal performance of the programme.

This NSP will not only serve to provide policy and strategic guidance in response to the TB epidemic in the case of the Kingdom of Eswatini but is equally relevant to various corporating partners that provide financial resources to the Kingdom of Eswatini for the TB response. Further, this NSP will be pivotal in raising financial resources for the comprehensive TB response from both domestic and international donors.

1.3 National Strategic Plan Development Process

The development of the 2023-2028 TB NSP was done through a collective and participatory approach, starting concept note development and stakeholder consultations and wring retreats. The NSP priorities was informed by key lessons mainly from the joint-end-term TB/HIV Programme Review, the Epidemiological and Surveillance assessment for TB of 2022, the regional green light committee (rGLC) and the global Drug facility (GDF). Other resource documents reviewed were the global TB report, national and WHO guidelines for TB management. The outline of this strategy is based on the "Toolkit to develop a NSP for TB prevention, care, and control", developed and recommended by the World Health Organization (WHO-2022).

People Centered Framework

The Participants in the workshops to develop the NSP included staff from the NTCP, Staff from USAID, CDC, Civil Society and the WHO. External stakeholders at the global level were consultative processes through the review of the draft of versions of the NSP. Their input and feedback were incorporated in the final version. The figure below outlines the steps to the development of this NSP.

2.4. Summary of the Review of Implementation of the Previous TB Control Strategic Plan

The past NSP had a patient centered approach and fully aligned with the WHO End TB Strategy launched in 2015. The past NSP put premium on TB case finding at community level and at health facilities. There was great effort to link all patients that were diagnosed to care. The Kingdom of Eswatini has made tremendous progress in the fight against TB. There is notable progress in the country's response to both drug sensitive TB (DS TB) and drug resistant TB (DR TB). The Covid-19 pandemic has had deleterious effects on the TB response globally, inclusive of Eswatini. The WHO Global TB report of 2022, shows that until 2021 the TB incidence rate for Eswatini was dropping. There was an accelerated decline in TB incidence Between 2010 and 2020, for instance the TB incidence in 2010 was 1590/100,000 and 342/100,000 in 2020. Due to the reduction in TB treatment coverage from 68% in 2019 to 53% in 2020 and 47% in 2021 brought about by the overwhelming effects of Covid-19 on the broader health sector and not sparing the TB programme. There has been an increase in the TB incidence for Eswatini from 342/100,000 in 2020 to 348/100,000 in 2021. Post Covid-19, the preprogramme is back on track with TB case finding, by end of 2022, TB treatment coverage had increased from 47% in 2021 to 61%.

2.5.2. TB Case Finding

The Kingdom of Eswatini TB Program adopted a two-pronged case finding strategy. The first strategy is intensified case finding which is basically provider initiated to detect TB cases early among those who sought health care with or without signs of TB. This is conducted at every entry point. The second case finding strategy adopted is active case finding (ACF) through targeted approaches. These two mechanisms are the plausible approaches established in Eswatini to finding the missing cases of TB. The end programe review together with the rGLC noted the following achievements, challenges and gaps.

Achievements:

- Universal use of GeneXpert testing for TB diagnosis in presumptive TB cases.
- TB units offer a "one-stop shop" for TB/HIV/NCDs services.
- Integrated specimen courier system established in all regions.
- Urine LAM incorporated in TB diagnosis for PLHIV.
- TB Diagnosis is highly decentralized.
- Implemented successfully TB/Covid-19 bi-directional screening.

Keys Challenges and Gaps

- 39% of TB patients were missed.
- Low skill set to diagnose clinical forms TB, including EPTB.
- Limited number of Genexpert.
- Limited frequency of specimen pick up leading to long turnaround time.
- Recurrent shortfalls in the supply chain for TB diagnostic consumables.
- Only about one-third of the enlisted contact are evaluated for TB.
- Low access to CXR, only 16 facilities have functional CXRs (12 in Government and 4 in private facilities) and 01 mobile digital CXR.
- Intensified case finding highly dependent on the OPD screening, TB screening in other departments is passive even with availability of TB screening.
- There are no subnational estimates of TB burden and no subnational targets, including facility targets, this leads to passiveness in case finding.
- The use of stool as one of the specimen options for TB diagnosis in children has not been rolled out.
- The next generation sequencing (NGS) is currently not functional, the problem has not been fully elucidated as whether it is the human resource capacity to run NGS or the fault with the equipment.

TB treatment and Care

Eswatini has established TB treatment modalities, applies a decentralized model, only patient with acute medical conditions are admitted in TB isolations. Patients are supported by both their family members and community health care workers that provide DOT and treatment monitoring at community level.

Achievements:

- Well capacitated HCWs, in TB management, they implement national guidelines accordingly.
- TB units offer a "one-stop shop" for TB/HIV/NCDs services.
- Continuous decline of loss-to-follow-up.

Key Challenges and Gaps

- TB mortality remains high, (Higher in DS-TB (13%) than in DR-TB patients (10%).
- Under-reporting of TB drug adverse events (AE).
- Ancillary drugs are not readily available (e.g gabapentin for peripheral neuropathy).
- Relatively low integration of TB treatment services in health facilities.

2.5.1. TB Preventive Therapy and Infection Prevention & Control

Eswatini has made progress in the provision of TB Preventive Treatment (TPT). The country has set a 90% target for TPT initiation among the eligible population. Guidelines, SOPs and job aids have been developed and are available in most health facilities and most Health care workers especially in the ART departments have been trained on TPT. New short course TPT regimens are adopted and are routinely offered in all ART sites (public facilities). TPT is largely provided in public health facilities most private facilities do not provide TPT. Efforts to scale up TPT provision for PLHIV, Miners/ex-miners with silicosis and all household contacts of confirmed pulmonary TB cases remain a priority in the country.

Achievements/Best Practices

- IPC risk assessments have been conducted to establish patient flow and systematic screening in most facilities.
- Cascade training on IPC done across all regions of the country.
- Significant improvement in TPT coverage among PLHIV from 18% in 2018 to 77% in 2022.

Key Challenges and Gaps

- Most of health facilities do not have active IPC plans.
- Poor capturing of HCW screening on CMIS.
- Inconsistent supply of IPC consumables i.e N95 respirators and fit test kits.
- Limited isolation rooms and air filtration systems.
- Low TPT uptake in < 5 household contacts of TB (31% in 2022).

Documentation and reporting of TPT data is through an electronic information system (CMIS), although there is still under reporting and challenges in timely access to accurate and consistent data. There has been a due to the TPT surge scale up campaign conducted in 2022.

Nonetheless, TPT coverage among household TB contacts and Miners/Ex-miners with silicosis remains low. There are challenges with household contacts reporting to the health facility for TB screening, TPT evaluation, initiation and follow up due to financial constraints. Furthermore, there is refusal of asymptomatic household contacts to initiate TPT and suboptimal training coverage of community health care workers on TPT. Moreover, some of the TB treatment sites still offer the longer TPT regimen (6H) versus the shorter TPT regimens (3RH/3HP) due to lack of awareness. TPT uptake among household contacts < 5 years decreased from 62% in 2019 to 31% in 2022 while TPT uptake for household TB contacts who are over 5 years was at 21% in 2022. TPT initiation among Miners/Ex-miners with silicosis was at 9% in 2022.

In the MOH Infection Prevention and control project is under the Quality Management Program (QMP). There are 4 Regional IPC Coordinators assigned in the 4 administrative regions tasks with supporting all healthcare facilities through the implementation of Infection prevention and control measures. The TB/HIV thematic area under the NTCP consists of TB prevention interventions of which TB Infection Prevention and Control is one of the components. The National TB IPC coordinator is responsible for facilitating TBIPC measures in both healthcare and Community settings in the country and the scope of TBIPC encompasses Managerial activities, Administrative controls, Environmental controls and Personal Protective Equipment. However, there is still a need to harmonize Infection prevention and control activities with the QMP in order to ensure that both standard precautions and transmitted based infections (TB/HIV) are fully covered. The Healthcare facilities have an IPC focal person and a committee guided by TORs though there are still some challenges in almost all the intervention strategies. Most of health facilities do not have active IPC plans and there is poor capturing of HCW screening on CMIS. There is inconsistent supply of IPC consumables i.e., N95 respirators and fit test kits. Hospitals and health centres have limited isolation rooms and poor air filtration systems in health facilities. Infectious waste is processed in institutions with Incinerators but there is always a delay in transportation of facility waste material resulting in misuse of burn pits in health care facilities. JOINT PROGRAMME REVIEW TB/HIV/PMTCT, March 2023 between health facilities and communities. ACF is seen as an instrument for reducing the broader socioeconomic consequences of TB hence it is the hallmark of the TB response.

The current Case finding strategies proved impactful in reaching the hard to reach populations with TB services and maximizing screening through digital platforms in health facilities TB Case finding remains low relative to expected TB prevalence/incidence. According to the 2022 WHO Global TB report, in Eswatini, only 61% of incident TB cases are diagnosed. A range of factors help account for this gap identified during the recent programme review were as follows:

(a) The use of symptom screening leaves out non-symptomatic TB cases;

(b) The symptom-based screening not being conducted the desired fidelity;

(c) The quality of symptom-based screening may be poor, especially in busy facilities;

(d) When clients are presenting with other, more pressing complaints; clients may not be forthcoming about their symptoms if they fear it will lengthen their visit at the health facility; and

(e) Community-level case finding and contact investigations may not be conducted on a large enough scale; patients may be diagnosed but not notified.

To counter some of the inequities in screening the country is introducing digital chest X-ray (including Computer Assisted Detection - CAD) in TB screening to improve case finding, notably in clients who cannot produce sputum and in those who are not symptomatic as a complementary screening tool.
Furthermore, TB case finding in communities' program is known to form an integral part of closing the gap between health facilities and communities, its implementation is often fraught with myriad challenges, comprising reduced human resource; lack of resources, poor linkage with the health system, poor coordination, poor supervision, poor quality control and support. These challenges can contribute to wastage of both human capital and financial resources.

On another note promoting a community-driven and community-owned system is of vital importance to address implementation of case finding. Meaningful engagement of communities to improve case finding will be drawn from lessons learnt during community during recruitment of TBCs which proved effective as community are addressing TB health issues although its suboptimal. However, there is need to expand community engagement by involving other community stakeholders like CSO, CBOs NGOs, FBOs, Youth groups, Support Groups and Traditional Healers.

The need to employ the vigorous approaches to find TB cases to reach the 90% treatment coverage was set by Global Plan to End TB Strategy by 2030 was augmented by data from recent Prevalence survey and Programmatic TB data.

More so, Eswatini having experienced a dramatically declining trend in case notification with narrowing of the gap between incidence and notification rate, - given 61% treatment coverage, the missing 39% of TB cases will be daunting hence the need introduce a more robust approach. The role of TB Champions some of whom are TB survivors has been fundamental in ensuring targeted approaches are implemented to the key affected population. The TB Champions act as a conduit of information to the public to identify signs and symptoms of TB early.

2.5.3. PMDT (DRTB)

The programmatic management of DR-TB (PMDT) had made the remarkable achievements are as follows; To a large extent the PMDT program has introduced nurse-led treatment initiation. The treatment success rate for DR TB improved from 53% in 2015 to 79% in 2021 cohort. This is attributed to the provision of comprehensive package of treatment support and the use of new shorter and friendly regimen. In 2020 Eswatini introduced an all oral Bedaquiline-based for 9-11 months.

Achievements/Best Practices:

- Improved DR TB treatment success rate.
- Has rolled out targeted next generation sequencing in the surveillance for DR TB and DST.
- Has introduced patient friendly and shorter regimen including the transition to the BPaLM/BPaL regimen.
- Provides psychosocial and nutritional support and travel cost refunds to DR TB patients with financial and psychosocial support for vulnerable patients, to ensure that pat.
- Nationwide scale-up of VOT for treatment monitoring.

Key Challenges and Gaps

- Low DR-TB treatment coverage (only 29% in 2021) which was correlated with low TB treatment coverage.
- Some facilities do not have functional ECGS machines, this was the case at Mkhuzweni, TB center and AHF TB clinic in Manzini.
- Transport deficits leading to delayed referral of acute patients to the admission facility.
- Delays in disbursement of data bundles/transport refunds.
- Suboptimal community outreaches due to transport challenges.
- The deliberations and recommendations are not documented in the individual patient file.
- The programme has great strengths in programmatic management of DR TB, there is no specialised clinician in the programme or supporting the programme to guide the clinical management of challenging cases with other acute medical conditions that may be life threatening.

- Lack of dedicated psychosocial counsellors in some DR TB treatment sites like the TB center.
- Currently there is no officer to coordinated Pharmacovigilance and aDSM.
- Key gaps with interim treatment outcome are that for 3 consecutive years 2019, 2020 and 2021, 8% of the patients have no culture results. Further, 5 to 8 in the last 3 years did not culture convert.
- Mortality among DR TB patients remains relatively high about 8 to 11%. Varied skills in managing acute medical conditions in DR TB patient. At present there is no internal Medicine consultant supporting the programme.
- Variations in the coverage of TPT in contacts of DR TB household contacts.

2.5.4. Integration of TB/HIV/NCD Services and Mental health

Eswatini is still among the 30 countries with the highest TB/HIV burden, a high HIV burden and high rates of TB associated with HIV. About 63% of the TB patients are co-infected with HIV and of the co-infected The National TB Control Program and AIDS work collaboratively to implement TB/HIV collaborative activities at all levels. The programs are focusing on providing patients with an integrated package of care that include provision of HIV care for presumptive and confirmed TB patients and the provision of TB prevention services in HIV care settings. There is political support for the integration of services in facilities resulting in high level of integration of TB/HIV collaborative activities in facilities, which includes patient education, screening, diagnosis, treatment, prevention and follow up.

Achievement//Best Practices

- HIV testing among TB patients is almost universal at 99%.
- 98% are receiving ART and 99% are receiving cotrimoxazole preventive therapy (CPT).
- In selected facilities TB/HIV/NCD/mental health and COVID services are integrated.
- A module within CMIS for integrated service delivery exists.

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Keys Challenges and Gaps

- Lack of tools for integrated services.
- The Module for integrated services in CMIS not fully rolled out.
- Lack of consolidated guidelines to provide guidance on a common approach.
- Lack of coordination meeting between TB and NCD and mental health.

2.5.5. TB in Children and Adolescents

TB in children in the Kingdom of Eswatini has continued to be a challenge. The notification of children under 15 years remains low at 4.3% against a target of 12%. Contact investigation for child contacts is suboptimal. However, improvements have been made on tools to assist in contact investigation.

Achievements/Best Practices:

- The treatment success rates for children and adolescents with drug-susceptible and drug resistant tuberculosis are good (91% for patients aged 0-14 years).
- Financial support is available for patients less than 10 years of age to allow access to TB-related care.
- Video-observed therapy (VOT) for treatment of DR-TB has been successfully introduced in several facilities that provide DR-TB treatment for children.
- There has been good integration of childhood TB screening into other health and education programs.
- Screening for tuberculosis has been integrated into routine care for children and pregnant women.
- There has been integration of childhood TB programs with the Expanded Program for Immunizations (EPI), the Integrated Management of Adult and Adolescent Illnesses (IMAI) manual, school health programs, the UNICEF child forum, and Sexual and Reproductive Health initiatives (SRH).
- Paediatric formulations are now available for all medications used to treat DS-TB as well as first line therapy for DR-TB and TPT except linezolid.
- Oral short-course therapy is the first-line option for paediatric patients with DR-TB.
- Diagnostic algorithms for childhood TB are contained in the national Guidelines on Childhood TB and are available.

Key Challenges and Gaps

- The use of stool not yet rolled out in routine surveillance.
- Limited skill set in childhood TB diagnosis.
- Low level of integration of childhood TB in MCH.

2.5.6. Laboratory Diagnostics services, include a subchapter on TNGS

Laboratory services are essential for the success of Eswatini's TB programe. The Government of Eswatini has dedicated a department within the Ministry of Health (MOH) organogram namely the Eswatini Health Laboratory services (EHLS), which has played a critical role in the TB reponse with regard TB laboratory support. The national TB laboratory network comprises 35 peripheral laboratories which are under the leadership of the National TB Reference Laboratory (NTRL) reporting to the Eswatini Health Laboratory Services (EHLS) of the Ministry of Health. From 2019, the NTRL has sustained an accreditation status for ISO 15189:2012 standard for medical testing laboratories awarded by the Southern Africa Development

Community Accreditation Services (SADCAS). The TB program through the NTRL collaborated with the Supra National Reference Laboratory (SNRL) Uganda to provide support to the NTRL of Eswatini.

Achievements/Best Practices:

- Specimen referral system scaled up to all (352) facilities.
- NTRL has established competencies in Liquid culture.
- LF-LAM scaled up to 190 sites but with frequent stock out of kits.
- NTRL has sustained an accreditation status for ISO 15189:2012.

Key Challenges and Gaps

- Recurrent stock out of laboratory commodities leading to interruption of TB testing at NTRL for culture and DST.
- TB Diagnostic network assessment not yet completed.

2.5.7. Procurement Supply Management and Pharmacovigilance

The national health supply chain is integrated for all commodities except for laboratory commodities and is organized into two levels - central and facility level. It supports more than 300 health facilities serviced directly by CMS through a commodity pull system. The regional health management teams provide oversight to the supply chain within the regions, with regional pharmacists as focal people in the supply chain. The national supply chain technical working group (SC-TWG) coordinates the country supply chain and designates a national quantification sub-committee which is mandated to conduct quantification and forecasting of the national health commodity needs.

The Medicines Registration Unit (MRU) established in the ministry of health functions is guided by the legal framework of the Medicines and Control Act of 2016 and oversees all the regulatory functions for medical products in the country. The MRU also houses the National Pharmacovigilance Centre (NPC) which coordinates pharmacovigilance activities at national, regional and facility level. The general objective of PSM thematic is to evaluate HIV/TB/SRH commodities procurement, supply chain and logistics system in Eswatini from the central level right down to the lowest level. The health care delivery system to ensure there is uninterrupted supply of HIV/TB/SRH Medicines to treat all diagnosed patients including adverse drug reactions.

Achievements /Best Practices

- The National Essential Medicines List (EML) Committee coordinated product selection and review product lists based on review of program guidelines which are usually informed by WHO recommendations.
- National supply chain coordination mechanisms are in place, a supply chain technical working group (SC-TWG) and national quantification subcommittee have been established.
- Both SC TWG and quantification subcommittee target the participation of the HIV, PMTCT and TB programs.
- The quantification subcommittee conducts an annual quantification exercise to produce three-year forecasting. Supply plans are updated quarterly to inform quantities of products procured.
- MOH Medicines regulatory unit is responsible for regulation of health products including the oversight of pharmacovigilance activities through the National Pharmacovigilance Centre (NPC).

- Pharmacovigilance reporting mechanisms are in place at all levels to facilitate adverse drug reaction reporting to the national pharmacovigilance centre.

- Manual inventory management is in use in all the facilities. Stock cards are used for inventory management for all products. A paper-based LMIS system is used for monthly reporting on commodities at facilities; this report also informs the monthly order to CMS (TB & PMTCT) and mother facilities (HIV).

- CMS has a data management unit (DMU) which is responsible for collating the logistics data from facilities into a commodity tracking system (CTS).

- Facilities are able to timely submit orders and reports to the regional pharmacists who coordinate validation and submission of orders to the central medical store (CMS).

- CMS makes use of an electronic inventory management system (NAVISION) and captures the consolidated orders for processing.

- Facilities make monthly orders to CMS. Orders are processed & distributed by CMS using a regional schedule.

- Multi month dispensing (MMD) for patients on chronic medication is practised in all regions and is welcomed by the patients in all age groups 142.

- An electronic inventory management system is in use at the Central Medical Stores (CMS) which positively contributes to good storage and distribution practices.

- A data management unit at CMS complements the integrity of the facility logistics data captured by performing data validation processes at all levels of data entry.

- Paper-based LMIS data is documented, tracked and validated at regional level.

- There is an ongoing pilot for the electronic logistics management information system (e-LMIS) at selected facilities in the Hhohho region in preparation for national rollout.

- Daily dispensing records are maintained in CMIS and the clinic EMR for HIV/TB drugs, and in the EMR for NCD/FP.Quan TB tool for quantification of TB medicines was adopted for use in quantification and supply planning and generating Early Warning system reports and the pharmacist from CMS and program officers were capacitated.

- Storage capacity/space and distribution vehicles increased at CMS.

- Warehousing of commodities largely integrated, plan for full integration of lab and pharmaceutical products is progressing well.

- Medicines & Related Substances Control Act of 2016 is in place and supported by a standalone Pharmacovigilance policy which is enacted by various guidelines and SOPs on regulatory functions.

Challenges /Strategic Gap

- There are no SC pharmacists in programs and this stretches the already overburdened CMS pharmacy personnel to cover SC needs in each program, with each pharmacist covering multiple programs.
- Ministry of finance procurement policies are not aligned to best practices within the health commodity procurement sector. The following contribute to a decreased supplier base and lack of interest to participate to the tender from well reputable commodity suppliers and adversely leading to unavailability of key medicines at CMS.
- No provision for upfront payments to suppliers.
- Non-flexibility in payments of suppliers; there is no provision to pay suppliers in foreign currency of Suppliers only paid once order is fully delivered.
- Payment terms are not favourable to suppliers.
- Delays in disbursement of funds by the MOF for commodity procurement 143.
- Centralised budgets impede operations in the regions and at central level, key areas affected include:
- Commodity distribution fleet operations – distribution vehicles made available through partner support, however funding for fuel, personnel and logistics personnel is not adequately budgeted and provided o Supportive supervision visits – logistics budgets not provided for at regional levels.
- Finance issues related to commodities appear to be still dealt with on an ad hoc basis. This impacts on HR issues as well.
- No Coordination platform for all stakeholders (government-MoH & MoF, Global Fund-NERCHA, PEPFAR) that support commodity supply.
- Pharmacy storage infrastructure in all sites has dilapidated with some storage areas too small or not fit to house medical commodities. Good storage and distribution practices are severely affected by lack of maintenance of air conditioners, cold chain storage facilities and fixed storage infrastructure.
- Post Marketing Surveillance (PMS) is a key contributor to a functional pharmacovigilance system and the absence of a National Medicines Regulatory Authority (NMRA) limits the ability to ascertain quality of health products. No measures are in place to identify and track falsified and substandard medicines that may contribute to adverse drug events.
- Low Adverse Event reporting.
- Manual inventory management systems are vulnerable to exploitation and data collected from regional sites is not easily consolidated due to lack of adequate transportation to the various facilities. Time delays in data consolidation prevent real-time decision making.
- Pharmaceutical services human resources are not adequate, there is a shortage of pharmacy personnel at facilities and specialist pharmacy personnel at central level to drive policy implementation across all units.
- Central Medical Stores (CMS) systems are not robust and the followings gaps were identified: o lack of visibility of product pipeline o not integrated with logistics management information system continued inventory management system downtime.

- No review/assessment is done to measure the performance of the forecast.
- Although MRU is established to prepare for the establishment of MRA, it is severely under resourced leading to constrained implementation of activities.
- CMS relies heavily on donor funding for daily operations, this includes servicing and maintenance of equipment, vehicles, and fuel provision.

2.5.9. Post-TB Lung Disease (PTLD)

A significant proportion of pulmonary TB patients develop lifelong sequelae following an episode of TB, this impacts negatively on their quality of life and increases the risk of premature death. Previous episode of PTB substantially increases the risk of recurrent TB, due to residual lung damage. Additionally, the irreversible lung damage occasioned by an episode of TB fibrotic potentiates the development of drug resistant TB. Patients with PTLD may exhibit persistent cough and radiological features consistent with PTB. These features may be mistaken for recurrent TB. PTLD can also occur in during the active phase of TB and during treatment if this goes unrecognized and not managed can lead to undesirable outcomes of TB treatment. . It is for these reasons, the NTCP is concerned about PTLD. The sequelae of PTLD can occur across all age groups including children and adolescents. For the diagnosis of PTLD, CXR and the following are required, Spirometry and CT scan. This is totally a new establishment, guidelines will need to be developed, the MOH will have to procure equipment for the diagnosis of PTLD, develop algorithms for PTLD evaluations, and build capacity in the use of spirometry and use of diagnostic algorithms. While PTLD may sound like a new domain, it isn't, not much attention has been given to PTLD in the past. PTLD has been handled from the broader health system than the TB program. Currently, health systems have several deficits in handling PTLD, starting with low diagnostic capabilities, absence of o systematic referral systems and weak linkage to care for patients with PTLD, low skill sets in the management of PTLD generally exist in most health systems, Eswatini is not an exception. This NSP proposes solutions to strengthen the handling of PTLD anchored around building synergies between the TB program and specialties like respiratory clinics (Pulmonology) and outpatient departments and palliative care that are involved in the care of a PTLD clients.

Cross-cutting Issues

Governance and Programme Management and Finance

The NTCP enjoys political support from the leadership in the Ministry of Health. The NTCP has clear defines managed deliverables and accountability. The NTCP is guided by the National TB Control strategic plan. The NTCP has created an enabling environment for wider partner participation. The Partners participates in the development of policy documents, coordination and implementation of interventions under the strategic plan. The NTCP has highly functional and capable technical working teams with national and regional programmatic structures.

Challenges and Key Gaps

- The NTCP has not yet established the MAF-TB.
- Delay in Processes and procedures around procurement hence leading to major stock outs in key TB commodities.
- Lack of a legislative and policy framework for private sector engagement and data governance in the healthcare sector.
- Lack of fiscal space that can be allocated towards HRH.
- The HRIS system exists, but is not updated or used.
- An electronic Training Information System exists, but is not updated or used.
- HRIS, training, and CMIS information systems are not integrated.

Table 1: Programmatic Gap Analysis

Programme Area		Key gaps	Root cause
TB Diagnosis	• TB case finding	Low TB treatment coverage (53%) of cases are missed in 2022.	Asymptomatic TB cases missed by symptom-based screening and frequent stock out of Xpert cartridges and TB LAM, coupled with Very low digital CXR coverage in the health facilities.
	• Childhood TB	Low case detection in children only, contribution to total cases is suboptimal at 4.3%	Low skill set to conduct NGA, stool sample use for childhood TB diagnosis is not rolled out
	• DR TB	Low DR TB case detection, at least 30% are detected	Correlated with overall TB case finding as GeneXpert is used as upfront test, Next generation sequencing use was not fully optimized
	• PPM	Low contribution to total TB cases (18%)	Low investment in TB diagnostics
	• Integrated TB screening	Sub-optimal TB screening in non-communicable recipient of care	Systematic screening of TB is not fully optimized in health facilities coupled with gaps in data capturing
	• Diagnostic network	Low proportion of Xpert machine coverage in 149 facilities with TB services is 23%	Sub-optimal national transport system due to fuel shortage, vehicle maintenance challenges and human resource constraints
		Low frequency of specimen pick-up from the health facilities (only two days/week) leading to prolong turn-around time (2-7 days)	
TB Prevention	• TB Preventive Therapy	Suboptimal TPT coverage, 77% uptake in PLHIV in 2022	• TPT delivery is limited only at health facilities, further transport cost creates a barrier
		No data on TPT coverage among key populations (miners/ex-miners)	• Inadequate capacity to utilize data system
		No TST/IGRA availability	• No funding was allocated to purchase TST/IGRA
	• TB Infection prevention and control (IPC)	Sub-optimal implementation of IPC measures including routine TB screening and fit testing for HCW	• Inconsistent supply of IPC consumables
			• Not having IPC plan and active IPC committees/focal point person in health facilities
		No systematic reporting of IPC data	• Gaps in IPC data capturing
TB Treatment and Care		Declining TB treatment success rate from 89% in 2019 to 81% for DS-TB in 2021 (2019 cohort to 2021 cohort	• Stock-out of anti-TB drugs
			• Integration with NCD and mental health suboptimal
		High TB related mortality	• Late TB detection other drivers not fully established
		TSR not evaluated by other comorbidities and important groups	

Programme Area		Key gaps	Root cause
TB/HIV		Facility-level TB-HIV recording and reporting gaps	
Programme management	• Financial and social support		
	• Human resources	64% of HR are funded by donors and 3% of posts are vacant.	• ack of fiscal capacity allocated towards HRH, freeze of national hiring,
	• HMIS	No link between DHIS2 and CMIS Incomplete data collection and analysis across the cascade	• Under reporting from health facilities
			• Low coverage of CMIS use (at least 30% are using paper-based)
			• Low skill set of data management and analysis
			• Limited access to data dashboard especially at the facility level
			• Low frequency of data review
	• Partnerships and multi-sectoral engagement	No established multi-sectoral accountable framework for TB	• Slow pace of MAF formation though the background discussion and the process is defined
	• Pharmaceutical and other medical supplies	Frequent stock outs of medicines and laboratory commodities	Inadequate coordination mechanism for Supply Chain
Research and strategic planning		Underutilization of data and information system for TB programming and policy development, No conduct of patient pathway analysis, catastrophic cost, inventory study	• Low frequency of data review meeting, low coverage of CMIS

Logical Framework

Vision

Eswatini free of TB by 2035 **Goals**

- Reduce TB incidence of all forms of TB by 25% in 2028 from 347/100,000 in 2021 to 260/100,000
- Population
- Reduce TB Mortality by 20% in 2028 from 85/100,000 in 2021 to 68/100,000 population
- Eliminate patients' catastrophic cost by 2028

Strategic Objective 1:

To increase TB treatment coverage to 90% by 2028

Strategic Objective 2:

To strengthen primary and secondary TB prevention services

Strategic Objective 3:

To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care.

Strategic Objective 4:

To improve TB screening, diagnosis, treatment and prevention among children and adolescents

Strategic Objective 5:

To improve the quality and utilization of TB Information for decision making and programmatic actions

Strategic Objective 6:

To Strengthen coordination, governance and human resource capacity for optimal program perform

Strategic Objective 1: To increase TB Treatment Coverage to 90% by 2028

The NTCP plans to strengthen TB case-finding activities to increase TB treatment coverage to reach 90% in 2028. Various strategies to improve TB case-finding, expanding access to sensitive and molecular including digital CXR with CAD/AI, social mobilization to create demand TB screening in hotspots as well as scaling up TB contact tracing. The programe will collaborate with other programme to strengthen integrated specimen courier system.

Below are expected strategic outcomes for this objective, strategic interventions and major actions that will be implemented to achieve the strategic objective.

Table 2: Objective 1 Strategic Matrix

Objective 1: To achieve 90% TB Treatment Coverage by 2028			
Expected Strategic Outcome	**Strategic Intervention**	**Major Activity**	**Sub Activities**
Increased TB case detection at the community level	1.1 Expand access to TB screening services in the community, key population, and congregate setting	1.1.1: Scale up targeted active case finding in the community, key population (miners/examiners) and congregate setting (Prisons) with the use of CXR and CAD/AI	1.1.1.1 Increase access to molecular TB diagnostic tools by incorporating newer technologies in the diagnostic network and increasing the number of Genexpert machines
			1.1.1.2 Strengthen integrated courier systems by developing a tracker of specimen movement to bring about efficiency
			1.1.1.3 Develop a TB case-finding plan
			1.1.1.4 Conduct hotspot mapping to inform mass TB screening campaigns using mobile vans
			1.1.1.5 Conduct TB screening targeting key vulnerable population
			1.1.1.6 Conduct mass TB screening in prisons, among HCWs
			1.1.1.7 Develop a framework for TBCI, one that includes all TB contact including contacts of clinically diagnosed patients
			1.1.1.8 Procure 10 digital CXR for all regions
Early case detection and reduce on missed cases of TB	1.2 Enhance TB case-finding approaches at the facility level	1.2.1 Strengthen TB case finding at the health facility level	1.2.1.1 Decentralise TB case finding in all health facilities to include all departments (not limited to MCH, OPD, IPD, and nutrition unit)
			1.2.1.2 Scale up bi-directional TB screening for Covid/NCD/HIV/TB
			1.2.1.3 Scale up urine LAM as per national guidelines
Increased number of Presumptive TB patients	1.2 Strengthen clinical skills to improve index of suspicion of TB	1.2.1 Build skills in front-line HCW in TB diagnosis	1.2.1.1 Develop a TB curriculum for HCWS and CHWS
			1.2.1.2 Conduct workshops to train HCWs in systematic TB screening
			1.2.1.3 Conduct onsite mentorship to front-line HCWs in systematic TB screening
			1.2.1.4 Develop Job aids (Algorithms) to guide HCWs and CHWs in TB screening
			1.2.1.5 Train nurses and clinicians in reading and interpretation of CXR
Increased DR TB detection	1.3 Optimize drug-resistant TB diagnosis and surveillance	1.3.1 Integrate next-generation sequencing in the diagnostic algorithm and routinely test for all bacteriologically confirmed TB cases	1.3.1.1 Develop a diagnostic algorithm to incorporate NGS in DR TB surveillance
			1.3.1.2 Develop skills and competencies in NGS
			1.3.1.3 Hold sensitization meeting for HWCs in all regions on the role of NGS in DR TB surveillance

Objective 1: To achieve 90% TB Treatment Coverage by 2028			
Expected Strategic Outcome	**Strategic Intervention**	**Major Activity**	**Sub Activities**
			1.3.1.4 Support EHLS to establish a bio-information system for surveillance of antimicrobial resistance including for DR-TB
			1.3.1.5 Introduce and Scale-up Xpert XDR cartridge for all bacteriologically confirmed TB cases to enhance XDR TB detection
Increased childhood TB case detection	1.4 Improve childhood TB diagnosis through the use of an alternative sample (Stool) testing for children	1.4.1 Roll out alternative samples (e.g.stool) testing for children	1.4.1.1 Conduct the validation of the use of stool and NPA for childhood TB diagnosis
			1.4.1.2 Build capacity in running stool/NPA specimens for TB diagnosis in all regions/facilities
			1.4.1.3 Train Laboratory scientists in the adopted method for the use of stool
			1.4.1.4 Sensitise HCWs in all regions on the use of stool for TB diagnosis
Improved TB diagnostic network, with increased bacteriologically confirmed cases	1.5 Strengthen the quality of the TB diagnostic network	1.5.1 Develop TB laboratory quality assurance systems	1.5.1.1 Develop quality assurance manuals
			1.5.1.2 Orient all laboratory staff in TB quality assurance systems
			1.5.1.3 Support to implement the ISO 17043 standard at the NTRL
			1.5.1.4 Conduct quarterly supportive supervision in the TB network
			1.5.1.5 Conduct EQA to all regional labs
		1.5.2 Enhance management of laboratory data	1.5.2.1 Develop data reporting framework for TB lab information system
			1.5.2.2 Scale up electronic recording platforms
		1.5.3 Support to EHLS to establish a backup referral laboratory locally and specimen referral to nearby international laboratories during service interruptions	1.5.3.1 Build capacity in staff from Nhlagano referral lab in the NTRL to train them in the culture and DST testing
			1.5.3.2 Establish an MOU with a neighboring country to provide DST testing (pheno/sequencing service) in case of the C&DST lab failure or any form of service interruption in the Eswatini
			1.5.3.3 Develop an SOP for transporting samples across international borders
			1.5.3.4 Sensitize the laboratory staff on the SOP for specimen referral

Objective 1: To achieve 90% TB Treatment Coverage by 2028			
Expected Strategic Outcome	**Strategic Intervention**	**Major Activity**	**Sub Activities**
			1.5.3.5 Transfer the samples to the referral labs during service interruption of the NTRL (sample testing fees, transport cost)
			1.5.3.6 Conduct quarterly monitoring and supportive supervision of the backup lab in Nhlangano and review the performance of referral of specimens to the SRL
Raised TB awareness	1.6 Raise TB awareness and create demand	1.6.1 Raise public knowledge about TB to model health-seeking behavior.	1.6.1.1 Conduct mass TB sensitizations
			1.6.1.2 Conduct TB awareness using village and community leaders

Strategic Objective 2: To strengthen Primary and Secondary TB Prevention Services

Eswatini has prioritized primary and secondary TB prevention through infection prevention and control and TB preventive therapy respectively. To achieve above objective, the NTCP intends to revamp the infection prevention committees in facilities, sustain the supply of infection prevention commodities such as the surgical masks for TB patients and N-95 respirators for health care workers. Further, to accelerate the attainment of the objective the NTCP will ensure that there are IPC plans at facility level.

The NTCP will collaborate with the HIV programme to scale up TPT in PLHIV towards saturation. The NTCP will also focus on scaling up TPT in other high risk population who includes <5 children and other household contacts of TB patients, miners, and ex-miners. In order to optimize uptake and TPT completion the NTCP will introduce shorter TPT regimens which include 3HP, 1HP and 3HR for DS TB, Levofloxacin and Ethambutal for DR TB contacts. Additionally, the NTCP will introduce TB infection screening using platforms such as IGRA to augment approaches to TPT in selected household contacts.

Below are expected strategic outcomes, strategic interventions and major actions for this objective that will be implemented during the five years of the NSP to achieve the expected outcomes.

Table 2: Objective 1 Strategic Matrix

Strategic Objective 2: To strengthen Primary and Secondary TB Prevention Services			
Expected Strategic Outcome	**Strategic Intervention**	**Major Activities**	**Sub Activities**
Accelerated reduction of TB incidence.	2.1 Ensure compliance to IPC measures in the health facilities	2.1.1 Develop IPC implementation frameworks	2.1.1.1 Hold meetings to develop IPC standards
			2.1.1.2 Update IPC guidelines
			2.1.1.3 Hold trainings in IPC to build capacity in implementing IPC standards and procedures
			2.1.1.4 Ensure consistent supply of Personal Protective Equipment (PPE)
			2.1.1.5 Print IPC IEC materials and guidelines
			2.1.1.6 Conduct mentorship and supportive supervision for the IPC committee members/focals including environmental officers
			2.1.1.7 Enhance the coordination with the regional IPC coordinators to strengthen supportive supervision
			2.1.1.8 Train regional IPC coordinators in IPC on IPC measures for them to provide strategic guidance to the facilities optimally
			2.1.1.9 Provide sputum collection outlets
			2.1.1.10 Install mechanical devices and UVG in strategic places in health facilities
			2.1.1.8 Provide TB IPC Risk assessment tools including developing an IPC dashboard to track the level of implementation of IPC standards in CMIS
			2.1.1.9 Support the development of IPC plans in all facilities
			2.1.1.10 Support the establishment of the IPC committees in all health facilities
			2.1.1.11 Establish medical surveillance system for TB among HCWs

Strategic Objective 2: To strengthen Primary and Secondary TB Prevention Services			
Expected Strategic Outcome	**Strategic Intervention**	**Major Activities**	**Sub Activities**
			2.1.1.12 Conduct a study to establish the burden and drivers of TB among health care workers to inform the development of the policy guideline
			2.1.1.12 Sensitise the public on infection control practices in congregate settings
			2.1.1.13 Promote cough etiquette and hygiene practices in communities
			"2.1.1.14 Conduct training for Wellness focal persons on standardized, systematic TB screening for HCWs
			2.1.1.15 Hold a meeting to engage collaborating partners on the development of a TB Surveillance Policy for HCWs.
			2.1.1.16 Conduct a sensitization meeting to engage RHMT and other key IPC stakeholders on IPC policy implementation plan and reporting framework.
			2.1.1.17 Engage Regional M&E to facilitate IPC data flow from lower level to national level (4 quarterly meetings:
Improved TPT coverage in PLHIV from the current 77% to atleast 95% and improve TPT coverage in other high-risk population to 90% by 2028	2.2 Scale up TPT in all at risk population	2.2.1 Improve TPT uptake and completion in the eligible populations	2.2.1.1 Develop a TB consolidated guidelines that include TPT shorter regimens
			2.2.1.2 Print and disseminate the updated guidelines
			2.2.1.3 Promote integration of TPT education messages with HIV prevention and TB/HIV treatment messages
			2.2.1.4 Run TPT scale up campaigns targeting at r high risk population to catalyse the attainment of TPT saturation
			2.2.1.5 Procure equipment and reagents for IGRA
			2.2.1.6 Scale up TPT provision in household contacts of DR TB
		2.2.2 Implement the differentiated service delivery for TPT	2.2.2.1 Conduct a workshop to develop the DSD model
			2.2.2.2 Develop SOPs for CHW on TPT to guide implementation
			2.2.2.3 Conduct trainings in all region on TPT for the TPT champions
			2.2.2.4 Establish routine community TPT delivery services in all regions
		2.2.3 Improve TPT data management including tracking outcomes	2.2.3.1 Update TPT platform in CMIS to augment data management
			2.2.3.2 Conduct quarterly data quality assessment for TPT data
			2.2.3.3 conduct TPT data review meetings and share the best practices

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care

The Ministry of health through the NTCP aims to improve the TB treatment outcomes for all forms by providing patient friendly regimens. To achieve above objective the NTCP will provide psychosocial nutritional support to TB patients and their families. Early case detection will be paramount to achieving this goal. Community follow up of patients will be essential to reduce the lost to follow up to zero. Partly the TB mortalities are due to undetected and untreated NCDs, The NTCP will establish close collaboration with NCD programme to enhance TB/NCD screening and management. TB/HIV collaborative efforts will be enhanced to ensure reduction in the TB mortality rate which remains high among PLHIV.

The NTCP will strengthen, DR TB case management and monitoring for adverse drug reactions. Build collision in case management through multidisciplinary bi-weekly case management meetings. The NTCP will ensure uninterrupted supply of both 1st and 2nd line medicines.

Below are expected strategic outcomes for this objective, strategic interventions and major actions that will be implemented during the five years of the NSP to achieve the expected outcomes.

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care

Expected Strategic Outcomes	Intervention	Main Activities	Sub Activities
1. Strengthened multidisciplinary approach to case management	3.1 Enhance collaboration between TB/HIV/NCDs.	3.1.1 Develop country level framework on integration of TB/HIV/NCDs with clear guidance on the Collaboration.	3.1.1.1 Develop a common framework for joint operations
2. Improved TB treatment success rate to ≥90%			3.1.1.2 Hold quarterly technical review meetings
			3.1.1.3 Disseminate the framework for TB/HIV/ NCD collaboration
			3.1.1.4 Conduct joint TSS to all regions
	3.2 Provide quality integrated approach in management of TB/ HIV/NCDs/Mental health services	3.2.1 Strengthen the quality approaches to TB care	3.2.1.1 Develop the quality TB Standards care package
			3.2.1.2 Roll out the quality TB standards care package in all regions (ToT)
			3.2.1.3. Quarterly regional trainings on quality standard of care package to HCWs in the TB BMUs.
			3.2.1.4. Conduct quarterly monitoring, technical and supportive supervision by MDTs (NTCP/ ENAP/ NCDs/ Quality Program/ Ips)
			3.2.1.5 Ensure all TB/HIV patients are started on ART
			3.2.1.6 Conduct training for nurse-led DR TB case management
	3.3 Enhance case management	3.3.1 Strengthen MDT meeting on case management	3.3.1.1 Conduct weekly virtual case review meetings for both DS TB and DR TB

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care

Expected Strategic Outcomes	Intervention	Main Activities	Sub Activities
			3.3.1.2. Expand the participation of MDT meetings
			3.3.1.3 Develop standard referral guidance for TB.
			3.3.1.4. Set up a Toll-free line and sensitize national, regional, and facilities.
		3.3.2 Update TB guidelines to articulate management of Diabetes/HTN/Lung cancer and Mental Health in TB clinics.	3.3.1.5. Conduct a 5 days meeting to review and update the TB guidelines to include the Management of Diabetes/ HTN/Lung cancer and Mental Health.
			3.3.1.6. Print updated guidelines. (See SO6).
			3.3.1.7. Conduct a 1 day dissemination meeting for national and regional stakeholders.
			3.3.1.8. Conduct TOT on updated guidelines.
			3.3.1.9. Conduct quarterly regional trainings to roll out updated guidelines to HCWs in the TB BMUs. (See SO6).
			3.3.1.10 Incorporate updated guidelines checklist into existing quarterly monitoring, technical and supportive supervision by MDTs (NTCP/ ENAP/ NCDs/ Quality Program/Ips). (See SO6)
			3.3.1.11 Conduct 5-day training (4-days theory, 1-day practical) on TB/ HIV/ NCDs/ Mental Health management.
		3.3.3 Scale-up implementation of aDSM (PV).	3.3.3.1 Disseminate aDSM tools with onsite training for paper based. For CMIS sites use the aDSM module to orient HCWs on documentation and reporting.
			3.3.3.2. Conduct a meeting in collaboration with NPVU to include the aDSM module in the existing CMIS dashboards.

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care			
Expected Strategic Outcomes	**Intervention**	**Main Activities**	**Sub Activities**
			3.3.2.3 Conduct quarterly regional mentorship and supportive supervision in collaboration with NPVU to monitor implementation.
			3.3.2.4 Conduct quarterly ADSM feedback meetings in collaboration with the NPVU.
			3.3.2.5. Collaborate with NPVU to conduct quarterly causality assessment workshop (3 days)
	3.4 Establish uninterrupted supply of screening tools, testing equipment and reagents for HIV and NCDs through proper quantification, regular monitoring and timely disbursement of funds.	3.4.14 Engage and establish a coordinating team with ENAP, EHLS, CMS, NCDs to monitor availability of key TB/ HIV and NCDs reagents (Determine, Unigold, HbA1c, Chemistry, gluco- strips)	3.3.3.1 Conduct a 2-day meeting to develop an integrated forecasting model for TB/ HIV/ NCDs reagents in collaboration with the CMS, laboratory, and pharmacy..
	3.5 Collaborate with ENAP and NCDs program to ensure availability of ARVs and NCDs medicines in the TB Clinics	3.5.1 Strengthen collaboration with CMS	3.4.1.1. Conduct joint quarterly supportive supervision and monitoring visits to all regions to monitor the supply chain
			3.4.1.2 Develop check list to t
		3.4.2 Pilot anti-TB drug refill system by integrating in the LulaMeds eLocker mechanism.	3.4.2.1. Engage ENAP/ GU and visit the LulaMeds eLocker implementing sites.
			3.4.2.2. Conduct a 2-day workshop to develop SOP to facilitate implementation of LulaMeds eLocker for TB drug refill. (invite CSOs and recipients of care).
			3.4.2.3 Conduct 1-day TB LulaMeds eLocker stakeholder sensitization meeting. (RHMTs, TB focal persons, Mentors, NTCP thematic leads).

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care

Expected Strategic Outcomes	Intervention	Main Activities	Sub Activities
			3.4.2.4. Engage mentors to facilitate the roll out TB LulaMeds eLocker refills in targeted facilities.
	3.5 Scale up Patient support	3.5.1 Scale up TB patient support groups with lessons learnt from MSF.	3.5.1.1. Review and adapt existing patient support SOP to guide scale up.
			3.5.1.2 Train HCW/CHW mentors, regional coordinators to facilitate implmentation
			3.5.1.3 Conduct 1-day virtual meeting for regional leads to sensitize them on patient centred care.
			3.5.1.4 Engage mentors and regional coordinators to distribute finalized TB patient support SOP to facilities with onsite training.
			3.5.1.5. Conduct quarterly supportive and mentorship to monitor implementation.
	3.6 Strengthen mortality reviews to improve clinical care systems.	3.6.1 Scale up Mortality reviews to TB BMUs sites.	3.6.1.1. Identify facilities for scale-up of mortality reviews
			3.6.1.2 Conduct 1 national TOT training and 4 regional TOT trainings for facilities on how to conduct mortality reviews and orientation on SOP.
			3.6.1.3 Disseminate Mortality review tools
			3.6.1.4 Conduct onsite training for targeted facilities and distribute mortality review tools.
			3.6.1.5. Conduct quarterly facility integrated mortality review discussion in the existing clinical/MDT meetings.
			3.6.1.6 Share mortality review data in Semi-annual review meetings or any forums to inform any changes in case management protocols.
	3.7 Develop a programmatic	3.7.1Develop materials for programmatic	3.7.1.1 Develop guidelines for the approach to PTLD

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care			
Expected Strategic Outcomes	**Intervention**	**Main Activities**	**Sub Activities**
	approach to PTLD	implementation	3.7.1.2 Develop SOPS for PTLD
			3.7.1.3 Support NTCP focal persons/ champions to attend PTLD annual conference.
			3.7.1.4 Conduct implementation research to explore areas of interest/concern in PTLD
	3.8 Scale up cross boarder referral to track LTFU	3.8.1 Accelerate implementation of the cross-border referral system.	3.7.1.1 Conduct cross-border collaboration meetings with neighboring countries.
			3.7.1.2. Review the current approach to the management of cross-border TB patients and identify areas for collaboration and improvement
	3.9 Strengthen Treatment monitoring	3.9.1 Ensure uninterrupted supply of reagents for biochemistry	3.9.1.1 Hold a quantification meetings for laboratory reagents
			3.9.1.2 Procure reagents/ service for biochemistry
	3.10 Establish robust mechanism for tracing LTFU	3.10.1 Develop strategies for tracing LTFU	3.10.1.1 Conduct monthly tracing of LTFU
Increase the treatment success rate for DR TB from 82% in 2022 to 90% by 2028	3.11 Scale up patient friendly formulation for both children and adults	3.11.1 Ensure uninterrupted supply of SLD	3.11.1.1 Procure WHO-prequalified drugs
			3.11.1.2 Procure ancillary drugs for the management of adverse reactions
			3.11.1.3 Update the guidelines to include a guide for post treatment care
			3.11.1.4 Scale up shorter regimens
	3.12 Sustain the comprehensive care package and support for DR-TB patients and scale up to DS-TB patients	3.12.1 Maintain a steady funding for the comprehensive care package including digital adherence technologies (DATs)	3.12.1.1 Conduct a review of the current patient support package to identify the gaps
			3.12.1.2 Develop a sustainability plan for the comprehensive patient support package

Strategic Objective 3: To achieve 90% treatment success rate for all forms of TB including DS-TB and DR-TB through provision of integrated quality of care			
Expected Strategic Outcomes	**Intervention**	**Main Activities**	**Sub Activities**
			3.12.1.3Augment the care package to include nutritional support, transport allowance, treatment supporter stipend, and DATs (Video Observed Therapy and Smart pill box)
		3.12.2 Implement comprehensive patient care and support package for DS-TB patients (DATs, nutritional support) to improve treatment adherence	3.12.2.1 Develop the sustainability plan for patient care package which includes a transition of the running cost for VOT platform from MSF to MOH-NTCP
			3.12.2.2 Conduct quarterly mentorship and supportive supervision visits to monitor the implementation comprehensive car package
			3.12.2.3 Conduct a 1-day meeting to develop SOP to guide implementation
			3.12.2.4 Engage stakeholder under the MAF-TB the patient care package and advocate for the support towards its implementation as part domestic contribution
			3.12.2.4 Conduct a 1-day meeting to sensitize HCWs on the new patient support package
			3.12.2.5 Roll out DATS and scale up VOT for DR TB and DS TB to enhance treatment monitoring

Strategic Objective 4: To improve TB screening, diagnosis, treatment and prevention among children and adolescents.

The NTCP seeks to improve TB case finding, in children and adolescents. Currently childhood TB contributes only about 5% of total cases instead of 10-15% WHO benchmark. To improve detection of childhood TB the NTCP plans to decentralize TB case finding in children in all service points, including in MCH, nutritional units, OPD, in patient and at the community through contact tracing. The NTCP plans to adopt the newer WHO recommendation on the use of stool and nasopharyngeal aspirates as alternative specimens for childhood TB diagnosis. The NTCP will also prioritise capacity building in clinical evaluation and interpretation of CXR. To aid this the NTCP under this strategic plan will scale up access to digital CXR with CAD/AI for TB diagnosis of all at risk populations.

This NSP also prioritizes TB preventive therapy in children < 5 who are contacts of TB patients and CLHIV. Under this the NTCP will scale up access to TPT shorter regimen and client friendly formulation for children and adolescents. Below are expected strategic outcomes for this objective, strategic interventions and major actions that will be implemented during the five years of the NSP to achieve the expected outcomes.

Strategic Objective 4: To improve TB screening, diagnosis, treatment and prevention among children and adolescents.

Expected Strategic Outcome	Intervention	Major Activity	Sub-Activities
Increase proportion of Childhood TB cases detected among the notified from the current 5% to 10-15%.	4.1 Build the capacity of healthcare workers to diagnose and manage TB in children and adolescents.	4.1.1 Capacitate healthcare workers on the new WHO recommendations and	4.1.1.1 Conduct training for 50 doctors and 200 nurses on comprehensive childhood and adolescent TB management.
		4.1.2 Adopt the use of stool for childhood TB diagnosis	4.1.1.2 Conduct workshop for 30 healthcare workers from hospitals and health centers (Labour ward, OPD and pediatric wards) including private sector.
			4.1.1.3 Conduct a two days sensitization workshop for 100 TB champions and 40 microscopists on the use of stool specimen for TB diagnosis
			4.1.1.4 Conduct One-day refresher for 20 radiographers on pediatric CXR taking.
			4.1.1.6 Review and update national guidelines to absorb newer WHO recommendations
			4.1.1.7 Conduct training in HCWs especially the newly recruited in CXR reading
			4.2.2.1 Adopt the protocol by Baylor COE on the use of stool for the development of IEC material and draft training materials
			4.2.2.2 Sensitize front-line HCWs on the use of stool to create demand
			4.2.2.3 Establish a mechanism to track and monitor the implementation of the use of stool for childhood TB diagnosis

Strategic Objective 4: To improve TB screening, diagnosis, treatment and prevention among children and adolescents.

Expected Strategic Outcome	Intervention	Major Activity	Sub-Activities
	4.2 Enhance nutritional support for optimal treatment outcome	4.2.1 Provide nutritional and psychosocial support	4.2.1.1 Provide nutritional and Psychosocial support to the patients and their families
			4.2.1.2 Build capacity CHW, HCW in counselling
	4.3. Enhance DOTS in Children	4.3.1 .Increase participation of pediatric TB patients on VOT	4.3.1.1. Roll-out DAT for DOTS program
			4.3.1.2 Build capacity in HCWs in the use of DAT
			4.3.1 3. Procure DAT
			4.3.1.4 Sensitise Healthcare Workers on VOT/DAT
	4.4 Enhance Treatment outcome of childhood TB	4.4.1 Roll-out shorter treatment regimen for DS TB	4.4.1.1 Update TB guidelines to include shorter regimen for children with non- severe DS TB
			4.4.1.2 Build capacity in the shorter regimen for children with non-severe DS TB
	4.5 Increase the number of children and adolescents who initiate and complete TPT.	4.5.1 Expand contact tracing models	4.5.1.1 Engage community health workers (TB Champions & RHMs) in differentiated child contact tracing management
			4.5.1.2 Recruit or retain CHW to support TBCI
			4.5.1.3 Roll out targeted contract tracing in all communities, prioritizing Hot spots
			4.5.1.4 Enhance use of data in contact tracing to inform decision making and targeting
		4.5.2 Engage communities to raise community awareness on TPT highlighting the importance of TPT in children.	4.5.2.5 Engage RHMs and TB Champions to mobilize communities for awareness campaigns in regions
			4.5.2.6 Implement community (TB Champions, RHM)-led contact tracing including screening at the NCP
			4.5.2.7 Develop and print SOPs and job aids to guide TBCI
			4.5.2.8 Conduct mass sensitization campaigns on TPT using radio,TV social media and the community structures
		4.5.3 Scale up TPT in < 5 contacts of TB and CLHIV	4.5.3.1 Develop a comprehensive TPT scale-up plan which includes children at risk of TB (< 5 contacts of TB and CLHIV)
			4.5.3.1Involve adolescents and caregivers in TPT regimen decision making
			4.5.3.3 Develop TPT targets by regions and national

Strategic Objective 4: To improve TB screening, diagnosis, treatment and prevention among children and adolescents.			
Expected Strategic Outcome	**Intervention**	**Major Activity**	**Sub-Activities**
			4.5.3.4 Develop and print IEC materials and registers for TPT
		4.5.4 Collaborate with School health and implement the differentiated model for TPT in school-going children and adolescents	4.5.3.1 Engage with school health team to finalize TB screening and referral/linkage to care tools for school-going children and adolescents.
			4.5.3.2 Extend Contact tracing to Schools for childhood TB cases and TB in adolescents
			4.5.3.3 Establish collaboration with other partners that are dealing with the plight of children
			4.5.3.3 Sensitise the stakeholders in the Ministry of Education on TB in children and adolescents

Strategic Objective 5: To improve the quality and utilization of TB Information for decision- making and programmatic actions.

The NTCP is determined to reduce the TB burden in the kingdom of Eswatini towards elimination. To achieve the vision of Eswatini free of TB, high-quality data for decision making and actions is pivotal. This NSP will work on improving and strengthening monitoring and evaluation systems and approaches to inform the delivery of quality TB services. This NSP puts together interventions and major actions that will augment the use of electronic recording platforms for timely data collection and analysis.

Under this objective, operational research has been prioritized to inform the NTCP on matters of interest, such as patient's costs linked to seeking TB services, patient pathway analysis, studies on community rights and gender matters related to TB and TB mortality reviews.

Below are expected strategic outcomes, strategic interventions and major actions for this objective that will be implemented during the five years of the NSP to achieve the expected outcomes.

Strategic Objective 5: To improve the Quality and Utilization of TB Information for decision- making and programmatic actions.

Expected Strategic Outcome	Interventions	Major Activity	Sub Activities
Improved data quality	5.1: Strengthen data quality assurance procedures	5.1.1: Improve the capacity of HCWs in the use of TB Modules in CMIS	5.1.1.1 Train TB Champions, Community partners and Facility staff on the TB Modules in CMIS
			5.1.1.2 Conduct comprehensive quarterly monitoring and supportive supervision to all regions and facilities
			5.1.1.3 Conduct data validation between CMIS outputs and facility paper-based patient medical records and provide feedback for action
		5.1.2: Implement measures to improve Data Quality Assurance procedures	5.1.2.1 Develop Protocols for implementing data quality assessments and data quality audits
			5.1.2.2 Train NTCP, HMIS and community cadres on data data quality assessment procedures
			5.1.2.3 Conduct semi-annual data quality assessments to improve quality of TB data generated by the CMIS
			5.1.2.4 Conduct a data quality audit to measure compliance with set data quality standards
			5.1.2.5 Develop and implement Data Management standard procedures for TB data
Improved coverage of electronic reporting platform for TB	5.2: Accelerate the transition from paper based reporting to case- based surveillance (Client Management Information	5.2.1: Build capacity in NTCP staff to support facility use of TB Modules in CMIS	5.2.1.1 Conduct refresher training/Train NTCP (national and regional) staff in application of CMIS

Strategic Objective 5: To improve the Quality and Utilization of TB Information for decision- making and programmatic actions.

Expected Strategic Outcome	Interventions	Major Activity	Sub Activities
	System		5.2.1.2 Develop a CMIS transition roadmap to gradually phase out manual data collection system.
		5.2.2 Increase the number of clerks at the regional HMIS offices to support CMIS transition	5.2.2.1 Engage NERCHA and the HMIS Unit with view to incorporating current TB regional data clerks into the regional HMIS teams
			Activity 5.2.2.2: Provide TA to CMIS developers to review and incorporate changes and additional TB data elements in CMIS module and the CMIS dashboards.
			5.2.2.3 Conduct a wider dissemination of the updates in CMIS to stakeholders
Improved performance of coverage indicators	5.3: Enhance data-driven programming and decision making	5.3.1: Institutionalise routine Programme progress reviews at national, regional and facility levels).	5.3.1.1 Conduct quarterly programme progress review meetings,
			5.3.1.2 Train NTCP staff in data analysis, visualisation and use.
			5.3.1.3 Conduct regional semi-annual data reviews with TB basic management units
			5.3.1.4 Facilitate quarterly National Coordinating Committee meeting (TB/HIV)
			5.3.1.5 Conduct weekly virtual data review meetings to track progress of key indicators to inform remedial measures
			5.3.1.6 Upgrade NTCP DHIS2 to facilitate interoperability with other platftorms and create dashboards for all levels for easy access to TB data.
	5.4 Strengthen the handling of TB data	5.4.1: Establish a central server to archive TB data and key strategic documents	5.4.1.1 Facilitate the back-up of TB data and archiving of key programme documents through an intranet
			5.4.1.2 Print adequate TB registers for facilities that are using a paper-based system during the transition period to CMIS
	5.5: Institutionalize usage of unique identifier (National ID) across the cascade to improve surveillance.	5.5.1: Incorporate the use of a UID on Aspect (GX Alert) to ensure deduplication of TB Diagnostic data	5.5.1.1 Conduct sensitisation of lab staff on the use of UID

Strategic Objective 5: To improve the Quality and Utilization of TB Information for decision- making and programmatic actions.

Expected Strategic Outcome	Interventions	Major Activity	Sub Activities
	5.6.: Ensure availability of evidence to inform TB burden and to track programme successes.	5.6.1: Conduct priority national TB surveys and operational research	5.6.1.1 Undertake the TIMS Community, Rights, Gender (CRG) Assessment
			5.6.1.2 Conduct TB Inventory Study
			5.6.1.3 Conduct Patient Pathway Analysis study
			5.6.1.4 Conduct Patient Cost survey
			5.6.1.5 Conduct MATCH analysis
			5.6.1.6 Conduct Mortality Audit study
			5.6.1.7 Conduct CRG Assessment for general TB population
			5.6.1.8 Community led monitoring
			5.6.1.9 Conduct annual TB cascade analysis to indentify gaps in the TB response
			5.6.1.10 Conduct a TB stigma index study
	5.7 Strengthening reporting and data governance for TB data	5.7.1: Incorporate National, Regional and Global reporting into routine NTCP M&E activities	5.7.1.1 Produce routine and disseminate information products (programme implementation reports)
			5.7.1.2 Compile quarterly progress reports for GF
			5.7.1.3 Compile quarterly and annual progress reports for MOH planning unit
			5.7.1.4 Compile data and complete Global TB Report
			5.7.1.5 Compile data and for SADC Dashboard
			5.7.1.6 Together with MOH HIMS unit develop a TB data governance framework
		5.7.2: Revise and update TB research & surveillance Agenda	5.7.2.1Engage Research Unit to initiate revision and update of TB research agenda
			5.7.2.2 Train NTCP staff on Implementation/Operational research

Strategic Objective 6: To strengthen Coordination, Governance and Organizational Capacity for Optimal Program Management and Performance

Successful implementation of the strategic plan requires not only good leadership and management capacities but also appropriate technical expertise and coordination between structures with the NTCP, partners and the civil society organisations. This NSP seeks to build a resilient Programme through institutional capacity building at national and regional levels. Coordination with partners will be enhanced to involve them in planning and during the implementation. Coordinative platforms will be strengthened and means of sharing information expanded including updating the Program website.

Under this objective intervention have been developed to support the implementation of a multi-sectoral accountability framework for TB (MAF-TB). Furthermore, this plan will enhance the participation and enagement of the community structures in the TB response. Additionally, this NSP prioritises the implementation of interventions aimed at addressing human rights and gender as well as support community-led monitoring. Further, this NSP will create an enabling environment for the participation of the private sector in the TB response.

Below are expected strategic outcomes, strategic interventions and major actions for this objective that will be implemented during the five years of the NSP to achieve the expected outcomes.

Strategic Objective 6: To strengthen Coordination, Governance and Organizational Capacity for Optimal Program Management and Performance

Interventions	Main Activities	Sub-Activities
6.1. Strengthen coordination for effective TB control oversight and management	6.1.1 Establish a functional multisectoral accountability framework for TB (MAF-TB) and coordination structure	6.1.1.1 Develop MAF-TB framework
		6.1.1.2 Conduct sensitization meetings for stakeholders about the MAF-TB and Establish a MAF-TB Task Team
		6.1.1.3 Conduct a wide-stakeholder meeting to launch the MAF-TB framework
		6.1.1.4 Conduct annual MAF-TB Coordinating team meetings
	6.1.2 Operationalise program structure	6.1.2.1 Review NTCP organogram
		6.1.2.2 Fund salaries for all positions under the NTCP
	6.1.3 Revamp TB Technical Working Group including sub-TWGs	6.1.3.1 Review concept note and members for the main TB TWG and sub-TWGs
		6.1.3.2 Conduct quarterly TB TWG meetings
		6.1.3.3 Conduct quarterly meetings for sub-TWGs (Peads, NCC, DR TB, community, TB mortality)
	6.1.4 Develop policy guiding documents for TB programming	6.1.4.1 Conduct NSP mid-term and End-term reviews
		6.1.4.2 Develop new TB NSP (2029-2033)
		6.1.4.3 Review TB guidelines to absorb new WHO Recommendations

Strategic Objective 6: To strengthen Coordination, Governance and Organizational Capacity for Optimal Program Management and Performance

Interventions	Main Activities	Sub-Activities
		6.1.4.4 Review and develop SOPs and protocols
		6.1.4.5 Conduct rGLC and GDF missions annually
		6.1.4.6 Develop TB Standards for benchmarking
		6.1.4.7 Develop TB quality improvement framework
	6.1.5 Develop a framework for conducting supportive supervision and mentoring in collaboration with other Programs (NCD, HIV)	6.1.5.1 Develop tools for structured monitoring support Supervision
		6.1.5.2 Conduct joint MSS to all regions
	6.1.6 Develop a TB training plan to cover comprehensive care and treatment.	6.1.6.1 Develop the training plan for all areas of TB control
		6.1.6.2 Develop training materials for all areas of TB control DS TB, DR TB IPC and TPT
	6.1.7 Support NTCP office operations	6.1.7.1 Enhance operations of the NTCP (plan for Printing consumables, fuel, service of equipment and cars, computers, electricity, wa- ter, internet services, telephone bills
		6.1.7.2 Acquire teleconferencing package for e-learning, Zoom meeting
		6.1.7.3 Procure Program vehicles to enhance transportation
		6.1.7.4 Enhance communication and operations of the NTCP, Procure laptops for Pro- gram staff.
6.2. Enhance Public Private mix (PPM) to strengthen TB management.	6.2.1 Develop a policy to guide the implementation of TB services in private facilities	6.2.1.1 Establish a PPM Task Team with outlined deliverables
		6.2.1.2 Develop a PPM framework including prototype MOU
		6.2.1.3 Disseminate the PPM framework to all stakeholders
		6.2.1.4 Establish MoUs with private facilities
		6.2.1.3 Hold PPM review and coordi- nating meetings
		6.2.1.4 Recruit PPM/MAF-TB Coor- dinator at NTCP
		6.2.1.5 Conduct mapping of private facilities to establish their diagnostic capacity and determine level of involvement in the TB response to guide scale up plans
		6.2.1.6 Train HCWs in private facilities in TB diagnosis management and recording and reporting

Strategic Objective 6: To strengthen Coordination, Governance and Organizational Capacity for Optimal Program Management and Performance

Interventions	Main Activities	Sub-Activities
6.3 Secure resources to support the achievement of NSP goals and ensure an efficient, sustainable TB response.	6.3.1 Advocate for increased domestic funding for TB.	6.3.1.1 Participate in the annual budgeting meetings hosted by the MoH Planning Unit.
	6.3.2 Advocate for ringfencing of funds for essential TB commodities.	6.3.1.2 Conduct meetings with the MoH Planning Unit and Financial Controller
	6.3.3 Strengthen systems for the procurement of TB commodities.	6.3.1.3 Participate in meetings with the Procurement Unit, Planning Unit, Financial Controller
	6.3.4 Enhance coordination of donor funded activities	6.3.5.1 Conduct quarterly planning and coordination meetings with CCM and NERCHA to harmonize grant issues
		6.3.5.2 Participate in planning and coordination meetings with PERPFAR and WHO
6.4 Enhance community engagement in the implementation of TB interventions	6.4.1 Map community stakeholders involved in TB response and compile a directory	6.4.1.1 Conduct mapping of com-munity stakeholders
		6.4.1.2 Conduct quarterly coordinating meetings engagements with community stakeholders
		6.4.1.3 Upload and share the directory on NTCP website
	6.4.2 Enhance collaboration of community stakeholders	6.4.2.1 Develop a national community strategic framework in collabo- ration with the RHM Program
	6.4.4 Conduct a community rights and gender (CRG) assessment	6.4.4.1 Engage CRG TA
	6.4.5 Build capacity of community stakeholders on comprehensive TB, CRG	6.4.5.2 Conduct sensitization meet-ings on CRG findings (community cadres, CSOs, THA, CBOs, tradi- tional leaders, FBOs)
	6.4.6 Conduct community led monitoring	6.4.6.1 Adapt the community-led monitoring assessment tool from Stop TB partnership
		6.4.6.2 Procure 250 tablets for CLM reporting
6.5 Optimize collaboration with CMS and EHLS to ensure uninterrupted drug and commodities supply.	6.5.1 Set up a coordination committee in collaboration with CMS and EHLS	6.5.1.1. Track monthly stocks of TB commodities
		6.5.1.2. Hold bi-annual quantification and forecasting meetings with CMS and EHLS
		6.5.1.3. Develop a system for monitoring the supply chain across all levels
6.6 Strengthen human resource planning and development for TB Program.	6.6.1 Advocate for government absorption of Donor-funded positions	6.6.1.1 Convene meetings with the MoH HR department
	6.6.2 Build capacity for the Program staff to enhance TB management and response.	6.6.3.1 Conduct individual training needs assessment for all NTCP Staff including regional coordinators
		6.6.3.2 Conduct residential training workshop for Program staff on leadership and management

Strategic Objective 6: To strengthen Coordination, Governance and Organizational Capacity for Optimal Program Management and Performance

Interventions	Main Activities	Sub-Activities
		6.6.3.3 Participate in international TB conferences and seminars and conduct study tours in key areas of the TB response
		6.6.3.4 Conduct annual planning meeting for the NTCP staff
6.7 Enhance strategic advocacy, communication and social mobilization (ACSM) for optimal national TB response.	6.7.1 Develop ACSM operational plan	6.7.1.1 Engage TA, with clear TORs
		6.7.1.2 Conduct 5-days residential workshop for developing and costing ACSM plan and M&E framework
		6.7.1.3 Develop an annual work plan for ACSM
	6.7.3 Commemorate annual world TB Day	6.7.3.1 Convene half-day meeting for wide stakeholder sensitization and formation of Task Team
		6.7.3.2 Conduct World TB Day build-up activities through radio/TV programs and community mobilization
		6.7.3.3 Conduct World TB Day build-up activities through regional campaigns in all the regions
		6.7.3.4 Procure World TB Day promotional and visibility materials (branded t-shirts, branded sun hats, banners)
		6.7.3.5 Conduct mass sensitization about TB using radio Television, Social media and community platforms
	6.7.4 Capacitate Parliamentarians for effective TB advocacy	6.7.4.1 Conduct 3-days residential training workshop to orient the Parliamentary TB Caucus on basic TB facts and global TB commitments and targets
		6.7.4.2 Conduct annual advocacy meeting for the Parliamentary TB caucus
6.8 Strengthen the operation of occupational Health Service Centres for the comprehensive TB response	6.8.1 Enhance collaboration with Occupational Health Service centre (OHSC)	6.8.1.1. Conduct coordination meeting with OHSC
		6.8.1.2. Strengthen linkages be- tween OHSC and NTCP
		6.8.1.3 Review OHSC SOP for TB diagnosis and linkage to care
		6.8.1.4. Conduct TIMS quarterly TWG coordination meetings
		6.8.1.5 Train staff at OHSC in TB diagnosis and management

Budget Plan

The costing for this National Strategic Plan (NSP) is based on activities defined and agreed on by all stakeholders during the development process. The costing of this NSP is comprehensive, all elements of the core plan have been included. The NSP will be funded through a number of sources which include the Government of the Kingdom of Eswatini the Ministry of Health. Additional support will be mobilized from the Global Fund to Fight AIDS, Tuberculosis and Malaria. Financial and technical support for the implementation of the NSP will be mobilized from the partners of the NTCP, which includes; the United States Government through USAID and CDC. Multilateral partners such as the World Health Organization, is anticipated to continue providing support during the life of this NSP. Indirectly funding of this NSP will come through the participation of the private sector in TB management. The NTCP will work with all stakeholders to ensure that all funding and activities for TB control in the next five years are aligned with the goals and objectives of this NSP.

Personnel

Cost Inputs	Unit of Measure	Unit cost (USD) Annual)	No. of Units	Frequency					Total
				Duration	2024	2025	2026	2027	2028	
Lab Technician (Microscope)		$7,945.92	1	1	24	24	24	24	24	$953,510.46
Lab Technologist (TB)		$5,184.83	1	1	9	9	9	9	9	$683,317.50
TB Grants Coordinator		$23,716.30	1	1	1	1	1	1	1	$ 118,581.48
TB IT Officer		$ 25,911.20	1	1	1	1	1	1	1	$ 129,556.02
National M & E and Research		$ 22,779.86	1	1	1	1	1	1	1	$ 113,899.32
National TB Lab Focal person		$ 22,779.86	1	1	1	1	1	1	1	$ 113,899.32
SSF Drivers		$ 7,888.83	1	1	6	6	6	6	6	$ 236,664.97
PPM		$ 24,624.19	1	1	1	1	1	1	1	$ 123,120.95
PSM		$ 24,624.16	1	1	1	1	1	1	1	$ 123,120.78
Regional Medical Doctors		$ 47,446.82	1	1	4	4	4	4	4	$ 948,936.42
Regional Nurse		$ 20,542.99	1	1	5	5	5	5	5	$ 513,574.82
Regional Data Clerk		$ 12,002.08	1	1	4	4	4	4	4	$ 240,041.64
TB ACSM Coordinator		$ 21,790.67	1	1	1	1	1	1	1	$ 108,953.35
National Community Service Coordinator		$ 34,048.75	1	1	1	1	1	1	1	$ 170,243.76
TB Community M & E Officer		$ 18,015.36	1	1	1	1	1	1	1	$ 90,076.81
Adherence Officer		$ 7,273.82	1	1	16	16	16	16	16	$ 581,905.35
TB Expert Client		$ 3,652.74	1	1	40	40	40	40	40	$ 730,547.39
TB Screening Officer		$ 3,652.74	1	1	100	100	100	100	100	$ 365,273.70
TB Champions		$ 2,510.12	1	1	40	40	40	40	40	$ 502,024.05
National TB DOTS Coordinator		$ 17,417.06	1	1	1	1	1	1	1	$ 87,085.31
National TB/HIV Coordinator		$ 18,020.17	1	1	1	1	1	1	1	$ 90,100.85
National Paediatric TB Coordinator		$ 24,114.56	1	1	1	1	1	1	1	$ 120,572.79
National MDR-TB Coordinator		$ 12,165.24	1	1	1	1	1	1	1	$ 60,826.19
PA - Receptionist		$ 6,160.95	1	1	1	1	1	1	1	$ 30,804.75
Senior Programme Officer		$ 24,114.56	1	1	1	1	1	1	1	$ 120,572.79
Health and Information Officer		$ 9,818.56	1	1	1	1	1	1	1	$ 49,092.78
Orderlies		$ 5,820.03	1	1	2	2	2	2	2	$ 58,200.28
Ambulance Driver		$ 4,877.62	1	1	2	2	2	2	2	$ 48,776.21
National TB IPC coordinator		$ 33,200.13	1	1	1	1	1	1	1	$ 166,000.66
MDR-TB Technical Advisor		$ 61,895.22	1	1	1	1	1	1	1	$ 309,476.11
Total for 5 years										$7,988,756.81
Total per annum										$1,597,751.36

Training and capacity building

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
1.3.1.2 Conduct workshops to train HCWs in systematic TB screening	33720.35	33720.35	33720.35	33720.35	33720.35	168,601.77
1.3.1.5 Train nurses and clinicians in reading and interpretation of CXR	16860.18	16860.18	16860.18	16860.18	16860.18	84,300.88
1.4.1.3 Hold sensitization meeting for HWCs in all regions on the role of NGS in DR TB surveillance	16487.43	16487.43	16487.43	16487.43	16487.43	82,437.17
1.5.1.3 Train Laboratory scientists in the adopted method for the use of stool	12185.62	12185.62	12185.62	12185.62	12185.62	60,928.10
1.5.1.4 Sensitise HCWs in all regions on the use of stool for TB diagnosis	5017.566	5017.566	5017.566	5017.566	5017.566	25,087.83
1.6.1.2 Orient all laboratory staff in TB quality assurance systems	24280.13	24280.13	24280.13	24280.13	24280.13	121,400.66
2.1.1.3 Hold trainings in IPC to build capacity in implementing IPC standards and procedures	29643.72	29643.72	29643.72	29643.72	29643.72	148,218.58
3.2.1.2. Conduct training in quality improvement approaches	31958.85	31958.85	31958.85	31958.85	31958.85	159,794.25
3.2.1.4. Quarterly regional trainings to rollout quality standard of care package to HCWs in the TB BMUs.	8695.354	8695.354	8695.354	8695.354	8695.354	43,476.77
3.3.2.7 Conduct 5-day training (4-days theory, 1-day practical) on TB/ HIV/ NCDs/ Mental Health management. 40 participants	9069.536	9069.536	9069.536	9069.536	9069.536	45,347.68
3.6.1.4 Conduct onsite training for targeted facilities and distribute mortality review tools.	327	327	327	327	327	1,635.00
4.1.1.1 Conduct training for 50 doctors and 200 nurses on comprehensive childhood TB management.	19527.61	19527.61	19527.61	19527.61	19527.61	97,638.05
4.1.1.2 Conduct workshop for 30 healthcare workers from hospitals and health centers (Labour ward, OPD and pediatric wards) including private sector.	5058.054	5058.054	5058.054	5058.054	5058.054	25,290.27
4.1.1.3 Conduct a two days sensitization workshop for 100 TB champions and 40 microscopists on the stool specimen diagnosis	2254.978	2254.978	2254.978	2254.978	2254.978	11,274.89
4.1.1.4 One-day refresher for 20 radiographers on pediatric CXR taking.	833.52	0	0	0	0	833.52
4.3.1.2 Build capacity in the use of DAT	29986.29	29986.29	0	0	0	59,972.57
4.5.2.4 Conduct TB contact tracing and TB screening training for RHMs	6866.492	6866.492	6866.492	6866.492	6866.492	34,332.46
5.1.1.1 Train TB Champions, Community partners and Facility staff on the TB Modules.	7325.775	7325.775	0	0	0	14,651.55
5.3.1.2 Train NTCP staff in data analysis, visualisation and use.	8,593.19	0	0	0	0	8,593.19
5.4.1.1 Sensitisation of lab staff on the use of UID	1,608.13	0	0	0	0	1,608.13
6.6.2.2 Conduct residential training workshop for Program staff on leadership and management	15,666.77	0	0	0	0	15,666.77
6.7.1.2 Conduct 5-days residential workshop for developing and costing ACSM strategy and M&E framework	8,598.19	0	0	0	0	8,598.19
6.7.3.1 Conduct 3-days residential training workshop to orient the Parliamentary TB Caucus on basic TB facts and global TB commitments and targets	12,351.55	0	0	0	0	12,351.55
3.3.2.4. Conduct TOT on updated guidelines.	48,231.56	0	0	0	0	48,231.56
3.6.1.2 Conduct 1 national TOT training and 4 regional TOT trainings for facilities on how to conduct mortality reviews and SOP.	7,720.66	0	0	0	0	7,720.66
1.3.1.1 Develop a TB curriculum for HCWS and CHWS	71974.28	71974.28	0	0	0	143,948.56
1.4.1.2 Build skills and competencies in NGS	56,167.04	0	0	0	0	56,167.04
6.1.6.1 Develop the training plan for all areas of TB control	31,659.29	0	0	0	0	31,659.29
3.5.1.4 Engage mentors and regional coordinators to distribute finalized TB patient support SOP to facilities with onsite training.	1,635.00	0	0	0	0	1,635.00
3.2.1.6 Conduct training for nurse-led DR TB case management	40612.67	40612.67	0	0	0	81,225.33
Total for 5 years						**$1,602,627.27**

Technical support and Supportive Supervision

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
3.6.1.1. Conduct baseline assessment of facilities for scale-up of mortality reviews	26,855.64	0	0	0	0	26,855.64
6.1.5.1 Develop tools for structured technical supportive supervision	18,600.66	0	0	0	0	18,600.66
1.3.1.3 Conduct onsite mentorship to front-line HCWs in systematic TB screening	11061.95	11061.95	11061.95	11061.95	11061.95	55,309.73
1.6.1.4 Conduct quarterly supportive supervision in the TB network	13495.58	13495.58	13495.58	13495.58	13495.58	67,477.88
2.1.1.6 Conduct mentorship and supportive supervision for the IPC committee members/focals including environmental officers	10619.47	10619.47	10619.47	10619.47	10619.47	53,097.35
3.2.1.5. Conduct quarterly monitoring, technical and supportive supervision by MDTs (NTCP/ENAP/NCDs/Quality program/Ips)	19026.55	19026.55	19026.55	19026.55	19026.55	95,132.74
3.3.3.3 Conduct quarterly regional mentorship and supportive supervision in collaboration with NPVU to monitor implementation.	13495.58	13495.58	13495.58	13495.58	13495.58	67,477.88
5.1.1.2 Conduct routine mentoring and supportive supervision	19026.55	19026.55	19026.55	19026.55	19026.55	95,132.74
3.4.1.1. Conduct joint quarterly supportive supervision and monitoring visits to all regions	19026.55	19026.55	19026.55	19026.55	19026.55	95,132.74
Total for 5 years						$574,217.4

Quality Assurance

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
1.6.1.3 Support to implement the ISO 17043 standard at the NTRL	8739.052	8739.052	8739.052	8739.052	8739.052	43,695.26
1.6.1.1 Develop quality assurance manuals	41,372.79					41,372.79
1.6.1.5 Conduct EQA to all regional labs	49486.65	49486.65	49486.65	49486.65	49486.65	247,433.25
1.6.2.1 Develop data reporting framework for TB lab information system	44,318.03	0	0	0	0	44,318.03
1.1.1.2 Strengthen integrated courier systems by developing a tracker of specimen movement to bring about efficiency	70000	70000	70000	70000	70000	350,000
						726,819.33

Monitoring and Evaluation

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
1.6.2.2 Scale up electronic recording platforms	39,489.77	0	0	0	0	39,489.77
2.2.3.1 Update TPT platform in CMIS	11,731.97	0	0	0	0	11,731.97
5.2.2.4 Update CMIS TB modules with new data elements (algorithms, drugs etc.)	333,723.45	0	0	0	0	333,723.45
5.3.1.6 Upgrade NTCP DHIS2 instance to incoporate indicators and dashboards	40,071.90	0	0	0	0	40,071.90
6.3.5.2 Participate in quarterly planning and coordination meetings with PERPFAR	0	0	0	0	0	90,408.19
2.2.3.2 Conduct data quality assessment for TPT data	0	0	0	0	0	663.72
3.3.3.2. Conduct a meeting in collaboration with NPVU to include the aDSM module in the existing CMIS dashboards.	19,416.48	0	0	0	0	19,416.48
3.4.2.1. Engage ENAP/ GU and visit the LulaMeds eLocker implementing sites.						110.62
3.4.2.4. Engage mentors to facilitate the roll out TB LulaMeds eLocker refills in targeted facilities.	1,327.43	0	0	0	0	1,327.43
5.1.2.1 Develop Protocols for implementing data quality assessments and data quality audits	39,717.92	0	0	0	0	39,717.92
5.1.2.5 Develop and implement Data Management standard procedures for TB data	98,589.60	0	0	0	0	98,589.60
5.2.2.2 Provide TA to CMIS developers to review and incorporate changes and additional TB data elements in CMIS module and CMIS dashboards.	1548.672	1548.672	1548.672	1548.672	1548.672	7,743.36
5.6.1.1 Produce routine products report and disseminate (programme implementation reports)	28509.956	28509.96	28509.96	28509.96	28509.96	142,549.78
3.1.1.2 Hold quarterly technical review meetings	27934.734	27934.73	27934.73	27934.73	27934.73	139,673.67

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
3.3.3.4 Conduct quarterly aDSM feedback meetings in collaboration with the pharmacovigilance unit. 35 participants.	42853.982	42853.98	42853.98	42853.98	42853.98	214,269.91
3.3.3.5. Collaborate with NPVU to conduct quarterly causality assessment workshop(3 days for 30 participants)	42184.734	42184.73	42184.73	42184.73	42184.73	210,923.67
5.3.1.1 Conduct quarterly programme progress review meeting	14103.982	14103.98	14103.98	14103.98	14103.98	70,519.91
6.5.1.2. Hold annual quantification meetings with CMS	2804.242	2804.242	2804.242	2804.242	2804.242	14,021.21
						$1,474,952.56

Transport

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
6.1.8.3 Procure Program vehicles 09 to enhance transportation	243,008.47					243,008.47
x.x.x.x Vehicle Operation and maintenance	24000	24000	24000	24000	24000	120,000.00
Total for 5 years						$363,008.47

Community and Civil Society engagement and Social participation

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
6.7.1.3 Develop a roadmap plan for ACSM	85,199.12	0	0	0	0	85,199.12
3.3.1.4. Set up a Toll-free line and sensitize national, regional, and facilities.	16,592.92	0	0	0	0	16,592.92
4.5.3.5 Develop and print IEC materials on TPT	13,767.68	0	0	0	0	13,767.68
1.7.1.1 Conduct mass TB sensitizations	26306.58	26306.58	26306.58	26306.58	26306.58	131,532.89
1.7.1.2 Conduct TB awareness using village and community leaders	30000	30,000	30,000	30,000	30,000	150,000.00
2.1.1.12 Sensitise the public on infection control practices in congregate settings	30000	30,000	30,000	30,000	30,000	150,000.00
2.2.2.2 Establish routine community TPT delivery services						1,327.43
Total for 5 years						**$548,420.04**

Advocacy

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
6.7.2.2 Conduct TB Day buildup activities through radio/TV programs and community mobilization	1908.186	1908.186	1908.186	1908.186	1908.186	9540.93
6.7.2.3 Conduct TB Day build-up activities through regional campaigns x3regions	20545.77	20545.77	20545.77	20545.77	20545.77	102,728.87
6.7.3.2 Conduct annual advocacy meeting for the Parliamentary TB caucus and NTCP	11224.29	11224.29	11224.29	11224.29	11224.29	56,121.45
6.7.2.4 Procure World TB Day promotional and visibility materials (branded t-shirts, branded sun hats, banners)	26894.91	26894.91	26894.91	26894.91	26894.91	134,474.56
Total for 5 years						**$302,865.81**

Programme Management

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
2.1.1.4 Ensure consistent supply of Personal Protective Equipment (PPE)	15960	15960	15960	15960	15960	79,800.00
2.1.1.5 Print IPC IEC materials	5,164.79	0	0	0	0	5,164.79
2.1.1.7 Install mechanical devices and UVG in strategic places in health facilities	24,000	0	0	0	0	24,000.00
2.1.1.10 Support the establishment of the IPC committees in all health facilities	13,274.34					13,274.34
2.1.1.13 Promote cough etiquette and hygiene practices at community level	20,000	20,000	20,000	20,000	20,000	100,000.00
2.2.1.2 Print and disseminate updated guidelines	55308.735	55308.74	0	0	0	110,617.47
2.2.1.4 Run TPT scale up campaigns for all high population	38528.762	38528.76	38528.76	38528.76	38528.76	192,643.81
3.2.1.3 Roll out the quality improvement program	35011.062	35011.06	35011.06	35011.06	35011.062	175,055.31
2.2.2.1 Hold workshop to develop the DSD model	44318.03	0	0	0	0	44,318.03
4.5.3.1 Develop TPT scale-up plan	9073.01	0	0	0	0	9,073.01
6.1.4.1 Conduct NSP mid-term and End-term reviews	400,000.00	0	0	0	0	400,000.00
6.1.4.2 Develop new TB NSP (2029-2033)	700,649.69	0	0	0	0	700,649.69
6.3.1.1 Participate in the annual budgeting meetings hosted by the MoH Planning Unit.	1,106.19	0	0	0	0	1,106.19
1.2.1.1 Decentralize TB case finding in all health facilities to include all departments (not limited to MCH, OPD, IPD, and nutrition unit)	21683.6	21683.6	21683.6	21683.6	21683.6	108,418.14
1.2.1.2 Scale up bi-directional TB screening for COVID/NCD/HIV/TB	9073.0	9073.0	9073	9073	9073	45,365.04
3.3.2.3. Conduct a 1 day dissemination meeting for national and regional stakeholders.	13169.25	0	0	0	0	13,169.25
3.4.2.3 Conduct 1-day TB LulaMeds eLocker stakeholder sensitization meeting. (RHMTs, TB focal persons, Mentors, NTCP thematic leads).	13,003.32	0	0	0	0	13,003.32
6.1.3.3 Conduct quarterly meetings for sub-TWGs (Peads, NCC, DRTB, community)	15570.796	15570.8	15570.8	15570.8	15570.796	77,853.98
6.1.4.5 Conduct rGLC and GDF missions annually	21128.32	21128.32	21128.32	21128.32	21128.32	105,641.59
3.3.1.3 Develop standard referral guidance for TB.	36,292.04	0	0	0	0	36,292.04
3.4.2.2. Conduct a 2-day workshop to develop an SOP to facilitate implementation of LulaMeds eLocker for TB drug refill. (invite CSOs and recipients of care).	14,437.50	0	0	0	0	14,437.50

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
3.5.1.1. Review and adapt existing patient support SOP to guide scale up.	24,450.22	0	0	0	0	24,450.22
3.7.1.2 Develop SOPS for PTLD	24,450.22	0	0	0	0	24,450.22
6.1.8.1 Enhance operations of the NTCP (plan for Printing consumables, fuel, service of equipment and cars, computers, electricity, water, internet services, telephone bills	149741.254	149741.3	149741.3	149741.3	149741.25	748,706.27
ICT Materials	23622.95	23622.95	23622.95	23622.95	23622.95	118,114.77
3.3.3.1 Disseminate aDSM tools with onsite training for paper base. For CMIS sites use the ADSM module to orient HCWs on documentation and reporting.	38716.815	38716.82	0	0	0	77,433.63
Total for 5 years						$3,263,038.61

Research and innovation

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
5.5.1.2 Conduct Inventory Study	0	50,000	0	0	0	50,000
5.5.1.3 Conduct Patient Pathway Analysis study	0	50,000	0	0	0	50,000
5.5.1.5 Conduct MATCH analysis	0	20,000	0	0	0	20,000
5.5.1.6 Conduct Mortality Audit study	20,000	0	0	0	0	20,000
5.6.2.3 Train NTCP staff on Implementation/Operational research	54,990.88	54,990.88	0	0	0	109,981,75
3.7.1.3 Support NTCP focal persons/ champions to attend TB/PTLD annual conference.	13170.63	13170.63				26,341.26
3.7.1.4 Conduct implementation research including areas of interest under PTLD						279,120.58
5.6.2.2 Build capacity of NTCP staff on TB Research Agenda						22,407.30
5.6.2.4 Conduct annual TB cascade analysis to prioritise OR questions	50,000					50,000
6.6.2.3 Participate in international TB conferences and seminars	86320	86320	86320	86320	86320	431,600.00
Total for 5 years						

Community Rights and Gender

Activities	Frequency					Total
	2024	2025	2026	2027	2028	
4.5.1.1 Engage community health workers (TB Champions & RHMs) in differentiated child contact tracing management	17530.974	17530.97	17530.97	17530.97	17530.97	87,654.87
5.5.1.8 Community led monitoring	27598.38	27598.38	27598.38	27598.38	27598.38	137,991.90
6.4.5.2 Procure 250 tablets for CLM reporting	375,000.00					375,000.00
5.5.1.1 Undertake the Community, Rights, Gender (CRG) Assessment for KVP (TB in the mines)		40,000				40,000
5.5.1.7 Conduct CRG Assessment for general TB population	12000	12000	12000	12000	12000	60,000.00
6.4.1.2 Conduct quarterly coordinating engagements with community stakeholders	18315.716	18315.72	18315.72	18315.72	18315.72	91,578.58
6.4.4.1 Conduct sensitization meetings on CRG findings (community cadres, CSOs, THA, CBOs, tradi- tional leaders, FBOs)	18683.628	18683.63	18683.63	18683.63	18683.63	93,418.14
6.4.5.1 Adapt the community-led monitoring assessment tool from Stop TB partnership						36,000.00
Total for 5 years						**$885,643.49**

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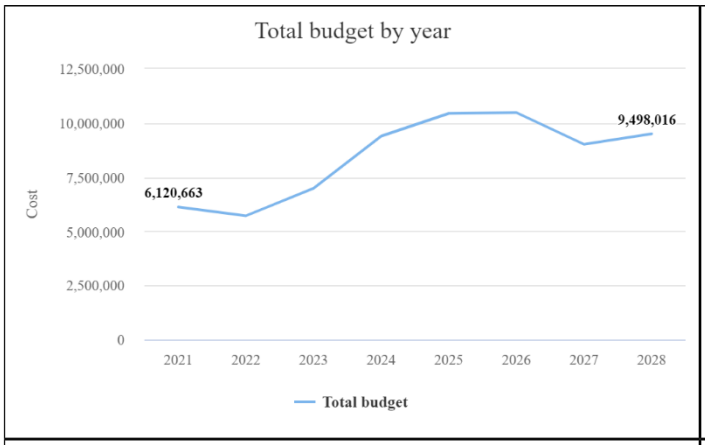
Multisectoral engagement

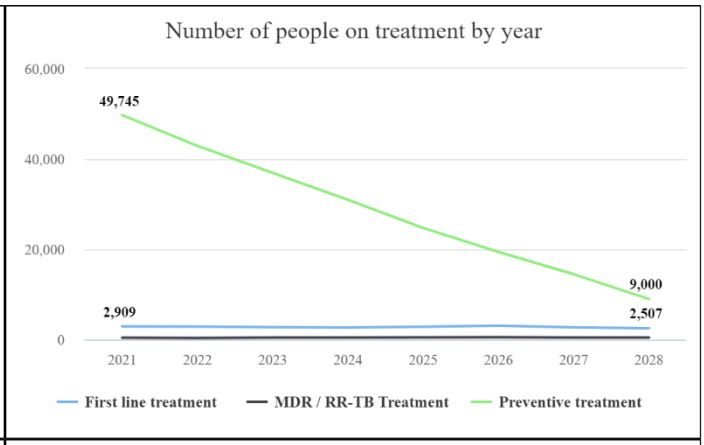
Activities	Frequency					Total
	2024	2025	2026	2027	2028	
6.1.1.2 Conduct sensitization meetings for stakeholders. about the MAF-TB and Establish a MAF-TB Task Team	32,049.23	0	0	0	0	32,049.23
6.1.1.3 Organize wider dissemination for MAF-TB framework	23,881.64	0	0	0	0	23,881.64
6.1.1.4 Conduct annual MAF-TB Coordinating team meetings	6326.88	6326.88	6326.88	6326.88	6326.88	31,634.40
6.7.2.1 Convene half-day meeting for wide stakeholder sensitization and formation of Task Team & ToRs	6,409.85	0		0	0	6,409.85
6.2.1.1 Hold PPM Task Team annual meetingd	2059.514	2059.514	2059.514	2059.514	2059.514	10,297.57
6.2.1.2 Develop a PPM framework including MOU	10,297.57	0	0	0	0	10,297.57
6.2.1.3 Disseminate the PPM framework to all stakeholders	20,589.05	0	0	0	0	20,589.05
6.2.1.5 Hold PPM review and coordinating meetings	32039.82	32039.82	32039.82	32039.82	32039.82	160,199.12
1.1.1.6 Conduct mass TB screening in prisons, among HCWs,…	190000	190000	190000	190000	190000	950,000
1.1.1.4 Conduct hotspot mapping to inform mass TB screening campaigns using mobile vans	8407.08	8407.08	8407.08	8407.08	8407.08	42,035.40
1.1.1.5 Conduct TB screening targeting key vulnerable population	190000	190000	190000	190000	190000	950,000.00
3.8.1.1 Hold cross- border collaboration with neighboring countries.	19069.69	19069.69	19069.69	19069.69	19069.69	95,348.45
6.1.1.1 Develop MAF-TB framework						48,853.98
Total for 5 years						**$2,381,596.26**

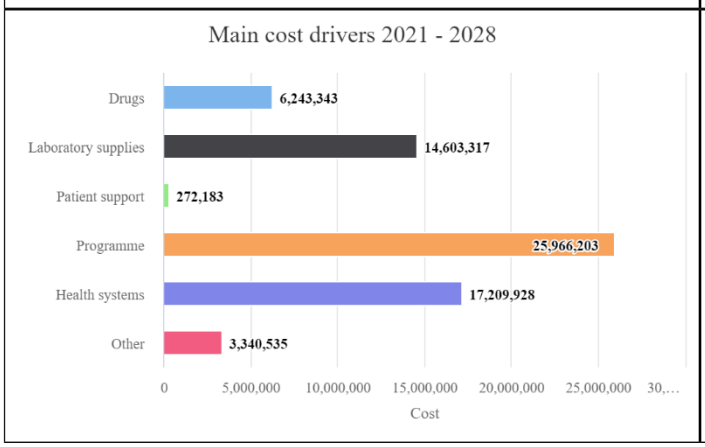
Total costs by cost category, disaggregated programme costs

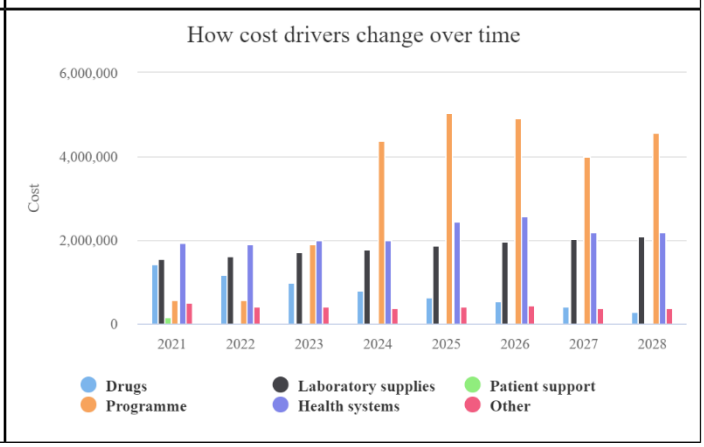
	2024	2025	2026	2027	2028	Total
Communication, media and outreach	92,644	92,644	135,244	92,644	135,244	548,420
Advocacy	60,573	60,573	60,573	60,573	60,573	302,866
General programme management and administration	454,058	428,320	996,053	445,169	942,700	3,266,301
Research and innovation	323,111	282,403	188,616	253,102	243,616	1,290,849
Community and civil society engagement, social participation	142,621	322,551	229,551	129,551	97,551	921,824
Multisectoral engagement	480,062	480,325	446,944	446,944	490,619	2,344,893
Health system costs						
Personnel time costs	489,795	541,555	607,818	586,374	588,949	4,170,954
Inpatient day costs	940,611	954,612	976,459	908,667	877,464	7,575,808
Outpatient visits	583,589	629,590	672,504	689,396	713,060	4,830,948
Equipment costs	0	316,110	316,110	0	0	632,219
Total	390,768	10,439,548	10,478,276	9,015,936	9,498,016	67,635,511

Total cost and cost drivers

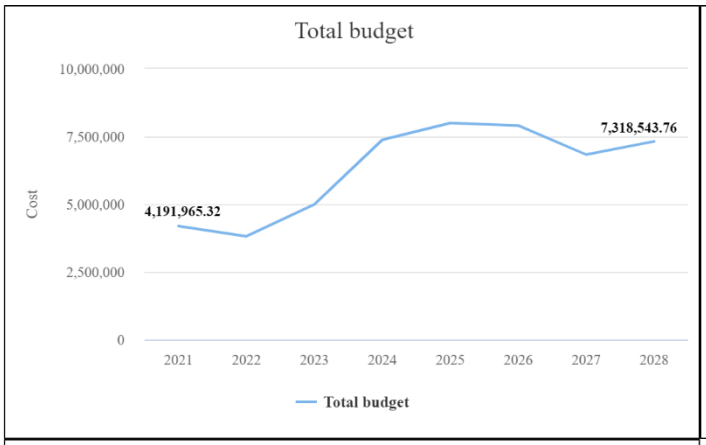


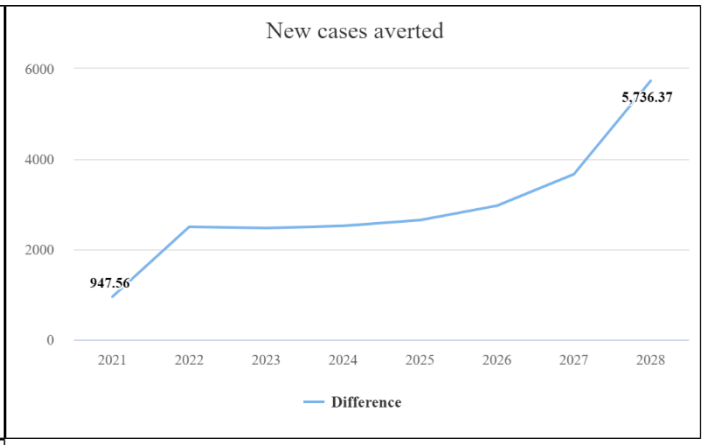


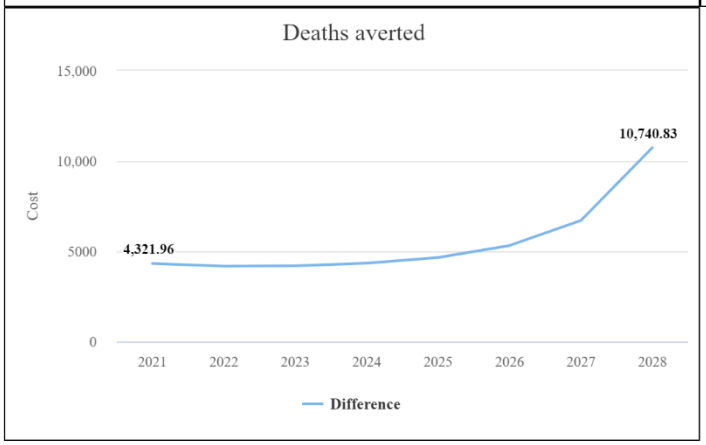




Cost and Impact







With successful implementation of the out listed interventions and activities, it is estimated and anticipated that a total of **5,736** new cases of all form of TB and **10,740** TB related mortalities will be averted. This NSP is posed to have a high impact in all aspects of the TB control. The modeling above was done using intergrated health tool for TB.

Monitoring and Evaluation Framework

GOAL: Eswatini free of TB by 2035

- **To reduce TB incidence by 40% by 2028 relative to the 2022 baseline**
- **To reduce TB deaths by 50% by 2028 relative to the 2022 baseline**

	Indicators	Indicator Definitions	Baseline [year]	Data Source	Reporting Frequency	Indicators				
						2024	2025	2026	2027	2028
IMPACT	TB incidence rate per 100,000 population	Numerator: Number of new and relapse TB cases occurring during the year Denominator: Number of people in the population x 100,000	325 [2022]	Global TB report	Annually	309	293	279	265	251
	TB mortality rate per 100,000 population	Numerator: Number of deaths caused by TB (all forms) in HIV-negative people per year, according to the ICD10 definition Denominator: Number of people in the population x 100,000	79 [2022]	VR or Global TB Report	Annually	67	57	49	41	35
	RR-TB and/or MDR-TB prevalence among new TB patients	Numerator: Number of new TB cases with RR-TB and/or MDR-TB x 100 Denominator: Total number of new TB cases with DST results/ Xpert result	4.3% [2022]	Global TB Report/ DRS	Annually/ DRS - every 5 years	4,1%	3,7%	3,3%	3,0%	2,7%
	TB/HIV mortality rate per 100,000 population	Numerator: Number of HIV-positive people who die of HIV with TB as a contributory cause of death. Denominator: Number of people in the population x 100,000	54 [2022]	Global TB report	Annually	49	44	39	35	27
OUTCOMES	Case notification rate of all forms of TB per 100,000 population- bacteriologically confirmed plus clinically diagnosed, new and relapse cases	Numerator: Number of all forms of TB cases (i.e., bacteriologically confirmed plus clinically diagnosed) reported [in a specified area] to the national health authority in the past year (new and relapse) Denominator: Total population in the specified area x 100,000	166 [2022]	TB Reporting System /CMIS	Annually	180	231	228	262	234
	Treatment success rate of all forms of TB- bacteriologically confirmed plus clinically diagnosed, new and relapse cases	Numerator: Number of all forms of TB cases (i.e., bacteriologically confirmed plus clinically diagnosed) in a specified period who subsequently were successfully treated (sum of WHO outcome categories "cured" plus "treatment completed") Denominator: Total number of all forms of TB cases (bacteriologically confirmed plus clinically diagnosed) registered for treatment in the same period	79% [2022]	TB Reporting System/ CMIS	Annually	85%	90%	>90%	>90%	>90%

Indicators	Indicator Definitions	Baseline [year]	Data Source	Reporting Frequency	Indicators				
					2024	2025	2026	2027	2028
Treatment success rate of RR TB and/or MDR-TB: Percentage of cases with RR and/or MDR-TB successfully treated	Numerator: Number of bacteriologically confirmed RR and/or MDR-TB cases enrolled on second-line anti-TB treatment during the year of assessment who are successfully treated (cured plus completed treatment) Denominator: Total number of bacteriologically confirmed RR TB and/or MDR-TB cases enrolled on second-line anti-TB treatment during the year of assessment	78% [2022]	Second-line TB treatment register/ CMIS	Annually	85%	90%	>90%	>90%	>90%
TB treatment coverage: Percentage of new and relapse cases that were notified and treated among the estimated number of incident TB cases in the same year (all forms of TB - bacteriologically confirmed plus clinically diagnosed)	Numerator: Number of new and relapse cases that were notified and treated. Denominator: Estimated number of incident TB cases in the same year (all forms of TB - bacteriologically confirmed plus clinically diagnosed)	61% [2022]	Numerator: TB register/ CMIS Denominator: Global TB report	Annually	65%	70%	80%	90%	>90%
Notification of RR-TB and/or MDR-TB cases – Percentage of notified cases of bacteriologically confirmed, drug-resistant RR-TB and/or MDR-TB as a proportion of all estimated RR-TB and/or MDR-TB cases	Numerator: Number of bacteriologically confirmed drug-resistant RR-TB and/or MDR-TB cases detected Denominator: Estimated number of RR-TB and/or MDR-TB cases	84/220 38% [2022]	Numerator: LIS/CMIS Denominator: Estimate from the drug resistance survey/ Global TB report	Annually	50%	60%	70%	80%	90%
Percentage of people diagnosed with TB who experienced self-stigma that inhibited them from seeking and accessing TB services	Numerator: Number of people with TB who experienced self-stigma due to their TB status that inhibited them from seeking and accessing TB services in the last 12 months Denominator: Total number of respondents among the people who were diagnosed with TB in the last 12 months	No data	Stigma Assessment Report/IBBS/ TB prevalence study	Every 2 years	TBD	TBD	TBD	TBD	TBD
Percentage of people diagnosed with TB who report stigma in health care settings that inhibited them from seeking and accessing TB services	Numerator: Number of people with TB who experienced stigma in health care settings due to their TB status that inhibited them from seeking and accessing TB services in the last 12 months. Denominator: Total number of respondents among the people who were diagnosed with TB in the last 12 months	No data	Stigma Assessment Report/IBBS/ TB prevalence study	Every 2 years	TBD	TBD	TBD	TBD	TBD

	Indicators	Indicator Definitions	Baseline [year]	Data Source	Reporting Frequency	Indicators				
						2024	2025	2026	2027	2028
	Percentage of people diagnosed with TB who report stigma in community settings that inhibited them from seeking and accessing TB services	Numerator: Number of people with TB who experienced stigma in community settings due to their TB status that inhibited them from seeking and accessing TB services in the last 12 months Denominator: Total number of respondents among the people who were diagnosed with TB in the last 12 months	No data	Stigma Assessment Report/IBBS/ TB prevalence study	Every 2 years	TBD	TBD	TBD	TBD	TBD
COVERAGE	Number of notified cases of all forms of TB- (i.e., bacteriologically confirmed + clinically diagnosed) **Includes only new and relapse cases*	Numerator: Number of all forms of TB cases (bacteriologically confirmed plus clinically diagnosed) notified to the national health authority during the reporting period Denominator: Not applicable	2 374 [2022]	TB register/ CMIS	Annually	2 109	2 730	2 964	3 168	2851
	Treatment success rate- all forms: Percentage of all forms of TB cases (bacteriologically confirmed plus clinically diagnosed) successfully treated (cured plus treatment completed) among all forms of TB cases registered for treatment during a specified period **Includes only new and relapse cases*	Numerator: Number of all forms of TB cases (i.e., bacteriologically confirmed plus clinically diagnosed) in a specified period who subsequently were successfully treated (sum of WHO outcome categories "cured" plus "treatment completed") Denominator: Total number of all forms of TB cases (bacteriologically confirmed plus clinically diagnosed) registered for treatment in the same period	79% [2022]	TB register/ CMIS	Annually	86%	90%	>90%	>90%	>90%
	Percentage of laboratories showing adequate performance in external quality assurance for smear microscopy among the total number of laboratories that undertake smear microscopy during the reporting period	Numerator: Number of laboratories showing adequate performance for smear microscopy Denominator: Total number of laboratories undertaking smear microscopy	100% [2022]	NTRL Administration records	Annually	100%	100%	100%	100%	100%
	Number of people in contact with TB patients who began preventive therapy	Numerator: Number of people in contact with TB patients who began preventive therapy Denominator: Not applicable	373 [2022]	TB register/ CMIS	Annually	1 492	2 675	3 320	3 992	4 192
	Number of TB cases (all forms) notified among prisoners	Numerator: Not applicable Number of TB cases (all forms) notified among prisoners Denominator: Not applicable	23/ 2 374 [2022]	TB register/ CMIS	Annually	23	30	45	60	60
	Number of TB cases (all forms) notified among key populations/high-risk groups (other than prisoners)	Numerator: Number of TB cases (all forms) notified among key populations/ high-risk groups (other than prisoners) Denominator: Not applicable	345/2 374 [2022]	TB registers/ CMIS	Annually	400	450	500	550	550

Indicators	Indicator Definitions	Baseline [year]	Data Source	Reporting Frequency	Indicators				
					2024	2025	2026	2027	2028
Number of notified TB cases (all forms) contributed by non-national TB program providers – private/non-governmental facilities	Numerator: Number of TB cases (all forms) referred and/or diagnosed by non-NTP providers- private/non-governmental facilities Denominator: Not applicable	98/2 374 4% [2022]	TB registers/ CMIS	Annually	105	137	148	158	143
Number of notified TB cases (all forms) contributed by non-national TB program providers – public sector	Numerator: Number of TB cases (all forms) managed or supervised by non-NTP providers- public sector Denominator: Not applicable	940/2 374 40% [2022]	TB registers/ CMIS	Annually	1 055	1 365	1 482	1 584	1 426
Number of notified TB cases (all forms) contributed by non-national TB program providers – community referrals	Numerator: Number of TB cases (all forms) referred by the community to a health facility for diagnosis in the BMU(s) covered by the grant during a specified period Denominator: Not applicable	831/2 374 35% [2022]	TB registers/ CMIS	Annually	738	956	1 037	1 109	998
Percentage of new and relapse TB patients tested using WHO-recommended rapid tests at the time of diagnosis	Numerator: Number of newly notified TB patients diagnosed with WHO-recommended rapid tests Denominator: Total number of new and relapse TB patients	1 902/2 374 80% [2022]	Laboratory registers/ CMIS	Annually	1 793 (85%)	2 321 (85%)	2 519 (85%)	2 693 (85%)	2 424 (85%)
Percentage of registered **new and relapse** TB patients with documented HIV status	Numerator: Number of new and relapsed TB patients registered during the reporting period who had an HIV test result (whether positive or negative) recorded in the TB register. Denominator: Number of new and relapsed TB patients registered in the TB register during the reporting period.	2 362/2 374 99% [2022]	TB register/ CMIS	Annually	2 088 (99%)	2 703 (99%)	2 934 (99%)	3 136 (99%)	2 823 (99%)
Percentage of HIV-positive **new and relapse** TB patients on ART during TB treatment	Numerator: Number of HIV-positive new and relapsed TB patients who started on TB treatment during the reporting period who are already on ART or who started on ART during TB treatment. Denominator: Number of HIV-positive new and relapsed TB patients registered during the reporting period.	1 509/1 536 98% [2022]	TB register/ CMIS	Annually	1 344 (99%)	1 739 (99%)	1 888 (99%)	2 018 (99%)	1 816 (99%)
Percentage of PLHIV on ART who initiated TB preventive therapy among those eligible during the reporting period	Numerator: Number of PLHIV on ART who initiated TB preventive therapy (TPT) during the reporting period. Denominator: Number of PLHIV on ART who are eligible for TPT during the (same) reporting period	TBD	TB register /CMIS	Annually	TBD	TBD	TBD	TBD	TBD
Percentage of TB patients with DST result for at least Rifampicin among the total number of notified (new and retreatment) cases in the same year	Numerator: Number of TB patients with DST results Denominator: Total number of notified TB cases in the same year	1271/2475 51% [2022]	TB register/ CMIS	Annually	1 476 (60%)	1 911 (70%)	2 371 (80%)	2 693 (85%)	2 566 (90%)

Indicators	Indicator Definitions	Baseline [year]	Data Source	Reporting Frequency	Indicators				
					2024	2025	2026	2027	2028
Number of TB cases with Rifampicin-resistant (RR-TB) and/or MDR-TB notified	Numerator: Number of bacteriologically confirmed RR-TB and/or MDR-TB cases notified. Denominator: Not applicable	66 [2022]	Laboratory register/ CMIS	Annually	105	119	132	143	153
Number of cases with RR-TB and/or MDR-TB that began second-line treatment	Numerator: Number of RR-TB and/or MDR-TB cases (presumptive or confirmed) registered and started on a prescribed MDR-TB treatment regimen during the period of assessment Denominator: Not applicable	84 [2022]	Second-line TB register/ CMIS	Annually	105	119	132	143	153
Percentage of cases with RR-TB and/or MDR-TB started on treatment for MDR-TB who were lost to follow-up during the first six months of treatment	Numerator: Number of confirmed RR-TB and/or MDR-TB cases registered and started on prescribed MDR-TB treatment who were lost to follow-up by the end of month 6 of their treatment. Denominator: Number of confirmed RR-TB and/or MDR-TB cases registered and started on treatment for MDR-TB during the period of assessment	2/97 (2%) [2022]	Second-line TB treatment register/ CMIS	Annually	3	4	5	6	6
Percentage of DST laboratories showing adequate performance on External Quality Assurance	Numerator: Number of laboratories showing at least 95 percent proficiency for isoniazid and rifampicin drug susceptibility testing. Denominator: Total number of laboratories that undertake drug susceptibility testing during the reporting period	2/2 100% [2022]	NTRL administration records	Annually	2/2	2/2	2/2	2/2	2/2
Percentage of confirmed RR/MDR-TB cases tested for resistance to second-line drugs	Numerator: Number of confirmed MDR-TB cases tested for resistance to second-line drugs during the period of assessment. Denominator: Number of confirmed MDR-TB cases during the period of assessment.	70/70 100% [2022]	Second-line TB treatment register/ CMIS	Annually	105	119	132	143	153
Number of cases of XDR TB enrolled on treatment	Numerator: Number of confirmed XDR-TB cases registered and started on a prescribed XDR-TB treatment regimen during the period of assessment. Denominator: Not applicable	0 [2022]	Second-line TB treatment register/ CMIS	Annually	3	4	5	6	6

	Indicators	Indicator Definitions	Baseline [year]	Data Source	Reporting Frequency	Indicators				
						2024	2025	2026	2027	2028
	Treatment success rate of RR TB and/or MDR-TB: Percentage of cases with RR and/or MDR-TB successfully treated	Numerator: Number of bacteriologically confirmed RR and/or MDR-TB cases enrolled on second-line anti-TB treatment during the year of assessment who are successfully treated (cured plus completed treatment) Denominator: Total number of bacteriologically confirmed RR TB and/or MDR-TB cases enrolled on second-line anti-TB treatment during the year of assessment	66/85 (78%) [2022]	Second-line TB treatment register	Annually	86%	90%	>90%	>90%	>90%
	Percentage of RR TB/MDR- TB patients with FQ resistance detected on LPA or pDST tested by Whole Gene Sequencing/ tNGS	Numerator: Number of DR TB patients with positive smear/culture at month 1 and tested by WGS Denominator: Number of DR TB patients with positive smear/culture at month 1	TBD	Second-line TB treatment register/LIS/CMIS	Annually	105	119	132	143	153
	Contact Tracing Coverage	Numerator: Number of bacteriologically confirmed PTB patients whose contacts were traced and screened Denominator: Total number of bacteriologically confirmed PTB patients	TBD	TB register/ CMIS	Annually	TBD	TBD	TBD	TBD	TBD
	Contact Screening Coverage	Numerator: Number of contacts of bacteriologically confirmed PTB patients who were screened. Denominator: Number of household contacts of bacteriologically confirmed PTB patients	TBD	TB register/ CMIS	Annually	TBD	TBD	TBD	TBD	TBD
	TPT Coverage among people exposed to Silica	Numerator: Number of people exposed to silica (miners and ex-miners) who were initiated on TPT. Denominator: Number of people exposed to Silica (Miners and ex-miners)	TBD	TB register/ CMIS	Annually	TBD	TBD	TBD	TBD	TBD

Monitoring and Evaluation

The Capacity of the M&E System for the NTCP

Eswatini NTCP conducted an epidemiological review recently in 2022 which has provided valuable information on the status of the M&E functions. Overall findings indicate that: Of the 13 standards for TB surveillance from the checklist, four were met, five were partially met, three were not met, and one was not assessed. TB notifications in Eswatini may not reflect true TB incidence in the country, considering the population's limited access to health care and the capacity of health systems to diagnose the TB patients attending health facilities. The situation is further complicated by the inability of the surveillance system to reflect the true number of people diagnosed with TB by the health systems due to under- reporting of initial lost-to-follow-up cases, those who died before the start of treatment, those identified with RR-TB and non-reporting by undesignated TB notification centers. This observation amplifies the need to conduct the inventory study. The table below shows the performance of the key areas of the M&E framework:

Standard		2017	2019	2022
B1.1	Case definitions			
B1.2	Minimum set			
B1.3	Scheduled submissions			
B1.4	Paper (quality)			
B1.5	Electronic (quality)			
B1.6	External consistency			
B1.7	Internal consistency			
B1.8	All cases reported			
B1.9	Access to health care			
B1.10	VR coverage			
B2.1	DR-TB			
B2.2	TB-HIV			
B2.3	Children			

Met	4
Partially met	5
Not met	3
Not applicable	0
Not assessed	1

The M&E for the NTCP will be domiciled in the NTCP under the leadership and stewardship of the program manager. The NTCP M&E Unit will feed into the main M&E system of the Ministry of Health. The NTLP Central Unit, through the M&E focal person assisted by a team of M&E officers within the Ministry of Health, including those seconded to the program by various partners, will be responsible for the day- to-day coordination and monitoring, and evaluation of TB activities in both the public and private sectors. The M&E framework will help measure the progress in implementing the interventions and activities outlined in this plan and assess progress in achieving the vision intended goal, objectives, and set targets for the NSP.

The M&E system for Eswatini incorporated all levels of the continuum of care community inclusive. The reporting system is organized in a way that data from the community to health centers (BMU) to the regional level and then to the national level. The National level submits TB data annually to the Global TB program at WHO. The NTCP continues to use both paper and electronic reporting at all levels. In the timeframe of this NSP the NTCP has put up robust plans to fully transition to electronic reporting of TB data. With this, the data will be entered from all the facilities and accessible in real time by all stakeholders and decision-makers.

Tracking of Progress

With the electronic platform implemented the NTCP will create a dashboard for ease of review of the performance of key TB indicators on a weekly/monthly basis. The NTCP will continue to conduct quarterly performance review meetings at regional and national levels.

The NTCP will conduct an end-of-term review of the NSP to inform the setting of priorities for the follow-on strategic plan. Besides the end-term review the NTCP will support the implementation of the regional Green Light Committee (rGLC) review of the implementation of DR TB and also conduct the epidemiological review to review the impact of the strategies and identify key gaps in the TB surveillance system.

Data Quality Assessment

The M&E unit under the NTCP with support from implementing partners will conduct periodic data quality assessments across all regions of Eswatini to assess for timeliness, completeness, correctness, and coverage of the data that is reported to the regional health office and national levels. This approach together with interventions will enable the NTCP to respond to the gaps identified in the 2022 epidemiological review that indicated a potential existence of underreporting of the data arising from the gaps in the data collection in the TB surveillance system.

TB Information Dissemination Strategy

The NTCP under this NSP will strengthen the flow of information and data sharing within the program vertically and with other stakeholders. The dissemination strategies for the TB information and data under this NSP include:

1. TB Annual reports
2. TB quarterly reports
3. Bulletins

Implementation Research

The NTCP prioritizes research to inform the program in subject areas of interest to the program. Under this NSP the NTCP will develop the research agenda and priorities. The country conducted the DRS exceptionally well, indicative of the country's potential. The are several studies that the NTCP is yet to conduct, which includes:

1. Patient Cost Survey
2. TB Patient Stigma Index

The inventory study, the epidemiological survey of 2022 recommended the inventory study to establish the magnitude of the under-reporting and the main drivers for the purpose of instituting corrective measures.

Contingency Measures

Learning from Covid-19 pandemic TB intervention and activities were gravely affected. TB Programmes across the globe recorded a decline in TB case detection and more concerningly reported an increase in TB related mortality. This did arise from restricted movement, person with respiratory symptoms were avoided to present to health facilities for fear of being diagnosed with Covid-19, TB contact investigation activities at community level were hold during peaks of the covid-19. The facilities were overwhelmed with Covid-19 patient, human resource in TB units were reassigned support the Covid-19 response. In the case of Eswatini this resulted into reduced TB detection and an increase in the burden of TB and TB mortality. This is the first time in the last two decades an increase has been reported in the number of people falling ill with TB. Post peaks of Covid-19, Eswatini has shown a positive re-bound with TB coverage picking up from 47% in 2021 to 61% in 2022. Besides Covid-19 there are other public health emergencies natural catastrophes that may emerge, climate change. With lessons learned from the experience of the Covid-19 pandemic, the overall goal of the TB contingency plan is to build resilient system provide mitigation measures to help support the continuation of essential services which includes TB diagnosis, TB treatment and care and preventive services.

Major interventions include:

The strategic shifts required to for the continuation of TB services during pandemics, outbreaks and natural calamities include:

- Identification of context-relevant TB services, re-adaptation of models of delivery of services, prioritization of community models of services provision. Shifting from routine to targeted community TB screening, utilizing much more of TB contact investigation.
- Optimization of service delivery settings and platforms such multiplexing of molecular TB diagnostic tools, switch to multi-month scripting, optimize video DOTs, shifting to community dispensaries. Scale up home based services.
- Establishment of effective patient flow (screening, triage, and targeted referral) at all levels at the same time reducing overcrowding.
- Rapid re-distribution of health workforce capacity, including by re-assignment and task sharing.
- Establishment of mechanisms to maintain adequate supplies of TB medicines and laboratory consumables/supplies.
- Infection prevention in health facilities, workplaces, schools and the community at large.
- Strengthen use of data for planning and decision making. Review program data weekly, if possible daily for selected indicators to track the impact and inform about the situation. Use real time or near real time data for decision making and actions and policy. In pandemics/outbreaks/calamities situations change rapidly. Timely response is essential.
- Optimise e-learning platforms for capacity building, provide data incentives for health care workers.