

NATIONAL STRATEGIC PLAN TO END TUBERCULOSIS IN NEPAL

2021/22-2025/26



Government of Nepal
Ministry of Health and Population
Department of Health Services
National Tuberculosis Control Center
Thimi, Bhaktapur

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1

BACKGROUND

1.1 Health Policy and Health Plan

The Section 35 (1) of the Constitution of Nepal has guaranteed the right to free basic health services to every citizen of Nepal, and has stated that “no one shall be deprived of emergency health services”. Likewise, the National Health Policy, 2019 has the provisions for the implementation of effective programs to execute study, research, oversight, prevention, control and eradication of communication diseases, including tuberculosis (TB), HIV/AIDS and malaria. Furthermore, the Public Health Service Act, 2018 states that every citizen shall have the right to get emergency health services and easy access to quality health services in an equitable manner. The Act has provided the Ministry of Health and Population the right to formulate necessary directives subject to the implementation of the provisions or acts framed under this Act. On the other hand, the Fifteenth Plan (Fiscal Year 2019/20 – 2023/24) has included TB as a communicable disease, and has planned for increasing the investment for the diagnosis of TB and other infectious diseases and towards the management of special programs for the prevention of TB and non-communicable diseases. Keeping all these aspects in mind, this five-year National Strategic Plan to End Tuberculosis in Nepal (2021/22-2025/26) has been formulated.

1.2 Demography

The projection done on the basis of National Population and Housing Census 2011 estimates the population of Nepal in 2020 to be 2,99,96,478 approximately. According to the TB Prevalence Survey carried out in 2018/19, the incidence of TB is estimated to be 245 per 100,000 population. Therefore, the projection based on the population estimates that around 69,000 people with TB disease are living in Nepal, out of which, 67 percent are expected to be males and 33 percent to be females.

TB is one of the top 10 causes of death in Nepal. It is estimated that about 17,000 people die due to TB every year in Nepal. Since there is a huge difference between the target of identifying new TB cases and the current data on Health Management Information Section (HMIS) (27,745 in 2019/20), there is a need to identify new TB cases and bring them within the continuum of treatment.

1.3 Economy

Nepal, officially the Federal Democratic Republic of Nepal, is a Least Developed landlocked country that has adopted mixed economy system. In 2018/19, the economic growth rate of Nepal was 6.8 percent, but due to the COVID-19 pandemic, the country suffered a negative growth with outstanding debt of -1.9. The revised estimation suggests that the economic growth rate of the country will increase up to 2.9 percent in 2020/21.

The 15th Plan has estimated the economic growth rate of Nepal in 2021/22 to be 9.9 percent. Similarly, the per capita income that is regarded as the indicator of economic development was USD 1,126 in 2019/20. By the end of 2020/21, the per capita income is projected to be USD 1,191.

In Nepal, the percentage of people living under poverty is 18.7 percent and 28.6 percent of Nepal's population is multi-dimensionally poor. TB and economy are interrelated; hence, it is necessary to include activities that maintain social security in TB plans and implement them accordingly.

Source: Fifteenth Plan (Fiscal Year 2019/20 – 2023/24) and Economic Survey 2019/20

1.4 Health System Financing

The total health expenditure as a proportion of GDP has been steadily increasing in Nepal. Health care has been predominantly financed by Out-Of-Pocket (OOP) payments. According to a study carried out in 2014/15, 60.4 percent of total health expenditure was covered by OOP payments. Besides, OOP health expenditure in Nepal was much higher than the ≤ 25 percent benchmark set by WHO.

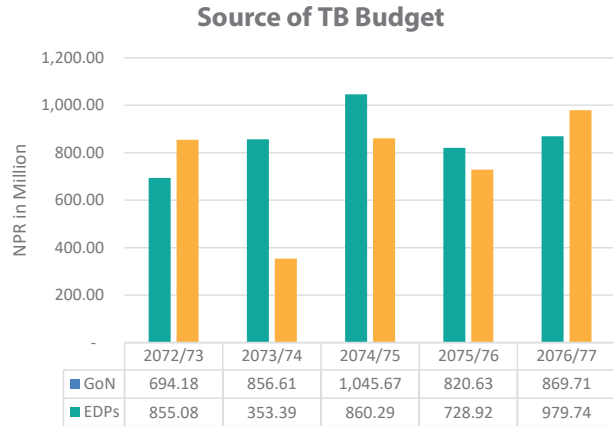
The government-financed health insurance program that began in 2016 has been scaled up in 68 districts. Under this scheme, a family with up to five members has to pay a premium of Rs 3,500 annually and avail free medical treatment worth Rs 100,000 in total. The Health Insurance Regulations, 2018 has the provision for 100 percent subsidy by the government to the families of handicapped, people with disability and people affected by leprosy, HIV and MDR TB.

1.5 National TB Program in Nepal

National TB Control Center (NTCC) is one of the centers within the organizational structure of the Ministry of Health and Population, and is the focal point of National Tuberculosis Programme (NTP). It is responsible for formulating policies, strategies and plans and carrying out monitoring, evaluation and quality assurance of NTP. The NTP is fully integrated and being implemented within the health system of the Government of Nepal through 135 public hospitals, 2168 non-government organizations, 196 Primary Health Care Centers (PHCCs), 3806 health posts, and 51,420 Female Community Health Volunteers (FCHV) (Annual Report, 2018/19, DoHS).

1.6 TB Finance

Of the total budget allocated for NTP from 2015/16 to 2019/20, the proportion of government budget was 53.16 percent while 46.84 percent budget constituted the funds donated by donor agencies. While TB services are provided for free, patients do bear charges for undertaking X-Ray, along with other laboratory fees. Patients also pay for their ancillary drugs and bear indirect costs for diagnosis and treatment of TB leading to substantial OOP.



1.7 Why TB National strategic plan (2021/22-2025/26)

Since 1994/95, National TB Program has been formulating short and long-term plans and has been implementing programs accordingly. The TB program has been under implementation in line with the global and national guidance. Since the prevailing strategic plan (2016/17-2020/21) ends in 2020/21, the NTP has formulated the National Strategic Plan to End Tuberculosis in Nepal (2021/22-2025/26) by addressing the topics mentioned below.

- Implement NTP effectively as per the spirit of federalism
- Fulfill the commitments made by the Government of Nepal at the global and regional levels towards meeting the End TB targets.
- Until 2017/18, the number of TB incident cases were expected to be 42,000. However, the results of National Tuberculosis Prevalence Survey carried out in 2018/19 estimates 69,000 new cases of TB, which is 1.6 times higher than previously estimated. Therefore, it is of utmost importance to utilize more effective technology for the diagnosis of TB in order to end TB.

In the process of formulating this strategic plan, extensive country level dialogue and discussions have been conducted with the experts, different groups and policymakers from the local to the central level by forming Technical Advisory Committee and various other committees on different dates. This strategic plan has included the suggestions received from such in-depth discussions along with the recommendations received from the joint programme monitoring and evaluation carried out by national and international experts in 2018/2019.

This strategic plan has been developed to be used as a policy to guide the provincial and local level governments as well. The role and responsibilities of the federal, provincial and local levels are described in Section 5.

2

EPIDEMIOLOGY OF TUBERCULOSIS

2.1. Estimated burden of TB in Nepal

TB burden in Nepal (prevalence and incidence) is higher than previously estimated. As per the National Tuberculosis Prevalence Survey 2017/18, the TB prevalence rate is 416/100,000 which is 1.8 times higher than previously estimated by WHO, and revised incidence rate is 245/100,000 which is 1.6 times higher than previously estimated. The mortality rates associated with TB were also re-estimated to be 3.3 times higher than previous estimation while TB drug resistance is 1.57 times higher than the previous estimation. Hence, Nepal has been enlisted in WHO bulletin as a country having high resistance towards TB drugs.

Table 1: Burden of TB

Fiscal Year	TB Incidence (all forms)	TB Prevalence (all forms)	Mortality (HIV -ve & +ve) (Annual)	DR TB (Total Estimates)
2017/18 Incidence	69,000 (245/100,000)	117,000 (416/100,000)	17,003 (9,000-26,000) Annual	2,200 Annual
2017/18 Prior estimates	42,000 151/100,000	60,000 215/100,000	5,500 (3,900-7400) Annual	1400 Annual
Revised burden, higher by	1.6 Times	1.8 Times	3.1 Times	1.57 times

2.2. TB notification

The number of new and relapse TB cases notified was 32,043 in 2018/19. Notification rate of new TB cases in Nepal differ substantially by geographic area. TB notification rates were found to be lowest in the mountain areas to the north of the country and highest in the Terai plains in the south. Considering the ratio of new incidence and prevalence rate, it is imperative to bring 14 percent TB cases within the continuum of treatment.

2.3. Tuberculosis Mortality

Though there is no functioning Vital Registration System in Nepal that provides direct or real-time information about TB-related deaths, data on TB-related deaths have been estimated based on TB Prevalence Survey and the data provided by WHO, which is 58 per 100,000 population annually.

3 PROGRESS, PROBLEM, CHALLENGES, AND RECOMMENDATION

3.1. Key achievements

Due to the lack of human and financial resources, only 48 percent of the activities proposed in the National Strategic Plan 2016/17-2020/21 have been implemented and 17 percent are partially implemented while 36 percent activities have not been implemented (*Source: Joint Monitoring Team Report, 2018/2019*). The major achievements during this period are as follows.

- DS TB is included in the package of basic health services and the patients with DRTB are covered by the national health insurance scheme.
- The NTP has moved towards digitalized case-based surveillance.
- WHO-recommended mWRD has been expanded to 43 districts
- Culture/DST laboratories have been established in two places
- The services of transporting sputum to TB Diagnostic Centers and need-based referral system have been initiated
- Work is underway to procure the medicines for all forms of TB by the government of Nepal.
- TB Preventive Therapy for children below 5 years who have come in close contact with index TB patient has been started.
- FAST (Find Actively, Separating and Treating Effectively) approach has been launched to increase TB diagnosis among the service recipients at hospitals and prevent TB infection.
- To appropriately manage TB among children after diagnosing it, partnership with Nepal Pediatric Association, professional authorities and other stakeholders has been established. Furthermore, the capacities of doctors working in various parts of the country have been enhanced. As a result, the TB diagnosis rate among children has been increased.
- There has been increment in the HIV testing rate among the TB patients.
- Hospitals are being constructed for specialized treatment services for TB at the central level, and guidelines for the establishment and operation of TB treatment and referral management centers at the Provincial level have been implemented.
- The treatment success rate of DS TB patients is 90 percent and the treatment success rate of drug resistant TB patients is 70 percent. In addition, there has been tremendous increment in the treatment success rate of DR TB with the introduction of new and shorter regimen of TB treatment.

3.2. Key Problems

- TB Case Notification not being mandatory.
- In terms of health agenda, investment, leadership and good governance, TB Program not being included as a priority program at all levels
- The dearth of adequate engagement and participation of CSOs, CBOs and patients' support groups in TB program.
- Sputum collection and its transportation to the nearest diagnostic center still not being effective and not being available nationwide.
- Inadequate effort in carrying out sputum test with the use of recently-available GeneXpert and its underuse.
- Untimely and inadequate reporting and recording of TB program by all health service providing facilities.
- Health facility-based TB treatment services not being easily accessible to the patients.
- Lack of proper implementation of CS-DOTS though it has been launched in some districts.
- Ineffective partnership with private sector and other institutions and stakeholders
- COVID-19 infection added complexity in TB program

3.3. Key Challenges

- To improve accountability, prioritization, engagement and investment for TB program at all levels.
- To enhance the work efficiency of TB Focal Persons
- To strengthen meaningful participation of community and private sectors in TB diagnosis and treatment
- Expansion of newer technology and its maximum utilization for TB diagnosis
- Expansion and maximum utilization of sputum collection and transportation method.
- Effective expansion of laboratories for TB diagnosis and its appropriate management.
- Institutionalization and expansion of electronic case-based surveillance systems in both public and private sectors, and institutionalization of robust supervision system.
- Increment in investment and effective implementation of TB infection control measures at all levels.
- Implementation of TB program by integrating it with other national health programs related to HIV, IMNCl, tobacco control, diabetes, nutrition, women of reproductive age group, recently delivered women, pregnant women, infant and adolescents' health etc.

- Lack of designated person to implement TB program at local level.
- To implement TB program in a multi-sectoral approach (e.g. education, agriculture, finance, social security, employment, poverty reduction, etc.)
- To identify patients diagnosed with TB but are unenrolled in TB treatment, and bring them in the continuum of TB treatment and care
- Management of TB patients during pandemics like COVID-19 and ensure continuation of such services.

3.4 Key Opportunities

- To secure commitments from the political leaderships on ending TB.
- Leverage economic and technical support from donor agencies
- Implementation of TB program by Provincial Level and Local Level with the investment of their own resources.
- Establishment of patient-centered services for TB management; increment in advocacy and support; and engagement of community and private health institutions in TB program
- Connect sputum collection and transportation with the TB Diagnostic Centre, and the possibility of participation of Provincial Public Health Laboratory for ensuring its quality.
- Conducive environment for utilization of knowledge and experiences gained during the implementation of COVID-19 control programs.
- Capacity building of health workers at all levels.

4

NATIONAL STRATEGIC PLAN TO END TUBERCULOSIS IN NEPAL (2021/22-2025/26)

4.1. Vision, Goal and Objectives

Vision

TB free Nepal

Goal

Nepal has set a goal to decrease incidence rate from 238 in 2020/21 to 81 patients per 100,000 population by 2025/26; decrease mortality rate from 58 in 2020/21 to 23 per 100,000 by 2020/21; end TB by 2035; prevent TB by 2050; and reduce the catastrophic cost to zero.

Objective

1. To build and strengthen political commitment, sustainability and patient-friendly health system to end TB.
2. To ensure the identification of TB, diagnosis, quality treatment and prevention.

4.2 Strategy, Policy Actions and Major activities

Mentioned below are the strategies that will be adopted to meet the objectives of the strategic plan.

Strategy	Policy Action	Major Activities
<p>1. Improve the quality of TB services and strengthen the health system for universal access to TB services; effective the TB services and support by increasing the community engagement in TB management, and strengthen the digitalized case-based surveillance system in health care facilities.</p>	<p>1.1. Provide quality TB services through increased universal access to health care by further strengthening the health system of TB program</p> <p>1.2. Strengthen community involvement and ownership in TB free Nepal Campaign</p> <p>1.3. Strengthened monitoring system of TB program</p> <p>1.4. Ensured implementation of TB programs through integrated health system for its sustainability during natural disasters and other emergencies.</p>	<p>1.1.1. Incorporate standard TB service as a part of basic health service package within UHC and ensure no catastrophic cost occurs to TB patient and Family members</p> <p>1.1.2. Management of adequate and sustainable resources for TB program as per the need.</p> <p>1.1.3. Strengthen the health system in line with federalism and management of posts as per the need.</p> <p>1.1.4. Strengthen the capacity of health workers</p> <p>1.1.5. Re-define partnership at all levels.</p> <p>1.1.6. Ensure effective Procurement and Supply Chain Management (PSM) system.</p> <p>1.2.1. Implementation of TB Free Local Level Declaration Campaign by involving all individuals holding leadership positions at all levels and the community to ensure necessary capacity and adequate resources for TB care and prevention; formulation of micro-plan; and implementation of multi-sectoral concept</p> <p>1.2.2. Improvisation of health facility-based DOTs services.</p> <p>1.2.3. Expand the CB-DOTS programs for DS TB and DR TB in a phased manner by adopting appropriate method on the basis of detailed evaluation.</p> <p>1.2.4. Implement activities of Active Case Finding up to the community level for TB active case finding, diagnosis and timely treatment.</p> <p>1.3.1. Strengthen and revise the mechanisms of program review, analysis and support at all levels.</p> <p>1.3.2. Ensure the quality of TB data in collaboration with communication system within Ministry of health and population</p> <p>1.3.3. Collaborate and coordinate with MoFAGA to record the TB-related deaths in Vital Registration system</p> <p>1.3.4. Use of digital platform between TB program and HMIS to strengthen the TB surveillance system.</p> <p>1.3.5. Ensure the enabling environment for the implementation of suggestions and recommendations by strengthening the supportive supervision, monitoring and evaluation mechanisms at all levels.</p> <p>1.3.6. Formulation of evidence-based plans, and promotion of periodic review and research.</p>
	<p>1.4.1. Access to basic health services for TB patients will be ensured even during natural disasters and other emergency periods.</p>	

Strategy	Policy Action	Major Activities
<p>2. Strengthen laboratory services to further improve the management of TB diagnosis and treatment.</p>	<p>2.1. Strengthened TB Laboratory Services</p>	<p>2.1.1. Formulate National TB Laboratory Plan and implement it. 2.1.2. Strengthen the National TB Reference Laboratory at National TB Control Center. 2.1.3. Establish examination of Genotypic DST (For 1st and 2nd line TB medicine) at all laboratories affiliated under NTRL. 2.1.4. Strengthen mWRD Laboratory network 2.1.5. Re-organize a quality assured smear microscopy network 2.1.6. Involve provincial public health laboratories for quality assurance of mWRD and microscopy centers 2.1.7. Establish a Sputum collection and Transportation (SCT) system and strengthen the sputum courier mechanism 2.1.8. Establish a system to evaluate the quality of laboratories 2.1.9. Ensure timely procurement and maintenance of laboratory equipment and consumables</p>
<p>3. Quality Improvement of the services for TB prevention, identification and treatment</p>	<p>3.1. Increased rate in identification of patients of DSTB and DRTB</p> <p>3.2. Increased TB treatment success rate</p>	<p>3.1.1. Strengthen TB case finding in community and health facilities using modern technologies (Digital X-ray, mWRD) 3.1.2. Strengthening of contact tracing to carry out sputum test of people who have come in close contact with TB patients. 3.1.3. Scale-up of activities of Active Case Finding among high risk and vulnerable groups. 3.1.4. Strengthen TB referral and treatment mechanism by adopting innovative approaches to prevent initial loss to treatment and follow-up of TB cases 3.1.5. Strengthen the management of diagnosis and treatment of childhood TB</p> <p>3.2.1. Quality Improvement in TB treatment in all the health facilities. 3.2.2. Quality check and regulation of newer regimen used in TB treatment and initiate and expand across the nation 3.2.3. Provide psychosocial and support to TB patients and their families for addressing the barriers to treatment adherence 3.2.4. Strengthen aDSM mechanism (Drug safety monitoring and management) for efficient identification and effective management of adverse reactions caused by medicine used in the treatment of RR/MDR TB 3.2.5. Bring the TB patients unregistered in treatment despite diagnosed in laboratories.</p>

Strategy	Policy Action	Major Activities
	<p>3.3. Expanded TPT coverage and strengthen Infection Control Measures at all health facilities</p>	<p>3.3.1. Expansion of TPT and Infection Control program will be expanded only through appropriate study and evidence 3.3.2. Increase coverage of TPT among children <5 years and PLHIV and scale-up among other TB contacts and vulnerable populations 3.3.3. Expansion of TB prevention and diagnosis technology and TB medicines only by being based on study and evidence. 3.3.4. Strengthen infection control and prevention measures</p>
	<p>3.4. Implementation of multisectoral approach and addressing of high risks due to TB comorbidities</p>	<p>3.4.1. Strengthen TB/HIV cooperation 3.4.2. Collaborate with the Tobacco Control Program under Non-Communicable Disease (NCD) for joint effort for TB tobacco control 3.4.3. Establish coordination between NTP and diabetes program 3.4.4. Increase TB case findings programs among people with malnutrition 3.4.5. Focus on promotion and intake of nutritious food among TB patient and their family</p>
	<p>3.5. Ensured meaningful participation of private and non-government sector for effective management of TB services</p>	<p>3.5.1. Develop a package for the mobility, adequate investment and service expansion in private and non-government sector to strengthen the patient pathway. 3.5.2. Develop partnership with relevant stakeholders (medical college, private health facilities, etc.) to effectively manage TB services. 3.5.3. Formulate a supportive policy and legal framework. 3.5.4. Utilize digital technologies for reporting and building accountability</p>

5

KEY RESPONSIBILITIES

5.1. Federal

National TB Control Center will perform following roles on priority at the federal level for the implementation of the strategic plans.

- Incorporate standard TB service as a part of basic health service package within UHC and ensure no catastrophic cost occurs to TB patient and family members.
- Advocate for the political commitment for securing adequate and sustainable resources and commodities for TB Program.
- Advocate for health system strengthening and adequate human resource in line with the federal context.
- Re-define the NTP partnership at all levels
- Ensure effective procurement and supply chain management system is in place.
- Strengthen and improvise the program review, analysis and feedback mechanisms at all levels.
- Ensure TB data quality in collaboration with information system of Ministry of Health and Population.
- Collaborate and coordinate with MOFAGA to strengthen Vital Registration system.
- Use of digital platform between NTP and HMIS to improve the TB surveillance system
- Promote periodic review and research for evidence-based plans
- Ensure the inclusion of TB prevention and care activities in Disaster Preparedness Plan at all levels.
- Execute the National TB Laboratory Plan.
- Strengthen NTRL under NTCC
- Establish Line Probe Assay (LPA) Laboratory Network under NTRL
- Establish Lab network monitoring system.
- Ensure procurement and maintenance of laboratory equipment and necessary regimens
- Strengthen childhood TB diagnosis and management.
- Develop a package for the mobility, adequate investment and service expansion in private and non-government sector to strengthen the patient pathway
- Formulate supportive policy and regulatory framework.

- Collaborate with Tobacco Control Program under Non-Communicable Disease (NCD) for joint effort for TB tobacco control.
- Establish coordination between NTP and diabetes program.
- Initiate new diagnosis and regimen for TB Preventive Therapy along with monitoring and evaluation
- Initiate and expand quality checking and regulation of newer regimen of TB treatment

5.2. Province

For the implementation of this plan, following activities will be performed by Provincial Health Directorate under Ministry of Social Development in coordination with NTCC.

- Capacity building of health workers.
- Implementation of TB Free Local Level Declaration Campaign by involving all individuals holding leadership positions at all levels and the community to ensure necessary capacity and adequate resources for TB care and prevention and formulation of micro-plan
- Expand CB-DOTS program for DSTB and DRTB.
- Strengthen and improvise the program review, analysis and feedback mechanisms at all levels.
- Promote periodic review and research for evidence-based programming.
- Ensure the inclusion of TB prevention and care activities in Disaster Preparedness Plan.
- Strengthen mWRD Laboratory network that is operated in a planned and continued manner.
- Management of quality assured smear microscopy network
- Make provincial level public health laboratories responsible for quality assurance of mWRD and microscopy centers.
- Develop laboratory network monitoring system.
- Ensure procurement and maintenance of equipment and necessary materials.
- Strengthen the management of childhood TB diagnosis and treatment.
- Monitoring and evaluation of diagnosis and regimen of TB Preventive Therapy (TPT)

5.3. Local Level

For the implementation of this plan, the local level will implement the following roles with priority in coordination with Provincial government and NTCC and facilitate and provide support to health facilities.

- Capacity building of health workers.
- Implementation of TB Free Local Level Declaration Campaign by involving all individuals holding leadership positions at all levels and the community to ensure necessary capacity and adequate resources for TB care and prevention and formulation of micro-plan
- Expand CB-DOTS program for DSTB and DRTB.
- Strengthen and improvise the program review, analysis and feedback mechanisms.
- Ensure the inclusion of TB prevention and care activities in Disaster Preparedness Plan.
- Establishment of courier system for sputum collection and transportation
- Strengthen the activities of TB case identification at health facilities by utilizing sensitive screening and diagnosis tools.
- Strengthen the contact tracing of people who have come in close contact with TB patients.
- Scale-up systematic screening among high risk and vulnerable groups
- Strengthen TB referral mechanism by using innovative approaches to prevent initial loss to follow-up of TB cases.
- Strengthen the management of childhood TB diagnosis and treatment.
- Partner with intermediary agency and key stakeholders (medical college, private health service center) for effectively manage TB services
- Utilize digital technology for reporting and developing accountability
- Expansion of collaboration with TB/HIV program.
- Increase TB case identification program among people suffering from malnutrition
- Increase coverage of TPT among eligible children <5 years and PLHIV and scale-up among other TB contacts and vulnerable population
- Strengthen infection prevention and control mechanism
- Ensure quality treatment of DSTB and DRTB in health centers.
- Provide psychosocial and support to TB patients and their families for addressing the barriers to treatment adherence
- Strengthen and expand aDSM mechanism (Drug safety monitoring and management) for efficient identification and effective management of side effects of medicines.
- Discourage the tendency of not reporting of TB cases following diagnosis and the obstructions that are likely to occur following effective monitoring.

6

STRUCTURAL MANAGEMENT

6.1. Monitoring and Evaluation

All government agencies, non-government organizations, donors and partners organizations involved in the NTP will be involved in regular monitoring of the progress in the implementation of this Strategic Plan. The concerned offices will monitor the programs implemented by the bodies operational under its purview. The concerned ministry, Department of Health Services, NTCC, Provincial Government, Local Level government and other associated authorities will involve in monitoring activities. To monitor the overall implementation status of this strategic plan, the NTCC at the federal level, the Provincial Health Directorate at the Provincial Level and the concerned Local Level government at the local level will form a monitoring committee with the involvement of all stakeholders. The monitoring committee will regularly monitor the non-performance of the prescribed work and submit a report to NTCC.

To implement the strategic plan, a detailed monitoring and evaluation plan (M&E Plan) will be prepared and implemented. The effect and results of the NTP will be evaluated internally and externally. For independent evaluation, the NTCC will form an evaluation task force comprising of national and international experts. The task force will submit a report to the Government of Nepal after conducting a mid-term evaluation of the program implementation and final evaluation of the results and impact.

6.2. Legal Provisions

By being based on the duties and functions of federal, provincial and local level as per the constitutional provisions, the Public Health Service Act (2018), National Health Policy (2019), Public Health Services Regulations (2020), prevailing 15th Plan, Basic Health Service Package 2018 will be effectively implemented to legally regulate and manage TB-related activities of all the three levels of government.

The prevailing National TB Strategic plan has included TB diagnosis, treatment and care as free-of-cost services. The use of modern information technology will be promoted in this legal system. In order to ensure free diagnosis and treatment of all types of TB patients through health insurance, free insurance will be provided to all types of TB

patients by amending the health insurance policies, acts and regulations as required. Provisions of making the public and private health institutions compulsorily report to HMIS will be ensured by amending the Infectious Diseases Act 2020.

6.3. Human Resource Management

For the implementation of the recommendations provided by Joint Monitoring Team comprising of national and international experts, following arrangements will be made to address the existing problems related to human resource management on the basis of Strategic Plan of Human Resources for Health (2020/21-2030/31), Organization and Management Survey (O&M Survey), institutional arrangement of all levels of government.

6.3.1. Federal Level: National TB Control Center

In order to implement the strategic plan, it is necessary to increase the existing manpower at the National Tuberculosis Control Center from 22 to 55.

- The approved organization structure of the National Tuberculosis Control Center has the positions for 33 staffs, of which, 22 are technical staff while 4 posts are currently vacant.
- NTCC has been receiving support from 8 technical staffs supported by Global Fund in its Program Management Unit, and this assistance will be continued until the implementation of this strategic plan.
- In order to effectively implement the activities mentioned in the plan, 12 more technical staff are required which are proposed to be sanctioned by the Government of Nepal. These proposed posts are also included in the Strategic Plan of Human Resources for Health (2020/21-2030/31) formulated by Ministry of Health and Population (MoHP).

For the successful implementation of this plan, it is imperative to adjust the existing positions as per number of positions tabulated below.

Table 2: Required human resources at National TB Control Center

S.N.	Post	Level/grade	Service	Group	Sub-Group	Existing			Proposed positions		Proposed Net Posts
						Add	Remove	Existing	Add	Remove	
1	Director	11	Nepal Health	PHA		0	1	0	0	0	1
2	Chief Chest Physician	11	Nepal Health	Chest Disease		0	1	0	0	0	1
3	Under Secretary		NPC-Statistic	Statistic		0	1	0	0	0	1
4	Senior Consultant Chest Physician	9/10	Nepal Health	Chest Disease		0	2	0	0	0	2
5	Public Health Administrator	9/10	Nepal Health	PHA		0	0	1	0	0	1
6	Microbiologist	9/10	Nepal Health	Medical Lab Technologist		0	0	1	0	0	1
7	Under Secretary		Administration	General Administration		0	1	0	0	0	1
8	Statistics Officer	Gazette Officer-III Class	NPC-Statistic	Statistics		0	1	0	0	0	1
9	Section Officer	Gazette Officer-III Class	Administration	General Administration		0	1	0	0	0	1
10	Finance Officer	Gazette Officer-III Class	Administration	Account		0	1	0	0	0	1
11	Medical Officer	8	Nepal Health	General Health Service		0	4	0	1	3	
12	Nursing Officer	7/8	Nepal Health	General Nursing		0	1	0	0	1	
13	Health Education Officer	7/8	Nepal Health	Health Assistant		0	0	1	0	1	
14	Public Health Officer	7/8	Nepal Health	Health Assistant		0	1	2	0	3	
15	Medical Technologist	7/8	Nepal Health	Medical Lab Technologist		0	2	2	0	4	
16	Lab Technician	5/6/7	Nepal Health	Medical Lab Technologist		0	2	1	0	3	
17	Radiographer	5/6/7	Nepal Health			0	1	1	0	2	
18	Junior Radiographer	4/5/6	Nepal Health	Radiography		0	0	1	0	1	
19	Staff nurse	5/6/7	Nepal Health	General Nursing		0	1	0	0	1	
20	ANM	4/5/6	Nepal Health	Nursing		0	0	2	0	2	
21	Health Assistant/General Health Inspector	5/6/7	Nepal Health	Health Inspector		0	4	0	0	4	
22	Senior Auxiliary Health Worker/Officer	4/5/6	Nepal Health	Health Inspector		0	0	2	0	2	
23	Accountant	Non-Gazette Officer-I Class	Nepal Health	Account		0	0	1	0	1	
24	Nayab Subba	Non-Gazette Officer-I Class	Nepal Health	General Administration		0	2	0	0	2	
25	Computer Operator	Non-Gazette Officer-I Class	Miscellaneous	Miscellaneous		0	0	1	0	1	
26	Kharidar	Non-Gazette Officer-II Class	Administration	General Administration		0	0	1	0	1	
27	Senior Lab Assistant/Inspector	4/5/6	Nepal Health	Medical Lab Technologist		0	0	2	0	2	
28	Driver		Engineering	Mechanical Engineer		0	3	1	0	4	
29	Support staff		Administration	General Administration		0	3	3	0	6	
Total						0	33	23	1	55	

6.3.2. Province, District and Local Level

Currently, there are problems in the implementation of the TB program as there are no staff assigned for the TB program at the province, district and local levels. Therefore, strategic plan will be implemented at the province, district and local level by adding the following posts.

Province

S.N.	Position	Level/Grade	Service	Group	Sub-group	Existing	Proposed Position		Proposed Net Positions
							Add	Remove	
1.	Medical Surveillance Officer (TB)	8	Nepal Health	General Health Service		0	7	0	7

District

S.N.	Position	Level/Grade	Service	Group	Sub-group	Existing	Proposed Position		Proposed Net Positions
							Add	Remove	
1.	Public Health Officer	7	Nepal Health	Health Inspector		0	77	0	77

Local Level

S.N.	Position	Level/Grade	Service	Group	Sub-group	Existing	Proposed Position		Proposed Net Positions
							Add	Remove	
1.	Public Health Nurse	7	Nepal Health	Nursing		0	753	0	753
2.	Health Assistant	5	Nepal Health	Health Inspector		0	753	0	753

For the successful implementation of the strategic plan, technical assistance can be obtained on the need basis from the supporting organizations in addition to the human resources mentioned in the table. Detailed human resource details for TB program will be included in the human resource management plan.

6.4. Financial Landscape

For the implementation of this plan, a total of USD 192 million is expected to be spent in the five-year period. A large proportion of the budget will be spent on TB case identification, management of DR TB, procurement of medicines and laboratory-related equipment and materials as well as program management and monitoring. This includes increased use of GeneXpert, laboratory service with culture in each province and establishment of referral center. Management of DR TB is yet another area requiring huge investment as the expenses on TB treatment

and expensive medicines will increase continuously. Program management and monitoring also includes upgrading of treatment centers and drug stores. Community participation and training are another areas that require more investment. As there is a need to improve the performance of the employees, expenses have been provisioned for the training.

The budget for this NSP has been prepared on the basis of activities proposed during the country dialogue, multi stakeholder meetings, Focus Group Discussion, and interactions with local, community and patients and target groups that took place in different phases. It has been prepared also on the basis of suggestions and recommendations received from the Joint Programme Monitoring carried out by national and international experts. The budget required for the plan has been estimated on the basis of norms, historical cost, current price and cost and epidemiological data that are directed as per the directive of Program Implementation Guideline of Government of Nepal.

Out of the total cost of NSP (USD 192 million), the Government of Nepal has committed to invest USD 81 million while The Global Fund has committed USD 21 million for the 2021/22 to 2023/24. In addition to this, it is estimated to receive additional USD 14 million from The Global Fund in the same ratio for the next two fiscal years. The remaining fund (USD 76 million) is expected to be collected from other donor agencies, such as USAID, KNCV, LHL International, TB REACH, JICA and PATH. The budget has been proposed for the program to be integrated into the integrated health system for proper management of the TB program in times of disaster.

The total budget for this National Strategic Plan 2021/22 - 2025/26 will be as mentioned below:

Table 3: Financial Landscape

Source	USD (in 1,000,000)						Percentage
	2021/22	2022/23	2023/24	2024/25	2025/26	Total	
Total expenditure for TB control	37.27	37.29	38.65	37.51	41.12	191.84	100
Nepal	13.95	14.82	17.00	17.05	18.46	81.27	42.40
Donal Agency	8.42	6.66	5.61	-	-	20.7	-
Expected outcome	22.37	21.49	22.60	17.05	18.46	101.16	53.20
Remaining budget	14.90	15.80	16.04	20.47	22.67	89.88	46.80

6.5. Risk analysis and Mitigation Measures

To implement this strategic plan, mitigation measures have been prepared by analyzing the risks mentioned below.

Internal

- As Nepal is at risk of various natural disasters such as earthquakes, landslides, epidemics, etc., health services including tuberculosis may be affected due to obstruction in the transport and communication system.
- Equal participation of all three levels of government as well as the utilization of local resources have been expected in the implementation of this strategic plan. Without adequate support, it may be difficult to achieve the expected results of this strategic plan.
- If the proposed human resources are not available, it will be difficult to implement the proposed plan.
- While preparing the plan, it is estimated that the activities will be implemented keeping in view the political stability of the country. If there is no stability, the goals may not be achieved as expected.

External

- It is estimated that more than half of the estimated cost for implementing the activities of the plan will be received from external sources. If the resources are not available, there is a risk of not meeting the expected results due to difficulties in the implementation of planned activities.
- As the support from the international TB experts are also expected in the implementation of the plan, there will be difficulty in achieving the goal in the unavailability of such assistance.

Mitigation Measures

Internal

- In order to ensure the continuity of TB services during disasters and epidemics, TB will be included in the Disaster Management Plan and a clear blueprint for disaster and epidemic mitigation activities will be formulated and implemented.
- In order to increase the participation of the local level in the implementation of the plan and to ensure the availability of necessary resources, the activities of the Tuberculosis Free Nepal Campaign will be conducted by making a detailed plan.
- Emphasis will be laid on the management of necessary resources by forming End TB Committees under the chairmanship of Hon'ble Prime Minister at the federal level and Hon'ble Chief Minister at the state level and Mayors at the local level.
- A time-relevant interim plan will be formulated and implemented to continue the TB diagnosis and treatment services.

External

- Efforts will be implemented to secure support from donor agencies by undertaking coordination, meeting, advocacy and debate. If these result into being unsuccessful, efforts will be made to invest internal resources with priority for the implementation of the plan.
- Along with this plan, technical assistance plan will also be prepared and submitted to the concerned body to ensure the necessary assistance during the implementation of the plan.

6.6. Quality Assurance

The following activities will be implemented for quality assurance during the implementation of this strategic plan.

- Arrangements will be made for the process of providing and receiving feedback by making the records and reporting system efficient.
- TB program will be reviewed annually in the framework of multilateral accountability at all levels.
- Regular and collaborative monitoring and supervision will be made using a checklist of quality checking from all levels.
- Regular cohort analysis, planning and review meetings will be held at all levels for evaluation and providing feedback on the program's indicators.
- The quality of data will be ensured regularly and annually.
- The program will be evaluated annually by external reviewers.
- The Joint Monitoring Team (Internal and External) and experts will carry out the independent review of NTP once in every 5 years.
- Review of the Regional Green Light Committee: The National Drug Resistant Tuberculosis Program will be reviewed annually by international experts.
- Regional and Global Institutional Drug Review: The national drug procurement and supply management system will be examined annually by international experts.
- Annual testing and certification of National Tuberculosis Laboratory will be done by Supranational Tuberculosis Laboratory. Similarly, the National Tuberculosis Reference Laboratory will ensure and certify the quality of the Provincial level TB laboratory.
- The quality control of microscopy centers will be done by the Provincial Public Health Laboratory.

Annex 1
Indicators of National Strategic Plan to End Tuberculosis in Nepal (2021/22-2025/26)

Strategies	Indicators	Baseline Indicator	Baseline year	Annual Targets					
				2021/22	2021/22	2021/22	2021/22	2021/22	
1. Improve the quality of TB services and strengthen the health system for universal access to TB services; effectuate the TB services and support by increasing the community engagement in TB management, and strengthen the digitalized case-based surveillance system in health care facilities.	2. Families affected by catastrophic costs due to TB (%) = zero percent	Unavailable	Unavailable	In Nepal, a survey on catastrophic cost has not been conducted. Hence, this indicator will be zero during the period of strategic plan.	2021/22	2021/22	2021/22	2021/22	2021/22
	3. Increased government investment in the TB program	35%	2020/21		45%	55%	65%	70%	70%
	4. Community will support in the treatment of 50% of TB patients.	Unavailable	Unavailable		30%	30%	50%	50%	50%
	5. All health facilities (100%) reported patients' details through electronic system.	Unavailable	Unavailable		30%	50%	80%	90%	100%
2. Strengthen laboratory services to further improve the management of TB diagnosis and treatment.	1. DST for patient with TB	40%	2019/20		50%	70%	80%	100%	100%
	2. 95% patients with DSTB patients are identified and brought within the continuum of treatment.	46%	2019/20		56%	65%	75%	85%	95%
	3. 95% patients with DRTB are identified and brought within the continuum of treatment.	18%	2019/20		70%	80%	85%	90%	95%
	4. TB Case notification contributed by 30% of the private sector	17%	2019/20		20%	22%	25%	28%	30%
	5. All (100%) TB patients are tested for HIV.	69%	2019/20		80%	85%	90%	95%	100%
	6. Decrease the rate of new TB cases (per 1 lakh)	238	2019/20		219 When reduced by 85	209 When reduced by 12%	200 When reduced by 16%	190 When reduced by 20%	181 When reduced by 24%

Strategies	Indicators	Baseline Indicator	Baseline year	Annual Targets				
				2021/22	2021/22	2021/22	2021/22	2021/22
3. Quality Improvement of the services for TB prevention, identification and treatment	1. Increased access to latent TB infection (LTBI) treatment by more than 90 percent among children under 5 years and PLHIV	40%	2019/20	50%	60%	70%	80%	90%
	2. Treatment success rate of DSTB reached ≥ 90 percent.	90%	2019/20	90%	90%	90%	90%	90%
	3. Treatment success rate of DRTB to be $\geq 85\%$	67%	2019/20	72%	75%	78%	82%	85%
	4. Increase in access to latent TB infection (LTBI) treatment by more than 90 percent for children under 5 and people with (PLHIV)	40%	2019/20	50%	60%	70%	80%	90%
	5. Decreased TB-related deaths	52 per 100,000	2019/20	46 individual per 100,000	41 Individual per 100,000	35 individual per 100,000	29 individual per 10,000	31 individual per 100,000
				Reduce by 20%	Reduce by 30%	Reduce by 40%	Reduce by 50%	Reduce by 60%



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