

Strategic Direction I

INTEGRATED PATIENT-CENTERED CARE AND
PREVENTION

Objective 1: accelerate **response for further** decline in the prevalence of drug sensitive and drug-resistant TB

Strategic Direction I: Integrated patient-centered care and prevention

1.1. Accelerate the appropriate diagnosis of TB

1.2. Detect and treat all forms of TB, among all ages and including drug-resistant and drug-sensitive

1.2.1 Core DOTS

1.2.2 PMDT

1.2.3 Pediatric TB

1.3. Joint TB and HIV programming to enable decentralized and integrated services for TB and HIV

1.4 Address TB and DM co-epidemic and plan integrated services for TB and DM

1.1 Accelerate the appropriate diagnosis of TB

Sr. No	Intervention areas (DX)	Key activities
1	Human resource & capacity building	<ul style="list-style-type: none"> Addressing the human resource shortage for strengthening system by filling compulsory/required posts Capacity- building of laboratory and radiology staff at all levels
2	Microscopy Service Expansion	<ul style="list-style-type: none"> Expansion to station hospitals on priority basis and phase wise LED FM will be phased- in nationwide
3	Expansion of Xpert MTB/RIF site to remaining districts and townships with high TB/DR TB case load	<ul style="list-style-type: none"> Expansion of Xpert MTB/Rif sites up to TS level in phased manner
4.1	Optimal utilization of existing rapid diagnostic tools	<ul style="list-style-type: none"> Expanding Gene Xpert testing among presumptive TB cases based on CXR abnormality Use of FL LPA and SL LPA per updated national GL and SOPs FL LPA testing for retreatment cases LPA test for Mycobacterium CM/AS (Common Mycobacteria and Additional species) will be used for as additional confirmatory species identification of NTM at BSL-3 laboratories Use of TB LAMP at R/S level TB Centers where case load are more than Xpert capacity

1.1 Accelerate the appropriate diagnosis of TB

Sr. No	Intervention areas (DX)	Key activities
4.2	Introduction of new diagnostic tools	<ul style="list-style-type: none">• Xpert MTB/RIF Ultra, Xpert MTB/XDR• GeneXpert Omni installation based on priority basic (hard to reach and mobile teams)• WGS• DST for new drugs
5	Quality capacity on culture, DST, LPA, GXP	<ul style="list-style-type: none">• Culture and DST capacity will be expanded to additional 3 R/S• Proficiency testing for culture/DST and LPA (with SNRL)• EQA on GeneXpert test• ISO 15189
6	Strengthen X Ray capacity at district/township level	<ul style="list-style-type: none">• CXR for all presumptive TB cases• CAD in CXR reading based on pilot study and quality control measures• Capacity building• Recording, reporting and monitoring system• QC (NTP network)• Outsourcing the CXR service to private sector

1.1 Accelerate the appropriate diagnosis of TB

Sr. No	Intervention areas (DX)	Key activities
7	Recording and reporting system for laboratories	<ul style="list-style-type: none"> Develop, pilot and roll out electronic laboratory information management system (eLIMS) in all BSL '3' lab and R/S lab in phase wide manner
8	Biosafety and infection prevention and control	<ul style="list-style-type: none"> Update and disseminate SOPs for all TB diagnostics including Microscopy guidelines, Xpert guidelines Develop infection control guideline, and provide training updating existing SOPs when new technology is introduced
9	Implementation Research	<ul style="list-style-type: none"> Using new diagnostic tools and innovative approaches that can be applied and utilized in the local context <ul style="list-style-type: none"> Omni gene sputum transport solution (purpose – decontamination procedure + transport medium) TB LAMP Urinary LAM
10	Regular supply of lab commodities	<ul style="list-style-type: none"> Expansion of electronic logistic management information system (eLMIS) up to the R/S level and township service delivery points Establishment of an electronic requisition system from township microscopy center to regional and regional to central level Optimizing warehouse management system, including capacity building for warehouse staff

Output Targets- Diagnosis

Diagnosis of TB	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
No. of laboratories with Sputum AFB Microscopy Service in Myanmar	Number of Labs performing sputum AFB microscopy service	517	617	667	717	767	817
Percentage of labs showing acceptable performance in External Quality Assessment (EQA) for sputum AFB microscopy	All labs participating in EQA activity	96%	96%	96%	97%	97%	97%
<u>Percentage of townships that employ/ install GeneXpert or other molecular diagnosis (cumulative percentage of 5% per year)</u>	<u>All reporting townships</u>	<u>25%</u> <u>(76/322)</u>	<u>40%</u>	<u>45%</u>	<u>48%</u>	<u>50%</u>	<u>55%</u> <u>(177/322)</u>
<u>No. of GeneXpert machines (cumulative number of 15 machines per year)</u>	<u>Number</u>	<u>92</u>	<u>122</u>	<u>137</u>	<u>152</u>	<u>167</u>	<u>182</u>

Output Targets- Diagnosis

Diagnosis of TB	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
Percentage of GeneXpert sites using GxAlert	All GeneXpert sites	99%	98%	98%	98%	98%	98%
<u>Number of District TB Centres with digital X-ray</u>	<u>Number of districts</u>	<u>14</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>45</u>	<u>50</u>
<u>Percentage of township with at least one medical officers/MO having received training on X-ray reading in the past year (cumulative percentage of 10% per year)</u>	<u>No. of all reporting townships (322)</u>	<u>12%</u>	<u>50%</u>	<u>60%</u>	<u>70%</u>	<u>80%</u>	<u>90%</u>
<u>No. of mobile X-ray team</u>	<u>Number</u>	<u>14</u>	<u>15</u>	<u>16</u>			

Output Targets- Diagnosis

Diagnosis of TB	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
No. of R/S that have culture and FL-DST & SL-DST capacity (cumulative number)	Number	2	4	4	4	5	5
No. of DST labs showing adequate performance on EQA	Number	0	4	4	4	5	5
Percentage of laboratories that are equipped and employed standardized package of infection control practices	Total Labs for sputum AFB microscopy	70%	80%	80%	80%	80%	90%
No. of Reference Labs and R/S labs using electronic LIMS system (Laboratory Information Management System) (cumulative number)	Number	<u>0</u>	2	2	4	4	5

1.2. Detect and treat all forms of TB, among all ages and including drug-resistant and drug-sensitive

1.2.1 Core DOTS

1.2.2 PMDT

1.2.3 Pediatric TB

1.2.1 Core DOTS

Sr. No	Intervention areas	Key activities
1	Implement essential TB diagnosis (Universal DST, etc), treatment, care and prevention services nationwide	<ul style="list-style-type: none">• Central NTP and its branches – responsible to amend/update policy, standards and provide necessary supports to ensure implementation of activities according to update• Address HR (both quantity and capacity at all level)• Patient centered care – access to quality assure diagnostic services (microscopy, GeneXpert, CXR, etc.) and uninterrupted supply of lab commodities, DOTS closer to homes, same day CXR reading and Xpert testing, use of IT to improve treatment adherence (e.g. 99DOTs, VOT)• Strengthening of decentralization of station hospitals for treatment initiation• Strengthen sputum transportation network and community-based TB care

1.2.1 Core DOTS

Sr. No	Intervention areas	Key activities
		<ul style="list-style-type: none">• Strengthen infection control at all levels and contact investigation practice• Promote ACSM activities• Engagement with all care providers and communities (coordination with township public health or disease control teams)• Supervision and M&E at each level
2	Develop subnational plans for all states and regions	<ul style="list-style-type: none">• Based on National Strategic Plan and guidance from central NTP, each State and Region needs to develop sub-national plan (operational work plan two yearly)• Organize annual review meetings at each State and Region to evaluate effectiveness of TB control activities against its sub-national plan• Response to Yangon region close-to-crisis situation


1.2.1 Core DOTS

Sr. No	Intervention areas	Key activities
3	Capacity building of integrated basic health care providers at all levels	<ul style="list-style-type: none">• Regular trainings/refresher trainings, TB basic training package integrated in basic training program for all basic health staff• Regular training and supportive supervision to general laboratory staff who performed microscopy• Use of different learning approaches (online, multimedia) - e.g. online learning, webinar if feasible (pilot in urban and expand stepwise)
4	Strengthening the integration of TB package under UHC	<ul style="list-style-type: none">• NTP to collaborate with NIMU for integration of TB services under general health care services, developing framework for social protection services for TB patients• NTP to further clarify existing roles and responsibilities of health workers under the Public Health Department to ensure implementation and adherence to applicable job descriptions (i.e., midwives and PHSII staff) and task shifting plan between midwives and PHSII

1.2.1 Core DOTS

Sr. No	Intervention areas	Key activities
5	Harmonization of patients support incentives	<ul style="list-style-type: none">• To standardize transportation allowances between NTP and partners• Address financial barriers affecting adherence to TB treatment effectively through social protection mechanisms and interventions in collaboration with NIMU and other ministries• Introduce nutrition support to DS-TB patients based on BMI
6	Intensive identification of presumptive TB cases	<ul style="list-style-type: none">• Apply systematic screening to identify patients with respiratory symptoms at outpatient department of general hospitals and RHCs for sputum examinations and CXR.• Strengthen sputum transportation network to enhance access to TB diagnostic services at sub-township level and villages.• Expand identification of presumptive TB cases by enhancing participation of community health care workers and volunteers in community-based TB care

Output Targets- Core DOTS

Core DOTS	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
TB treatment coverage		76%	84%	87%	90%	93%	96%
Number of notified cases of all forms of TB	Number	136,039	132,099	126,953	120,524	113,023	105,864
Number of notified cases of bact confirmed TB cases	Number	53,481	58,440	60,193	61,999	63,859	65,775
Treatment success of all forms of TB (new and relapse)		88%	90%	90%	90%	90%	90%

1.2.2 PMDT

Sr. No	Intervention areas	Key activities
1	Essential PMDT Services	<ul style="list-style-type: none">Expanded access to Xpert, CL/DST, Expanded treatment capacity, Trainings, stronger case holding, uninterrupted QA SLDs supply and enablers and psycho-social support, strengthen CBTBC, implementing community capacity building modules, regular coordination meetings, contact tracing, and palliative care
2	Early detection and Treatment Initiation	<ul style="list-style-type: none">Raising awareness, strengthening of linkages between MDR TB treatment sites, Xpert sites, BSL3 labs, TB/HIV, Public and private hospitals, and PPM- Coordination meetingsReducing results turnaround time and prompt feed backAppropriate counselling and early appropriate treatment initiation

1.2.2 PMDT

Sr. No	Intervention areas	Key activities
3	Expand Access to new drugs and new Treatment Regimens	<ul style="list-style-type: none">• Address and resolve HR challenges for MDR TB, particularly Yangon• Following advancements and updating NTP guidelines, pilot, adopt and expand new drugs and new regimens• Expand STR gradually and move forward with switching to all oral shorter regimen as per evidence and WHO recommendations• Pilot injection free all oral regimen in 2020 and scale up after the results• Decentralized Pre XDR and XDR TB treatment• In collaboration with medical service, expand PMDT sites in phased manner
4	Regular update of National Guidelines and scope of practice	<ul style="list-style-type: none">• Evidence-based practices, regular update and amendments in National guidelines, provide TOTs and cascade trainings• Patient centered care

1.2.2 PMDT

Sr. No	Intervention areas	Key activities
5	aDSM coverage to all DR TB patients	<ul style="list-style-type: none">• Strengthening, stepwise scaling up aDSM activities nationwide• Improve R&R• Capacity building (trainings)• Regular review meetings
6	Awareness raising & Engagement with other health departments	<ul style="list-style-type: none">• Engagement with community, public and private health care providers• Multisectoral engagement through interministerial and intersectoral collaboration• Campaigns, regular CMEs, engagement with other OPDs
7	Regular M&S, Evaluation and Operational Research	<ul style="list-style-type: none">• Use of standardized M&S checklist• Operational Research for innovative treatment approaches (newer drugs and regimens) such as BPaL (Bdq, Pretomanid, Linezolid) regimen or new model of care

Output Targets- PMDT

PMDT	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
Percentage of presumptive MDR cases screened by GeneXpert		80%	90%	90%	95%	> 95%	> 95%
Percentage of previously treated TB patients receiving GeneXpert for RR screening		80%	90%	90%	95%	> 95%	> 95%
No. of Lab/ bac: confirmed drug resistant TB cases (notified)		3,479	3,412	3,288	3,127	2,935	2,667
No. of cases with DRTB that began 2 nd line treatment		2,802	2,866	2,795	2,689	2,554	2,400
Percentage of notified MDR-TB patients started on treatment		81%	84%	85%	86%	87%	90%
Percentage of notified MDR-TB patients undergo second line DST		< 50%	60%	70%	> 70%	> 70%	> 70%

Output Targets- PMDT

PMDT	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
No. of XDR-TB cases diagnosed		35	57	56	54	51	48
No. of XDR-TB cases initiated on treatment		29	40	42	43	41	41
Percentage of cases with DRTB (RR or MDR-TB) who were lost to follow-up during the first six months of treatment		4%	< 3%	< 3%	< 3%	< 3%	< 3%
No. of DR-TB treatment initiation centers with renovated wards for IPC, including isolation (cumulative)							
No. of DR-TB patients receiving social support							

1.2.3 Pediatric TB

Sr. No	Intervention areas	Key activities
1	Establish “Specialized Centers” for diagnosis and treatment of pediatric TB/MDR-TB (MOHS)	<ul style="list-style-type: none">Establish specialized centers in each region and state in stepwise mannerThese centers will be the conveners and hosts of periodic training and refresher sessions, enabling participants a hands-on training experience and an opportunity to witness best practice through best practice centers as models of service provision
2	Intensify case finding for < 5 years old age group by integrating with IMNCI	<ul style="list-style-type: none">Intensified case findings especially for under 5 children integrated with IMNCI in under 5 clinicsUse of Xpert Ultra and <u>considered the use of TB Lamp in inadequate samples</u>
3	Strengthen appropriate use of X-ray as a diagnostic tool	<ul style="list-style-type: none">Expand access to CXR at township level along with MOHS investmentsCapacity building for CXR reading and interpretation<u>Pilot “Remote diagnosis support system using digital technology”</u>Pilot EQA system for CXR to avoid over and under diagnosis along with regular quality control of CXR reading

1.2.3 Pediatric TB

Sr. No	Intervention areas	Key activities
4	Strengthen contact tracing activities	<ul style="list-style-type: none">• The engagement of communities, along with patients and basic health workers, will be provided with adequate financial and logistical support for referrals, DOTs provision and follow-up
5	Expand the coverage of TB preventive treatment in children	<ul style="list-style-type: none">• Strengthen existing community-based TB care activities (initial home visits, DOTs provision, etc.)• Assessment of provider as well as parents/guardians' attitudes and practices related to the provision of preventive treatment for children contact of TB patients• Operation research on 3HP for under - 5 years children household contacts of TB patients and expansion• Continue advocacy workshops to scale up TPT in children

1.2.3 Pediatric TB

Sr. No	Intervention areas	Key activities
6	Strengthen TB/HIV and TB/MNCH collaborative activities among children including EPI	<ul style="list-style-type: none">• Strengthen TB/HIV collaborative activities• Promote BCG immunization at birth in collaboration with the expanded program on immunizations (EPI) of the Ministry of Health and Sports
7	Access to childhood TB formulation	<ul style="list-style-type: none">• NTP will continue procurement of second line drugs for pediatric MDR-TB cases available through GDF and as per WHO specification and recommendations
8	Regular update of national guideline and provide trainings	<ul style="list-style-type: none">• NTP together with specialists to review and revise national pediatric DS-TB and DR-TB guideline as per WHO updated recommendation• Provide trainings/refresher trainings after each revision

Output Targets- Pediatric TB

Pediatric TB	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
Percentage of childhood TB among all cases		19%	17%	16%	15%	14%	12%
Percentage of children under 5 among all children		45%	48%	49%	50%	51%	52%
TSR among childhood TB cases		96%	>95%	>95%	>95%	>95%	>95%
BCG coverage		96%	>96%	>96%	>96%	>96%	>96%
Percentage of childhood TB cases tested for HIV		80%	>85%	>85%	>85%	>85%	>85%

1.3 Joint TB and HIV Programming to Enable Decentralized and Integrated Services for TB and HIV

Sr. No	Intervention areas (DX)	Key activities
1	Strengthen integrated and coordination effort	<ul style="list-style-type: none">• Keep all established TB/HIV coordinating bodies, annual central level meetings and bi-annual region/state level• Annual joint program review (NTP and NAP)
2	Enhance TB/HIV activities	<ul style="list-style-type: none">• Intensified TB screening, IPC, TPT, early initiation of ART, HIV testing, prevention of HIV among TB patients, CPT
3	Piloting on one-stop TB/HIV services	<ul style="list-style-type: none">• Preparation (2020) in coordination and collaboration among NTP, NAP, TB/HIV partners and medical care services.• Implementation (2021).• Implementation research will be conducted along with service delivery.• Main centers in Yangon Region will become Specialized Center and will be serving as training centers.

Output Targets- TB/HIV

TB and HIV Collaborative Activities	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
HIV prevalence among TB patients	All registered (N&Rp)TB cases	9%	< 9 %	< 9 %	< 9 %	< 9 %	< 9 %
Percentage of registered TB cases tested for HIV (recorded in the register)	All registered (N&Rp)TB cases	91%	96%	98%	98%	98%	98%
Percentage of HIV+ registered TB patients given anti-retroviral therapy during TB treatment	HIV+ registered (N&Rp)TB cases	71%	80%	83%	86%	89%	90%
Percentage of TB/HIV cases receiving CPT	HIV+ registered (N&Rp)TB cases	88%	91%	92%	93%	94%	95%

1.4 TB and DM Collaborative Activities

Sr. No	Intervention areas (DX)	Key activities
1	Strengthen the policy and strategy framework	<ul style="list-style-type: none">• NCD program will be added into the functioning body of TB/DM collaborative activities• Regular update of national policy/guidelines and communication materials
2	Nationwide expansion	<ul style="list-style-type: none">• TB/DM project townships will be expanded in all PEN townships in collaboration with NCD unit• Collaboration with private DM clinics and GPs
3	Capacity building for TB/DM activities	<ul style="list-style-type: none">• Training on TB/DM clinical management, recording and reporting
4	Strengthen M&E	<ul style="list-style-type: none">• Joint supervision• Annual program review meeting• Establish a sentinel surveillance system

Output Targets- TB/DM

TB and DM Collaborative Activities	Denominator	Baseline 2018	Targets				
			2021	2022	2023	2024	2025
<u>Number of townships with TB/DM collaborative activities</u>	Total number of townships of the country	10					