



Guidelines and Norms for STDCs in NTEP 2023

Guidelines and Norms for STDCs in NTEP, Central TB Division, MoHFW, Government of India 2023.

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Live Document: Due to the evolving nature of the program the guidelines need to be updated frequently in accordance with it. This would mean that the content would be updated as and when any policy, procedure or technical instructions are changed.

**Guidelines and Norms
for STDCs in NTEP
2023**



सत्यमेव जयते



आज़ादी का
अमृत महोत्सव

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Foreword



Capacity building of human resources is vital for achieving uniformity, effectiveness and high quality of services. State TB Training and Demonstration Centre (STDC) is the technical arm of the state TB programme. STDCs had undergone transformation over the years to technical units within the states to provide technical and managerial assistance to State TB Cell since the time of National TB Programme. To standardize the role of STDCs in NTEP, a reference guideline was prepared by the Central TB Division and the National Tuberculosis Institute (NTI), Bengaluru in 2003 for establishment and functioning of the STDCs in the states.

Strengthening of STDCs has been planned by NTEP under the 'Build' component of National Strategic Plan. With increased commitment for TB elimination by 2025, the NTEP has exhibited accelerated transformation since past few years. This has resulted into rapid changes across multiple domains/aspects of the NTEP. There is a felt need to strengthen roles of STDCs in various areas, especially training and supervision, monitoring and evaluation.

The updated guiding document of STDCs incorporates the current NTEP guidelines and also includes technological advances in the sphere of training and monitoring activities. I am sure that this guiding document will be of immense help to the STDC.

TB Harega, Desh Jeetega

(Dr. Rajendra P. Joshi)



Acknowledgement

The Guidelines and Norms for STDCs in NTEP (2023), the lead for which was taken by Central TB Division (CTD) and National Training Institute (NTI), Bengaluru to update the version published in 2003. This document is an end product of a series of consultations and meetings of the working committee held under the chairmanship of Director, NTI. The working committee is composed of technical experts from National Institutes, viz., National Tuberculosis Institute (NTI), National Institute of TB and Respiratory Diseases (NITRD), National Institute for Research in Tuberculosis (NIRT), development partners including The Union, World Health Organization (WHO), State Technical Experts including State TB Officers, STDC Directors, and Community representatives working in NTEP.

A Consultative Workshop was held at NTI Bengaluru in the presence of Central and State TB Officials in April 2022 to discuss on the felt need of updating the guiding document for functioning of State TB Training and Demonstration Centres (STDCs). An expert committee was formulated to deliberate on the recommendations and update the guiding document. Several meetings were organized physically and virtually in 2022 till 2023 by the CTD with technical and organizational support from National Institutes, The Union and WHO teams. The updated document henceforth, is built on the findings and recommendations of the STDC Baseline Assessment findings conducted by the USAID supported, The Union led iDEFEAT TB Project with the support of their consortium partner IQVIA.

Our deepest gratitude to Ms. Roli Singh, Additional Secretary & Mission Director, National Health Mission (NHM), MoHFW, GoI, Dr. P. Ashok Babu, JS (RCH & TB), Dr. Vineet Kumar Chadha (Advisor-NTEP) and Dr. K.S. Sachdeva, Regional Director (The Union) for the overall policy guidance and framework. The working on entire document was well supported and guided throughout by Dr. Rajendra P. Joshi-DDG (TB), GoI.

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Acronyms

ACSM	Advocacy, Communication and Social Mobilization	NTP	National Tuberculosis Programme
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy	OR	Operational Research
C&DST	Culture and Drug Susceptibility Testing	OSE	On-Site Evaluation
CTD	Central Tuberculosis Division	PIP	Programme Implementation Plan
DPC	District Programme Coordinator	PT	Panel Testing
DTO	District Tuberculosis Officer	QA	Quality Assurance
EQA	External Quality Assessment	RNTCP	Revised National Tuberculosis Control Programme
IEC	Information, Education and Communication	RTPMC	Regional Training and Programme Monitoring Centre
IR	Implementation Research	SIHFWs	State Institute of Health and Family Welfare
IRL	Intermediate Reference Laboratory	SM&E	Supervision, Monitoring and Evaluation
LTs	Laboratory Technicians	SNC	Sub-National Certification
MOTC	Medical Officer Tuberculosis Control	STC	State Tuberculosis Cell
NAAT	Nucleic Acid Amplification Testing	STDC	State Tuberculosis Training and Demonstration Centre
NGOs	Non-Governmental Organizations	STLS	Senior Tuberculosis Laboratory Supervisor
NHM	National Health Mission	STO	State Tuberculosis Officer
NIRT	National Institute for Research in Tuberculosis	STS	Senior Treatment Supervisor
NITRD	National Institute of Tuberculosis and Respiratory Disease	TB	Tuberculosis
NRLs	National Reference Laboratories	TMIS	Training Management Information System
NSP	National Strategic Plan	TORs	Terms of References
NTEP	National Tuberculosis Elimination Programme	TOTs	Training of Trainers
NTI	National Tuberculosis Institute	TUs	Tuberculosis Units



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Introduction

State Tuberculosis Training and Demonstration Centres (STDCs) are state-level strategic institutions in the National Tuberculosis Elimination Programme (NTEP) which is headed by an STDC-Director and acts as the knowledge hub in the state in relation to the TB programme. It supports the state in Programme Management by conducting its core activities of Supervision, Monitoring and Evaluation (SM&E) and Training in tuberculosis (TB) and NTEP. Apart from this, it also manages the Intermediate Reference Laboratory (IRL) and performs technical activities such as support in preparing the State Programme Implementation Plan (PIP), implementation and scale-up of new interventions, surveillance and TB burden estimation, ensure quality-assured laboratory services, conducting Operational Research (OR) and evolve the state strategic plan for TB Elimination.

The STDCs were originally established during the National TB Programme (NTP) and existed before 1998, as the Tuberculosis Demonstration and Training Centres (TDTCs). It was later re-designated as the State TB Training and Demonstration Centre (STDC) when Revised National Tuberculosis Control Programme (RNTCP) was launched. The STDC guideline was last released in 2003. It included Training, SM&E, Quality Assurance (QA) of TB Laboratory diagnostics and Advocacy, Communication, Social Mobilization (ACSM), and Operational Research as the major activities.

With the drive to accelerate progress towards TB Elimination, the NTEP has evolved and considerably expanded the range of TB services. The National Strategic Plan (NSP) of the NTEP envisaged the STDCs playing a significant role in building capacities of the NTEP cadres, General Health System and Private health care facilities/providers, along with SM&E of the programme and Operational Research. With the evolution of the TB programme, the functions of STDCs have also expanded. Thus, there was a felt need to revisit and revise the existing STDC guideline.

An STDC baseline assessment was conducted (2021–2022) with support obtained from United States Agency for International Development (USAID) supported iDEFEAT TB Project, to evaluate and document the current status and functioning of STDCs. It was observed that there was a wide variation in the capacity and functionality of STDCs in the country. Hence, there was a need to focus on revising the functional framework for STDCs.

With this context, this revision of the STDC guidelines seeks to formally update the previous guideline (2003) to match current programme operations and vision of “Ending TB”. By using the guideline, state NTEP administrators should try to align their STDC structure and functions and eventually bring uniformity in its minimum functions and performance across the country. It will also enable the NTEP leadership to evaluate the functioning of these strategic institutions and build capacity and strengthen them for optimal functioning.



Norms for Establishing an STDC

Every State/Union Territory should have at least one functional STDC, established with infrastructure, equipment and human resource (HR, norms provided subsequently). It is preferably located alongside or nearby the State TB Cell (STC) at the State Headquarters/Capital, for administrative convenience, effective co-ordination and sharing of responsibilities.

In larger states, with a population of more than 5 Crore/more than 20 NTEP districts, they can establish additional STDCs or the single STDC at the state may be supported by additional Regional Training and Programme Monitoring Centre (RTPMC). The RTPMCs may be delegated with the responsibility of capacity building and SM&E activities. These additional centres would be governed by the single STDC at the state and may be resourced as per norms provided subsequently. RTPMCs function similar to STDCs, but they are placed away from the state headquarters based on the geographical and local considerations.

Integration with General Health System: Wherever there are no STDCs/RTPMCs as per the norms provided above, the state may decide to build the STDC/RTPMC in an appropriate existing state institution like the State Institute of Health and Family Welfare (SIHFWs) and regional training centres. Dedicated HRs, infrastructure and equipment as per NTEP norms may be provisioned to these institutions.

Human Resource

The STDC works under the leadership of the STDC Director/Head of the Institution (STDC). She/he is an appropriately senior official from the state health system, preferably a TB specialist, or specialist qualified in Community Medicine or Public health or Microbiologist, having prior TB programme management experience, e.g., a former District TB Officer (DTO). In exceptional situation, the STDC Director/Head of the Institution may be from other specialties as per state policy. The STDC Director needs to be trained at National Level at a National Institute. This position is a regular and full-time post and the minimum tenure for a STDC Director is recommended for a period of 5 years, to ensure effective leadership at the STDC as well as to provide technical and operational support to the state in an efficient implementation of NTEP activities.

The staffing structure of the STDC should be given as mentioned in Figure 1. These positions may be regular positions from the State Health System or may be contractual staff as decided by the state health administrators. Three technical sections of the STDC – Training, SM&E, and the Intermediate Reference Laboratory (IRL) will each be trained at the National Institute. The Medical Officer-Training Division should be TB specialist, or specialist qualified in Community Medicine or Public health; Medical Officer-SM&E should be a specialist qualified in Community Medicine or Public health; while the IRL will be led by a Microbiologist.

The **Medical Officer-Training** is responsible for planning, organizing and conducting NTEP Training in co-ordination with other NTEP programme managers and medical college faculty. They ensure the availability of trained manpower and the conduct of need-based trainings at the district and sub-district level. They are supported by the **Training Co-ordinator and a Statistical assistant**. Together, they assess the training needs, prepare and execute the training calendar for STDC and district trainings across the state, according to the latest NTEP Training Guidelines in co-ordination with the DTOs and other staff.

The **Medical Officer-SM&E** supported by an **epidemiologist, biostatistician/statistician and Ni-kshay Operator**, are responsible to conduct SM&E activities, at the state and district levels and ensure the optimum programme performance as elaborated in the NTEP-SM&E guidelines.

The **IRL-Microbiologist** is supported by the IRL staff as depicted in Figure 1 below. The IRL serves as reference Centre for diagnostic services and facilitates the establishment of decentralized facilities for TB diagnosis and infection detection. In addition, they will conduct laboratory-based hands-on training and External Quality Assessment (EQA) and Quality Improvement of decentralized laboratories functioning at the district and lower levels.

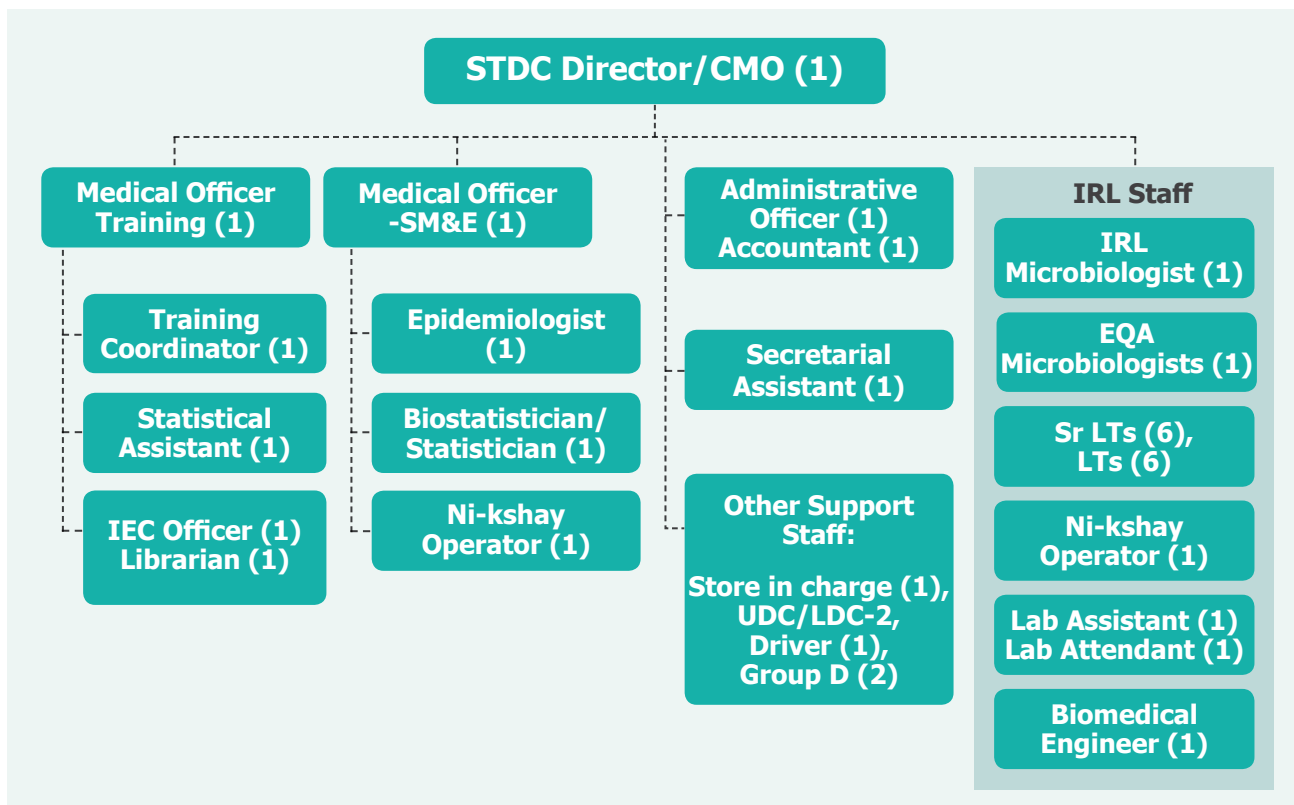
For administrative and financial functions, the STDC Director will be supported by an **Administrative Officer, Accountant, Secretarial Assistant** and **other supporting staff (UDC-LDC)**. The Accountant manages the funds received for conducting the STDC activities and the Secretarial Assistant supports the STDC Director in general administration under the supervision of the Administrative Officer.

The RTPMCs need to follow the same staffing structure as the STDC, all of whom may report to the nodal STDC Director of the state. The senior most of the two medical officers at the RTPMC be in-charge of day-to-day administration.

When RTPMCs are built inside any existing state institutions, such as the SIHFW/Regional training institutions, the state may decide the organogram/reporting protocol for the staff of the RTPMC for administrative purposes. However, it is crucial to ensure that technical reporting to the STDC Director is maintained.

The above structure is the minimum HR expected for any STDC. The STDCs of larger states may need to be provided with additional staff, based on the load of activities. The norms for the qualifications and experience required for each of the STDC staff is mentioned in the latest HR norms and Terms of Reference (TORs),¹ published by the Central TB Division (CTD).

Figure 1: STDC Organogram



¹ "RNTCP Terms of Reference of Staff." <https://tbcindia.gov.in/WriteReadData/l892s/1780748950TOR%20RNTCP%20positions.pdf>

Infrastructure and Equipment

The STDC may preferably be located in the same premises where State TB Cell (STC) is situated or in close proximity for better co-ordination.

Every STDC/RTPMC needs to have adequate infrastructure and equipment to conduct its necessary functions. These include office rooms, training/meeting rooms, laboratory facility and residential/hostel facilities.



Office Rooms and Related Equipment

The STDC office rooms include the chamber of the STDC-Director, rooms for section in-charges (Training), SM&E and Microbiology divisions/units. It should also include appropriate space for the Training and SM&E section. It is desirable that the establishment section is located adjacent to the Director/Head of the Institution room/Chamber. STDCs/RTPMCs should also be equipped with adequate number of computers/laptops for each staff of the STDC.



Training/Meeting Rooms

- **Auditorium** with a seating capacity of approximately 50 people. It should be equipped with necessary audio-visual (AV) support.
- A **separate room** with a capacity of approximately 40–50 people for conducting district review and other administrative meetings.
- **Three rooms** with seating capacity of 15–20 people each. There needs to be separate class rooms wherever possible to have close interaction with each trainee during physical training.



Residential/Hostel Facilities

The number of residential facilities (approximately/at least 25 rooms) need to be provisioned based on the expected number of trainees undergoing concurrent training at the STDC. These may also be used for boarding and lodging of programme managers during review meetings. The hostel needs to have canteen, dining hall and housekeeping arrangements.



Modernized Training Unit

The STDCs/RTPMCs should be provided with the necessary equipment to effectively deliver trainings as per the requirements of the Modernized Training Strategy of NTEP. The Units may be installed in the auditorium/two training/meeting rooms as described above. Modernized Training Units at STDCs require facilities, such as:

- High-speed internet connectivity (either through a >50 MBPs leased-line or through a >200 MBPs Broadband/Fibre connection);
- Virtual meetings/knowledge dissemination setup (Virtual meeting service subscription, 3 Televisions, Camera, speakers, microphone);
- Interactive Digital Board (>65-inch diagonal size), or LCD Projector and screen (minimum 3 sets) along with Laptop or computer;
- Digital devices/tablets (minimum 40 sets) for the trainees;
- Portable AV equipment such as speakers, wireless microphones, laser pointers for trainings at satellite sites (minimum 2 sets).



Transportation

The STDCs need to have vehicle support to effectively deliver SM&E activities as per the policies of the State and for field-visit demonstrations to the trainees. If no vehicles are available, it may be hired from a suitable outsourcing agency.

The above training, residential and equipment facilities ideally be dedicated for the STDCs/RTPMC, but may also be shared with or borrowed from any regional/State Institute (SIHFW) or medical colleges as appropriate.



Infrastructure for IRLs

The IRLs established should have the following infrastructure:

1. At least 2 rooms for sputum examination (Processing and Microscopy)
2. Sample receipt room
3. One room for sample opening with Biosafety Level-II facility
4. TB containment laboratory²
5. Reagent and Media Preparation room
6. Equipment area
7. One washing and sterilization room
8. Three physically separated rooms for conducting Line Probe Assay
9. One room for Nucleic Acid Amplification Test activities
10. One room for Laboratory Information Management System (LIMS), Ni-kshay Operator (DEO) and reporting
11. Separate staff room with washroom for males and females
12. One store room
13. Walk in Cold room

The above infrastructure and related equipment and consumables need to follow Technical specifications provided by NTEP.^{3,4}

STDC Administration

The STDC as an institution will function under the supervision of the STC. It will manage the RTPMCs and IRLs/ C&DST in the state. The STDC will have three sections: (1) the Training Section, (2) SM&E Section and (3) the IRL Section; each of which have a dedicated stream of activities in relation to conducting NTEP training, SM&E and laboratory-related work in the state. The personnel in these three sections will collaborate to provide all required technical assistance to the STC, such as PIP preparation and Operation Research.

The STDC will need to be empowered with adequate financial and administrative autonomy to conduct planned activities. The STDC will annually prepare an action plan prior to the State PIP process. The action plan has to include all training, SM&E, IRL and technical activities, such as operational research etc. The general norms for the quantum of each activity under each section should be based on needs/gap assessment keeping in mind the functions of STDC as detailed below. The action plan will also have to include the relevant budget with proper justification and timeline, and will have to be incorporated into the State PIP. Care has to be taken to ensure that the activities and budget include the necessary travel of STDC personnel within the state and other parts of the country for executing all its functions. The STDC staff may travel by hiring vehicles, through air/rail/ferry as appropriate, following the state National Health Mission (NHM) norms. However, the technical staff who are not entitled to travel by state norms, may be allowed to travel by air for attending National or Regional Level trainings/Workshops/Meetings/Evaluation visits, if it is an overnight journey or travel involving more than 500 km. They should be provided with timely permissions and TA/DA as per their entitlements/reimbursement of actual expenditure incurred with proper justification.

Once the PIP is approved, the total annual budget approved for the STDC and its divisions may be transferred to the STDC, to be used for approved activities under the annual plan.

² Technical Specifications for Construction, Testing, Commissioning and Validation of TB Containment Laboratory.

³ Technical Specifications of Equipment in the TB Culture and DST Laboratories under RNTCP (January 2017).

⁴ Technical Specifications of Consumables, Kits, Reagents, Chemicals and other items used in the TB Culture and DST Laboratories.



Functions of STDC

The overall function of the STDC is to act as the technical arm of the STC. Acting as the technical arm, it is directly responsible for four major work streams as mentioned below.



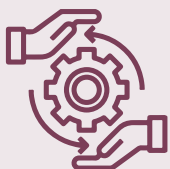
SM&E: STDCs would be performing continuous and real-time monitoring of programme performance through all the digital and physical information systems and reporting sources. Based on the same it would provide feedback and collect reports based on actions taken from the districts. To understand on ground scenario and compare programme vision and achievements it will also need to conduct supervisory visits and evaluate the current performance of the programme against the aspirations. The findings of the SM&E activities along with the necessary actions to be taken are to be communicated to the respective districts through the State Tuberculosis Officer (STO).



Training: STDCs are expected to build the capacity of HRs in the programme, i.e., NTEP key personnel, general health system, medical college faculty and private health sector in relation to programme operations so that they are able to effectively deliver TB services and execute the roles expected from them.



TB Laboratory (IRL): It will facilitate laboratory trainings and manage the resources at IRLs which in-turn is responsible for providing TB laboratory services, conducting hands-on laboratory-based training and for monitoring quality of laboratory services in the state.



Technical Support: Technical support involves myriad activities, keeping in view TB epidemiology of state; prepare and evolve state-level TB elimination strategy and plan; generate evidence, prepare a need-based ACSM plan for all target groups and support them in the implementation of newer interventions.

STDCs need to optimally utilize virtual interaction platforms to deliver the above functions effectively.⁵ The functions of STDCs are further elaborated under these four thematic areas.

Monitoring, Supervision and Evaluation by STDCs

Monitoring, review, supportive supervision and evaluation are important to ensure that the programme is implemented as planned against the stated objectives and desired results. These are intensive technical activities and core function of the STDCs.

The STDCs need to lead activities in this area and support STCs. Designated nodal personnel (Medical officers, Epidemiologist, Statistician, Ni-kshay Operator) should be made accountable for regularly accessing data available from Ni-kshay and other programme information sources. They should also be involved in analyzing the data and preparing programme performance reports for presentations during review meetings. Based on the ongoing monitoring, review and supervisory activities, STDCs should regularly provide action-based feedbacks to districts and seek timely action taken and obtain report from them.

⁵ Effective utilisation of virtual interaction facilities at STDC.

Details of the processes and approach to be followed in monitoring, supervision and evaluation are available in the NTEP Supervision and Monitoring Strategy.⁶ The role of STDCs in SM&E are described below.

Programme Monitoring

Programme monitoring means collecting, compiling and analyzing data to determine progress of various activities under the defined thematic areas against the stated objectives at the district and sub-district level on real-time basis and periodically. Monitoring uses a set of core indicators and targets to provide timely and accurate information in order to review performance and inform progress and thus facilitating decision-making processes. This helps us to find timely solutions to the performance gaps in each district. Programme monitoring is also of paramount importance for ongoing programme planning and implementation. Programme monitoring should be a routine function of STDCs.

The STDC need to access the Ni-kshay data and monitor the completeness, correctness and timeliness of data entry. They have to monitor the district-wise performances on a day-to-day basis using the key indicators suggested by the NTEP. Further periodic Ni-kshay data analysis has to be undertaken for monitoring programme performance. Whenever there is a significant under/over achievement or a remarkable variation of a particular outcome indicator, STDCs need to do a 'Root Cause Analysis' by looking at the input, process and output indicators related to it to find out the reason for the same. Using the Ni-kshay data, STDCs also should do the person, place and time analysis to gain insights to identify patterns and trends that may indicate reasons for poor or under achievement.

Based on the ongoing review, the STDC needs to:

1. Prepare and communicate the feedback with action points to the districts, as and when they find an issue in consultation with STO. The feedback shall include the detailed observations on key indicators, their "Root Cause Analysis" in short and suggested solutions to overcome the same.
2. Obtain timely action-taken reports and in-turn monitor the change in performance after the action.
3. Purposely select Districts/TB units (TUs)/health facilities to be visited during supportive supervision and evaluation.
4. Identify priority performance themes and geographies (Districts/TUs) to be reviewed during periodic review meetings.

Program Reviews

Review meetings are conducted periodically, aiming at identifying areas and actions for improving the programme performance. They are essential for quality improvement and sharing of best practices. STDCs need to support STC in the planning and conduct of monthly review meetings of the districts and state in the following ways.

Planning and preparation for reviews is a crucial step that STDCs need to undertake in consultation with STCs. Thorough preparation and advance planning of agenda items (Programmatic themes and operational areas) need to be done prior to the meeting based on inputs obtained from ongoing monitoring.

During the review meetings, STDCs should guide the discussions, such that they are based on objective criteria, and discussions progress in a consultative mode towards solutions. STDCs should ensure that the discussions are not limited only to outcomes, but also to inputs, processes and outputs. STDCs also should ensure that districts share their experiences, challenges and best practices to facilitate cross-learning.

STDCs need to ensure that the review concludes with **action-oriented feedback** directed at specific responsible persons. All the feedbacks should be communicated to the responsible authorities within one week of the review meeting. All the emerging feedback from the review meeting need to be consolidated as minutes of meeting. STDCs also need to track the actions taken by all concerned based on the decisions made in the meeting/feedback provided.

⁶ Supervision and Monitoring Strategy in Revised National Tuberculosis Control Program (March 2012). <https://tbcindia.gov.in/showfile.php?lid=3030>

Supportive Supervision

Supervision is a systematic process for increasing efficiency of the health personnel by developing/updating their knowledge, perfecting their skills, improving their attitudes towards their work and increasing their motivation. It is thus an extension of training.

Supervisory visits by STDCs should be a collaborative effort to identify problems and find solutions. The effort by the supervisory team, need to be issue based and directed at providing ongoing support for solving problems and to overcome difficulties. Feedback provided during the visit should be constructive (with practical solutions) and not mere observations on performance. It should aim to build capacity of the health staff to implement the programme procedures correctly with high level of efficiency, to assess HR, training needs and to ensure data and service quality. At the end of the visit, the staff should be motivated and encouraged to effect solutions and bring improvements in programme performance.

Selection of districts: STDCs need to conduct district-wise supportive supervisory visits oriented towards the performance of the district as a whole, and in-turn evaluate performance and build the capacity/competencies of the DTO and other NTEP staff and health functionaries. Selection of the district for supervision need to be made based on the routine monitoring done by STDCs. Districts which require support need to be given preferences and shall be visited more frequently. Supervisory visits need to cover all districts in the state at least once in a year.

Supervisory team: A composite team of minimum two members consisting of at least one medical officer from STDC/RTPMC need to visit the district for supportive supervision. They may be accompanied by STDC Director/Head of the institution/Senior Supervisory Staff from the state. It is advisable to combine IRL EQA/OSE visits with the supervisory visit.

Conducting the visit in the district

Key thrust programme operation areas for a supervisory visit need to be purposively decided prior to the visit based on ongoing monitoring of the district performance. The institutions and corresponding staff to be visited may be decided based on the same. For example, if the reason for selection of a district is low treatment success rate from private sector, then high load private sector health facilities, current beneficiaries, their linked TU staff, and district PPM co-ordinator would be visited.

During the supervisory visit, data quality assessment in the selected focus areas should be done to assess correctness, completeness and timeliness. This would include verifying/comparing data recorded in Ni-kshay (dates, categories, quantities) against the true/actual value identified based on the context (recall/records from beneficiary, hospital records, etc.). The visit to the TB Detection Centres (TDCs) and NAAT Laboratories for EQA activities may be combined with the supervisory visit.

Visit planning

The Medical Officer (SM&E) of the STDC/RTPMC need to prepare in-advance the monthly supervisory visit plan along with the focus areas for each district and include the same in the Advanced Tour Programme (ATP). A minimum of two districts should be visited by the STDC supervisory staff every month. For better efficiency, supportive supervisory visits could be clubbed with EQA visits by IRL. The monthly visit plan (ATP) need to be submitted to the STDC-Director before 25th day of the previous month. The STDC-Director in-turn should communicate it to STO, the corresponding districts and the linked National Institute before the first official day of the month.

The supervisory visit is for 3 or more working days in each district. Based on the selected thrust area, institutions, staff and beneficiaries to be visited, the Medical Officer (SM&E) of the STDC may consult the district to chalk out a suitable travel plan in advance. Based on the plan, the Medical Officer (SM&E) needs to arrange suitable travel logistics with the approval of the STDC Director.

Output of a supervisory visit

At the end of the supervisory visit, feedback is prepared and it should be specific action-oriented along with supporting observations, with timelines. The observations and recommendations of supervisory visit need to be discussed with the DTO and team. For any administrative issues the districts/State Health authorities may be appraised. Observations and recommendations need to be submitted to the relevant authority (District TB Officer, CMO, STO, etc.) within 7 days of the end of the visit. Each recommendation is an activity/task for the district/state to perform. STDCs also need to advocate to solve any issues requiring actions at the state level. STDCs should also monitor the actions taken against each feedback and close the feedback once the task is satisfactorily accomplished.

Internal Evaluation

Internal evaluation forms an integral component of NTEP SM&E strategy. It acts as a tool to evaluate if good programme practices are adopted and quality services are provided to the community. These evaluations also offer an opportunity to look into all aspects of programme critically and swiftly. These activities help programme managers in understanding determinants of good as well as poor performance of districts for replication of good practices in other districts and take appropriate measures for their improvement.

The STDCs should plan and lead the State Internal Evaluations. STDCs need to prepare a plan so as to cover all the districts in the state at least once in 3 years. Plans and formats for evaluation should be based on the NTEP SM&E guidelines.

Training

One of the core responsibilities of STDCs is to ensure that the health system is trained in delivering TB services and managing the programme effectively. In order to ensure adequate skill set for delivering high-quality TB care on a continual basis, the staff may require to be trained in-depth at the time of induction into the system, and provided with updates as and when necessary. A proportion of them may also need to be re-trained either periodically or based on their performance gaps/competencies.

The STDC needs to directly implement training activities at the state level and also co-ordinate the operationalization of all the trainings of staff and trainers at the level of district and below. They may deliver training for the following purposes as mentioned:

- **Induction Training:** All the freshly recruited staff in the health system and deputed/transferred into NTEP will require induction training in NTEP. Different categories of NTEP and General Health System staff have to be trained as per the relevant course curriculum (Modules/hands-on training/other guidelines) prescribed by NTEP for the respective cadre.
- **Update Training:** This training should be provided as and when there is a change in programme guidelines or new operational processes are being introduced. For this purpose it is preferable that all such newer initiatives may be compiled as fresh modules. These modules need to be prepared cadre-wise and later integrated into the existing course at national level when they are revised.
- **Refresher Training:** It is offered to the already trained officials either on their request or the official was trained long back and the supervisor or the official feels the need for training. Duration of this training will be similar to induction training or may be of shorter duration as per the need. Those who were already trained, but were outside the programme for a significant period of time may also need to get a refresher training (Periodically once in 3 years).
- **Re-Training:** It is similar to induction training for all the officials when a large change is adopted in the programme and the entire operational aspect is thoroughly changed or if an official needs to be retrained as per the assessment of the supervisor/supervisory team.

The STDCs are required to train the trainers for all cadres in NTEP and facilitate and monitor cascade training for other staff at all levels of the health system in the state.

Planning training

Each year the STDC has to prepare the comprehensive training plan/calendar and support the districts in preparation of their training plan and its inclusion in the PIP of the state. The training plan should be able to clearly state the number of batches of NTEP/TB related training (with details of expected participants, facilitators, modalities used, start and end date, training locations/venue, etc.) that will have to be operationalized in the state for all types of trainees including public, private, volunteers, medical college faculties, community and civil society members. This would include training at all levels including training of trainers and training at state/district/sub-district levels. Following are the activities to be done to prepare the annual training plan.

Maintain the HR and training database: The STDC has to maintain the database of all staff (including General Health System and Private sector) to be trained, cadre-wise pool of trainers and details of available training infrastructure at various levels in the state. The training database should contain details of:

1. **Sanctioned staff of different categories** at various levels in the state and the current status (personnel posted in the respective position, regular/contractual).
2. **Individuals posted at various positions** including, personal profile, location of posting, their training log/history, competency feedback given by supervisors, and finally their training requirement based on position/designations (such as pending training – induction/re-training/update, trained).
3. **Facilitators** including log of Training of Trainers (TOTs) attended, details of the cadres that they are qualified to train, log of training feedback given by the participants.
4. **Infrastructure** (venue/location/training halls) with equipment available.

The training database should be updated in real-time mode. It is to be developed as an online tool and integrated with the **Training Management Information System of the NHM (TMIS)**. Till such time a limited version of the database may be maintained as data in spreadsheets.

Conduct a training need analysis: Using the regularly updated training database the STDCs should be able to undertake an assessment of the different types and quantity of training that they need to conduct in the coming year to ensure that the staff at different levels within the programme and of the Health System of the state are able to perform the duties/roles expected of them. The assessment would also need to consider the priorities of training along with the time, resources and facilitators available to execute/implement the training. Purpose/aim of the needs assessment will be to estimate the NTEP-related training load in terms of the number of personnel in various cadres to be trained in the different geographies of the state.

Build trainer resource pool: Based on the needs assessment and the gap in trainer requirements against the training load, the STDC needs to conduct relevant TOTs for each cadre of staff. Trainers may be identified from a variety of sources including NTEP Staff, Medical Colleges, and National Institutes. TOTs can only be conducted by qualified Master Trainers for each cadre in the state.

Prepare the annual training plan: Using the database and based on the training need assessment, the STDC has to prepare its own annual training plan for induction/update/re-training and also support preparation of training plans including training calendar in the respective districts.

Prepare the training calendar: Based on the available capacity and priorities of the state, the STDC needs to prepare a training calendar. The training calendar will list down the various trainings planned at all different levels in a Gantt chart format. The standard duration of each training needs to follow the NTEP's training guidelines for each type (induction/retraining/update, etc.). The facilitators for each batch of training, the dates and locations where in-person training/demonstration/evaluations would be conducted for each batch should be identified.

Update the training section of the PIP: Based on the training calendar prepared, the STDC need to estimate the required resources (trainers, infrastructure, material, funds, etc.) on the basis of relevant NTEP norms,⁷ keeping in view that the existing capacity at different levels. The STDC has to ensure that the funds required for the training are included in the PIP at the respective level. The STDC need to prepare relevant

⁷ Norms and Basis of Costing for RNTCP. <https://tbcindia.gov.in/WriteReadData/l892s/613851929Revised%20Norms%20and%20Basis%20of%20Costing%20of%20TB-%20Post%20MSG.pdf>

justifications for the conduct of the same and obtain approval. Based on the approved PIP, the STDC may try to fill the resource gaps through appropriate additional resources and ensure essential training is prioritized.

Operationalizing Training

The STDC has to ensure that quality training is imparted to various cadres at different levels as per the training calendar and the relevant CTD guidelines. The training material should include cadre wise courses published by the CTD and should be shared with all the participants along with the training tool kits and other logistics. Some of the training material, especially for the peripheral field staff and community volunteers may be translated to local language, and then back translated to ensure that it conveys the meaning of the original content.

Training of programme managers [DTO, Medical Officer TB Control (MOTC)], training of core NTEP staff [Senior Treatment Supervisor (STS), Senior Tuberculosis Laboratory Supervisor (STLS), District Programme Coordinator (DPC), Laboratory Technicians (LTs), etc.], and training of all trainers in the state will be directly conducted by the STDC. The STDC has to undertake the following steps with respect to the trainings directly conducted by it:

1. Reserve corresponding training venue/infrastructure;
2. Ensure enrollment of corresponding trainees in individual batches;
3. Inform and confirm the availability of facilitators.

Training of staff like Microscopy-LTs, staff of general health system, private sector staff, and health volunteers would be implemented at the district/sub-district level under the overall supervision of the DTO. For the training at the district/sub-district level, the STDC should support in all aspects for conducting the trainings.

Some specialized training (e.g., training of Microbiologists and Sr. LT of IRL & CDST labs), and training of the state-level programme managers and trainers would be conducted by the National Institutes. For this purpose the STDC need to request linked National Institute to conduct TOTs, training of state-level programme managers/STDC staff as needed. STDCs may also facilitate nomination of trainers to be trained in upcoming TOT batches by the National Institute and facilitate their participation.

Sometimes additional trainings may need to be organized over-and-above the annual training plan as per requirements of the state or as conveyed by CTD.

Monitoring and Evaluation of Training

As training is being conducted through out the year the STDCs have to be able to generate and report the latest status of the training on demand. They should take action to ensure adequate performance against the plan. For this task the STDC needs to:

1. Monitor the end-to-end execution process of each batch of planned training at STDC and other levels. This includes:
 - a. monitoring of the batches initiated/completed as per the plan for various cadres/geographies;
 - b. monitoring the output of the training in terms of the proportion of trainees successfully completing the training.
2. Take action for trainees who were unable to successfully complete training, by including them in the next available batch.
3. Training feedback and quality assurance: This includes collating and analyzing the various quantitative/qualitative feedback provided by the participants at the end of the course and translate the feedback into actions related to the trainer, training infrastructure and facilities, training content.
4. At the end of each year before the next year's planning, evaluate the training conducted against the annual plan. Any shortfall may be accounted for during the subsequent year's training plan.
5. Based on the evaluation STDCs should prepare the annual report of training conducted in the State and include it in the NTEP report of the state for future reference and review.

Training Evaluation

It is imperative to evaluate the short-term effects and long-term gains of any training programme. This can be undertaken in association with linked National Institutes periodically at least once in 2–3 years.⁸

Management of the IRL

At the beginning of the RNTCP era, ZN microscopy was the only diagnostic technology available and STDCs were made in charge of monitoring and ensuring quality. Since then, laboratory services in the NTEP has been under continuous evolution and expansion. The programme has expanded to use a range of technology to detect both *Mycobacterium tuberculosis* as well as resistance to the various anti-TB drugs. These include LED microscopy, polymerase chain reaction (PCR) based rapid molecular diagnostic tests/NAAT, and C&DST. These tests have been increasingly scaled up and integrated into the TB Programme.

This evolution and expansion has resulted in laboratory services being a highly specialized Microbiological area. The IRL has evolved under the STDC as an important institution in NTEP. The IRL has the responsibility to ensure laboratory services for all technologies in the region to perform at the optimum standard and quality. In this context, the STDC being the overarching institution for technical assistance to the state, it has to manage the IRL and ensure that it performs as per the expectations of the programme. This includes:

1. Completion of Microscopy/NAAT Quality Assurance activities in the region as per plan. (Framework for implementing microscopy EQA).⁹
2. Facilitating the certification process and quality assurance of all linked C&DST Labs in the state.
3. Co-ordinating the establishment of new C&DST labs in the state (in both Public and Private Sector) based on the laboratory needs assessment, in consultation with CTD and to establish the required linkages.
4. Facilitating ongoing Lab Trainings at STDC.
5. Facilitating other ongoing programme functions in relation to laboratory services.

Technical Assistance to State TB Programme

Apart from the core routine activities of Training and SM&E, STDCs need to support the state by technically guiding the state TB programme.

1. **Support and preparing the state strategy plan for TB Elimination:** STDCs need to plan strategies and support the state to adopt state-specific strategies and programme implementation approaches taking into consideration the TB epidemiology and health system strength.
2. **Implementation of new interventions:** Based on evolving programme guidelines issued by the CTD, STDCs need to support the state in implementation of new interventions in the state.
3. **Support in preparing the PIP:** The STDC based on the existing performance of the state and the needs identified based on the TB Elimination strategy of the state, needs to support the state and districts to prepare the PIP in such a way that the state and district NTEP is adequately resourced.
4. **Technical support for ACSM:** The STDC needs to technically support STC in ACSM activities.
5. **TB surveillance:** The STDC need to have a clear understanding of the status of the TB burden and epidemiology of the state through continuous ongoing surveillance activities. This may include activities such as conducting surveys, analysis of programme data and additionally collect data as per need. Based on this activity the state may apply for Sub-National Disease-free Certification.
6. **Generate evidence** for programme interventions in alignment with state strategy through suitable operational research, evaluation, documenting and disseminating the best practices by publishing related reports and periodicals.

⁸ Training Evaluation.

⁹ Framework for implementing EQA laboratory network activities under NTEP. (EQA Protocol Guideline).

7. **Support sub-national certification (SNC) for TB elimination:** STDCs need to support the SNC process.

Activities related to these processes need to be planned by the STDCs each year and budgeted in the PIP. Further details of each technical activity is provided below.

Preparation of State Strategic Plan for TB Elimination

India has a highly variant TB epidemiology and extreme difference in health system strength. One national strategy will not translate to effective on-ground activities. STDCs need to technically support the state in identifying bold programmatic changes designed to accelerate progress towards the TB Elimination. STDCs based on its understanding of the State, need and context (TB epidemiology, strength of health system, resources available), need to prepare and evolve action plan towards TB Elimination. The action plan while being in alignment with the interventions of the NTEP strategy, needs to consider the TB burden of the state, special population groups related to TB (vulnerable groups, migrants, etc.). Based on this context, the strategic interventions may add-on to existing NTEP and may be directed towards:

1. Early and complete detection
2. Correct and complete treatment
3. Prevention of new infections
4. Prevention of breakdown to active TB
5. Health system strengthening for TB care

Support Preparation of the State PIP

The STDCs need to technically support STCs in preparing the annual action plan as per the state strategy for PIP preparation. This would include:

- **Gap analysis:** The STDCs need to undertake district-wise gap assessment through analysis of the existing data, observations from the supervisory visits and periodic evaluations, a district-wise gap analysis need to be prepared. Gap analysis would highlight what are the major programme gaps in terms of infrastructure, equipment, HR, activities and funds in each district.
- **Identification of priority activities:** Based on gap analysis, STDCs need to help the districts and state to identify the activities to be included on priority basis in the PIP of the respective district and state.
- **Capacity building and mentoring of district:** STDCs should support DTO to prepare the PIPs of their respective districts including the micro-plan for each activity with number of beneficiaries and expected outcomes with proper justification. This may be done in a workshop mode before the preparation of the state PIP.

Medical Officer (SM&E) will be the nodal person who is responsible for the activity under the overall guidance of the Director STDC and STO.

Technical Support for ACSM

The STC has been provided ACSM Officer from the NTEP for carrying out and coordinating the ACSM activity in the State. The overall responsibility of ACSM activity lies with the STC. The STDCs would be required to provide technical inputs to make the ACSM activities more effective. STDCs need to provide technical support to STC for:

- Collaborate with scientific/professional/academic organizations/institutions, opinion leaders, non-governmental organizations (NGOs), TB Champions, AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy), Corporates and other government departments for implementation of the state TB elimination strategy and for following Standards of TB Care in India.
- Designing and Development of Advocacy and Information, Education and Communication (IEC) material in local language including contents for social media.

- Supporting the state and districts to develop annual ACSM plan.
- Dissemination of programme performance through publication of Bulletin/Newsletter every quarter.
- Technically Support in the implementation of “TB-Free Panchayat Certification”.

TB Surveillance

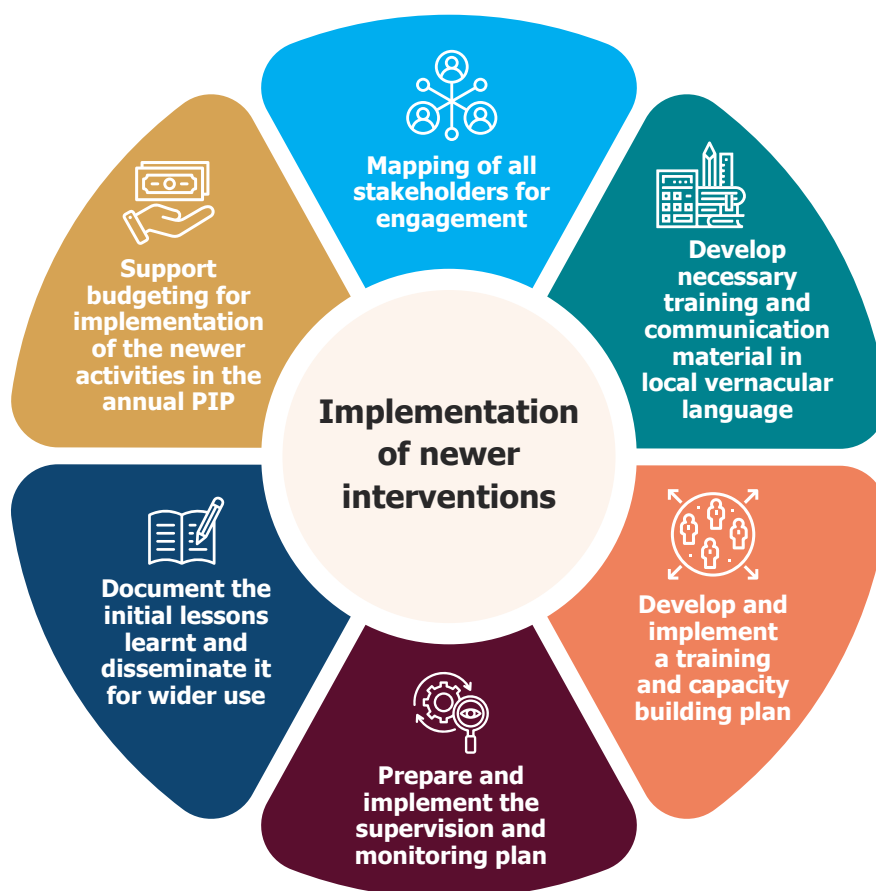
It is pertinent to have a clear understanding of the Epidemiology of TB in the state in terms of its burden (incidence and mortality rates) and its trends, identification of vulnerable populations, hot-spots of transmission of TB, particularly of drug-resistant TB, etc. The STDCs are expected to play a lead role in surveillance, by:

1. Ensuring correctness, completeness and timeliness of Ni-kshay data and other programme data at all levels through day-to-day monitoring and necessary handholding.
2. Periodic analysis of programme data.
3. Collection and analysis of: (a) Drug sales data and (b) Schedule H1 data.
4. Mathematical modelling in collaboration with domain experts to forecast resource requirements, predict impact of specific interventions, etc.
5. Collect additional information, to understand/estimate the time, place and person changes in the burden of TB by undertaking surveys.
6. Dissemination of the analytics at all levels within the state and outside the state.

The STDCs need to co-ordinate and collaborate with Community Medicine, Department of Medical Colleges, Public Health Institutes and Mathematics Department of Science Colleges including Indian Institute of Technology (IIT) and Indian Institute of Management (IIM). Epidemiologist will be the nodal person responsible for the activity.

Implementation of Newer Interventions

The STDCs should support the state in strategically customizing and scaling up the new interventions and programme guidelines issued by CTD, from time to time, or as per state requirements for TB Elimination.



Implementation and Operational Research

The NSP encourages and promotes Operational Research to generate evidence on effectiveness of interventions and strategies aimed towards TB elimination. The STDC being the technical support arm of the STC, should actively take a role in planning and conducting Implementation Research (IR)/Operational Research.

The STDCs should independently plan and execute need-based Operational/Implementation Research. This would include:

1. Identify research priority for the state to better achieve the programme objectives in alignment with the Operational Research guidelines of NTEP.
2. Disseminate research priority areas with the potential researchers, institutes and agencies for the conduct of Operational Research.
3. Organize capacity building sessions for interested programme staff to design research studies and proposals in the form of Operational Research workshops (Protocol Development, Report writing).
4. Call for Proposals, review and approval of proposal in coordination with State Operational Research Committee.
5. Setup and host a formal Institutional Ethics Committee to review and approve any research proposals. They may also leverage any existing IEC at a co-located institution.
6. Applying for and securing funds for executing research studies from external sources.

7. Support state Operational Research Committee to execute approved studies.
8. Review progress of approved studies every quarter.
9. In coordination with Medical college task force, STDCs should also plan to conduct Operational Research dissemination workshop annually.
10. Advocate for policy/operational changes in the state and the country, based on Operational Research findings.
11. Maintain a data base of all TB research (past/ongoing/published) from the state.
12. Evaluate and Document best practices in the state, and disseminate them by publishing related reports in periodicals/journals for necessary programmatic uptake.

The Epidemiologist of STDC will be the Nodal Officer for Operational Research related activities.

STDC should ensure that required budget for Operational Research related activities are proposed through the PIP mechanisms. It is essential for the STDC to have a concrete plan in terms of number of research projects proposed in the PIP.

Support Sub-National Certification

Under NTEP SNC is an ongoing, regular and systematic surveillance conducted annually by CTD across India. STDCs will support the conduct of annual SNC activities in the state. In addition, STDCs needs to support SNC in the following ways:

- Preparation and selection of districts for SNC claims including secondary data compilation and analysis;
- Engaging with the available Public Health experts from Medical Colleges and other institutions;
- Supervision and monitoring the quality of the SNC process;
- Training of volunteers.



Role of National Institutes in STDCs

The national institutes should play a significant role in strengthening the STDCs in the states. They have to provide technical guidance and training for strengthening of STDCs in supporting STC. The National Tuberculosis Institute (NTI), Bengaluru, will be the nodal national institute for this purpose, while the other national institutes such as National Institute of Tuberculosis and Respiratory Disease (NITRD), New Delhi and National Institute for Research in Tuberculosis (NIRT), Chennai will support NTI, Bengaluru for specific support functions across the country or regionally.

National institutes will advocate for and guide the establishment of STDCs as per the norms described earlier. Overall the National Institutes will support established STDCs in the following two ways:

A. Supervision, monitoring and evaluation of STDCs

The performance of STDCs must be monitored regularly based on its annual action plan by both State and Centre. From the central level NTI, Bengaluru, will support in monitoring the performance of STDCs on an ongoing basis and provide an annual report of the performance of the STDCs to CTD. This will include:

1. **Monitoring the performance** of each STDC against their annual plan including the training status of the TB related workforce and the quality and status of feedback provided by STDCs to districts on their performance. Refer to the guide given at the end of the section on SM&E of STDCs, on the components to be included in SM&E of STDCs by the National Institute.¹⁰
2. National institutes will conduct need-based **supervisory visits** to all the States and STDCs to cover all the states at least once in a year. They will provide action-oriented feedback for improvement.
3. **Provide feedback** to the CTD, STDCs and STCs, regarding the performance and available capacity in STDCs, in an action-oriented manner.
4. **Advocate** for prompt action from the State and Centre regarding the same.

B. Build capacity and expertise

Based on the monitoring and supportive supervision, the NTI Bengaluru will prepare a strategy to strengthen and build capacity of STDCs and plan activities annually. The strategy and activities should include, but not limited to the following areas:

1. **Induction training of STDC and state-level staff:** All STDC and State-level staff, including the STO and STDC-Director should be trained by the National Institutes. This should include training on Programme Operational areas and separate capacity building on their individual functions (such as Training, SM&E, Administration) based on the standard training materials provided by the Centre.
2. **Training-of-trainers:** The National Institutes will host the resource pool of all Master trainers in the NTEP. The master trainers will be responsible to build the trainer resource pool at the state level as per the needs of the state. The quantity of trainers required will be collaboratively identified by the state and the National Institute based on the load of training in the state. Whenever there is a shortfall in the resource pool, the state may request the NTI to conduct TOTs, or such sessions may also be proactively conducted by the National Institute.

¹⁰ Quarterly report on infrastructure and activities of STDC.

3. Update training of trainers on changes or new programme implementation: Based on new programme, operation areas introduced or changes inducted by the CTD, the master trainer pool at the National institute should conduct and update training of all corresponding state-level trainers.

4. Theme-specific Training/workshops:

a. Surveillance and data for action

This would include workshop for analysis and interpretation of data available from the Ni-kshay Information Ecosystem, and would be aimed to identify programme performance gaps, conduct root cause analyses, and prepare action-oriented feedback for improving programme performance.

b. State TB elimination strategy development workshops

These workshops will be conducted by National Institutes on a periodic basis and will support the STDCs to develop State-specific strategies, review and evolve them as per need.

c. Operational research

National institutes will build the capacity of the STDCs in conducting Operational Research by training and mentoring them.

Details of the conduct of training and content will be provided in the NTEP Training Guidelines.



Supervision, Monitoring and Evaluation of STDCs

The performance of STDCs must be monitored regularly on the basis of the annual action plan by both the State and Centre. STDCs need to submit a quarterly report of its activities through the STO to NTI and CTD, within 15 days after the end of the quarter.

NTI, Bengaluru will support CTD in monitoring the performance of STDCs on an ongoing basis and provide a Annual report of the performance of the STDCs to CTD. Along with any state NTEP review, CTD should also review the performances of STDCs.

Key performance indicators for monitoring the functioning of STDCs are as follows:



Proportion of **training conducted** by STDCs against planned



Proportion of **supportive supervisory visits** and EQA, on-site evaluation (OSE) visits to district by STDCs against planned



Proportion of **programmatic reviews** with district facilitated by STDCs against planned



Proportion of **state internal evaluation** facilitated by STDCs against planned



Average number of **action-oriented feedback**, per district, provided by STDC in the quarter



Proportion of **action taken report** received against the feedback issued by STDCs (last 3-month status)



Proportion of **Operational Research** initiated by STDCs against **annual plan**



Proportion of **Operational Research** completed by STDCs **against due date**

All supervisory and evaluation visits from centre to states such as Joint Supportive supervision, Central Internal Evaluation need to visit STDCs and review their performance.

Guide for supportive supervision of STDCs/RTPMCs are as follows:

- ✓ STDC/RTPMCs established in the State/Union Territory as per norms and needs of the state.
- ✓ Staff for STDC/RTPMC available as per norms.
- ✓ Infrastructure and equipment including Modernized Training Units established at STDCs/RTPMCs as per norms.
- ✓ Training plan of STDCs/RTPMCs adequate to cover the health workforce in the state.
- ✓ Training implemented in the state as per training guidelines.
- ✓ Training conducted by STDCs are quality assured.
- ✓ Training and training needs monitored by STDCs through TMIS.
- ✓ SM&E plan of STDCs/RTPMCs is in alignment with guidelines.
- ✓ SM&E activities conducted by STDCs as per the plan.
- ✓ Technical assistance in the following domains provided by STDCs:
 - » State-specific strategic plan prepared and revised timely
 - » TB surveillance
 - » Preparation of PIP
 - » ACSM
 - » Implementation of newer interventions
 - » SNC
 - » Operational Research.
- ✓ Data in quarterly reports submitted by STDC is correct and complete.

