

2022

Final Report on
**BASELINE
ASSESSMENT
OF STDGS**



The Union

International Union Against
Tuberculosis and Lung Disease

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Table of Contents

Contributions & Acknowledgements	3
List of abbreviations	4
Executive Summary	5
Background	7
History of STDCs	7
Need for Assessment of STDCs	8
Methods.....	9
Aim.....	9
Assessment Framework.....	9
Assessment Approach.....	10
Secondary Data and Literature Review.....	10
Primary Data Collection and Assessment	10
Assessment Findings.....	15
STDC Capacity.....	15
Human Resources	15
Infrastructure and Equipment.....	16
Training Material	19
Governance and Funding	19
STDC FUNCTIONALITY	22
Training	22
Supervision, Monitoring, Programmatic Reviews and Evaluation	28
Technical Assistance to the State	31
Recommendations	34
Annexures.....	39
Annexure 1: Draft TOR	40
Annexure 2: List of Stakeholders Interviewed for STDC Baseline Assessment	44
Annexure 3: Staffing Status of Key Personnel by State	46
Annexure 4: Total number of STDC staff by State.....	48
Annexure 5: Availability of physical infrastructure in 16 STDCs.....	49
Annexure 6: Availability of Equipment In 16 STDCs	52
Annexure 7: List of Trainers	53
Annexure 8: Sample Training plan- STDC Delhi, Gujarat, Kerala, Telangana and West Bengal.....	58
Annexure 9: Number of personnel trained in classroom and virtual trainings (2018, 2019, and 2020).....	65
Annexure 10: Sample SM&E Plan For STDC West Bengal	67

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List of abbreviations

ACSM	Advocacy Communication and Social Mobilization
ADHS	Additional Director of Health Services
ASHA	Accredited Social Health Activist
CAPI	Computer Assisted Personal Interviewing
CDST	Culture and Drug Sensitivity testing
CHO	Community Health Officer
CTD	Central Tuberculosis Division
DBT	Direct Benefit Transfer
DDRTBC	District Drug Resistant TB Centre
DISHA	Directed Initiatives for sustainable Health action
DR-TB	Drug-resistant TB
DS-TB	Drug-sensitive Tuberculosis
DTC	District TB Centres
DTO	District TB Officer
EQA	External Quality Assurance
HR	Human resource
HRD	Human resource development
IEC	Information Education and Communication
IRL	Intermediate Reference Laboratory
JMM	Joint Monitoring Mission
KII	Key informant interview
LTBI	Latent TB infections
M&E	Monitoring and Evaluation
MDR	Multiple drug resistant
MO	Medical officer
MoHFW	Ministry of Health and Family Welfare
MPHW	Multi-Purpose Health Workers
NDRTBC	Nodal DR TB Centre
NHM	National Health Mission
NSP	National Strategic Plan
NTEP	National TB Elimination Program
OR	Operational Research
PIP	Programme Implementation Plan
PMDT	Programmatic Management of Drug-resistant TB
PPSA	Patient Provider Support Agency
QA	Quality Assurance
RNTCP	Revised National Tuberculosis Control Programme
SATCOM	Satellite communication
SIHFW	State Institute of Health and Family Welfare
SME	Supervision, Monitoring and Evaluation
STDC	State TB Training and Demonstration Centre
STC	State TB Cell
STF	State Task Force
STO	State TB Officer
TB	Tuberculosis
TPT	TB preventive treatment
UNHLM	United Nations High Level Meeting
WHO	World Health Organization

Executive Summary

State Tuberculosis Training & Demonstration Centers (STDCs) are state-level strategic institutions in the National Tuberculosis Elimination Programme (NTEP). They were originally established during the National TB Program (NTP), that existed before 1998, as the TDTTC (Tuberculosis Demonstration and Training Centre). It was later designated as the STDC (State Tuberculosis Demonstration and Training Centre) when Revised National Tuberculosis Control Programme (RNTCP) was launched. The role of an STDC was published in 2003. It included Training, SM&E (Supervision Monitoring and Evaluation), EQA (External Quality assurance) of sputum microscopy, Advocacy, IEC (Information, Education and Communication), and Operational research (OR).

With the drive to accelerate progress toward TB Elimination, the NTEP has evolved and considerably expanded in-depth range of TB services. The National Strategic Plan (NSP) of the National TB Elimination Program (NTEP) envisaged the STDCs playing a significant role in building capacities of the NTEP cadres, general health system, and private health facilities/providers along with supervision, monitoring, evaluation of the programme and operations research. Although there were no further formal updates on the role of STDCs, they have evolved along with the programme. In this context, NTEP with the support of USAID funded iDEFEAT TB Project undertook the STDC baseline assessment across the country to evaluate and document the current status and functioning of STDCs.

The STDC baseline assessment framework was built on two key pillars- STDC capacity and STDC functionality. Under STDC capacity, various sub-themes such as infrastructure and equipment, human resources, material, governance, and funding resources were assessed. Whereas, for STDC functionality, the three core activities of STDCs, training and capacity building, SM&E (including Supervision, Monitoring, programmatic review and Evaluation), and Technical Assistance to NTEP (including advocacy and operational research) were assessed. For conducting the baseline assessment of STDCs, a mixed methods approach was used, wherein both quantitative and qualitative data were collected. The quantitative data were collected through an assessment form while qualitative data were collected through key informant interviews at the state and district level using detailed discussion guides. The key informants included State TB Officers, officials/ staff from STDCs (director, epidemiologist, master trainers, training coordinator, etc.), past beneficiary/ trainees (medical and paramedical trainees/ DTOs), and WHO NTEP Consultants.

Data collection was conducted in a two-phase manner. Phase 1 involved in-person visits to 07 selected state STDCs; Delhi, Maharashtra (Pune), Gujarat (Ahmedabad), Madhya Pradesh (Bhopal), Telangana (Hyderabad), Tamil Nadu (Chennai), and West Bengal (Kolkata), and phase 2 involved remote/virtual assessment of 10 select STDCs; UP (Agra), Kashmir (Srinagar), Punjab (Patiala), Jharkhand (Ranchi), Bihar (Patna), Odisha (Cuttack), Rajasthan (Ajmer), Himachal Pradesh (Dharampur), Manipur (Imphal), Kerala (Thiruvananthapuram). Owing to the unavailability of quantitative data on STDC Bihar, this report detailing the quantitative findings of STDC Baseline Assessment conducted in 16 selected states.

It was observed that all 16 STDCs except STDC Tamil Nadu were established as separate institutions, designated by the respective state government. Best practices in a number of functions were observed in STDCs of Delhi, Gujarat and Maharashtra (Pune). A dedicated STDC director led the STDC in 09/16 states only. All STDCs worked in close collaboration and concurrence with the STCs. From a funding perspective, it was observed that STDC Delhi, Himachal Pradesh, and Maharashtra (Pune) had financial powers, whereas other STDCs were administratively and financially dependent on State TB Cells (STC). Among human resources at STDCs, it was observed that there was a significant variation in staff size, distribution, and composition across STDCs.

Adequate training infrastructure and equipment were generally available across all STDCs. However, dedicated hostel facilities were available in 07/16 STDCs. Virtual online platforms for conducting and participating in virtual training and review were available in 11/16 STDCs.

From STDC functionality perspective, it was observed that all STDCs except STDC Tamil Nadu were leading state-level training. The training at STDC was often conducted with support from WHO NTEP consultants. It was observed that different formats were being maintained by STDCs with a limited scope of monitoring of training activities. Generally, the trainings were aimed at all cadres of NTEP staff, but not the staff of the general health system and private sector. Key thematic areas of these trainings were usually decided based on the local performance and identified needs, though there was no systematic method to identify training needs and plan trainings.

It was noted that the overall activities including financial planning, PIP budgeting, and district-level trainings were primarily led by STC in a majority of states with minimal or no contribution from STDCs. Similarly, the SME activities were generally planned and conducted by STC wherein STDCs supported STC as and when required. In the majority of STDCs, the OR activities were not mandated. Among the 16 STDCs, only STDC Delhi was actively involved in conducting research studies with 45 research papers (2018-2020). STDCs played a minimal role in the advocacy and IEC activities at state level. These activities were led by the STC.

Overall, there was wide variation in the capacity and functionality of STDCs in the country. There is a felt need to focus on setting up a benchmark by revising the functional framework for STDCs. It is critical to define the standard norms, roles and responsibilities of STDCs, thereby encouraging them to improve their performances in the evolving context of TB elimination. All STDCs need to have a certain degree of administrative and financial autonomy in discharging their approved core functions. From a human resource perspective, STDCs need to have dedicated staff to execute the core activities. Also, the STDC staff should be equipped with knowledge and resources to adapt to the increasing use of digital and connected mobile devices for program operations. They are to be made responsible and accountable for providing the necessary technical assistance to the state to accelerate progress toward TB Elimination, and for ensuring that the entire TB workforce is completely trained and are able to execute their roles as per the requirements of the TB program.

In order to expand training to the general health system staff and private providers, it is critical to functionally integrate with respective SIHFWs at the state level and also collaborate with other government and private agencies and professional organizations such as the IMA, IAP and the Association of Healthcare Providers. STDCs are recommended to lead and support STC in supervision, monitoring, and evaluation as per the guidelines of NTEP. STDCs should be encouraged to facilitate the state-level review of NTEP with necessary feedback based on the analysis of the Nikshay data and other reports under the program. For which, the capacity of STDC to access and use Nikshay for review and data analysis needs to be enhanced with specialized Human Resources and tools. For operational research activities, STDC in coordination with State Task Force is advised to build capacities of in-house human resources to conduct operational research.

STDCs have the potential to greatly enhance the progression towards the achievement of TB Elimination and India's UNHLM targets; however, their potential has not been fully and uniformly utilized across the country. There is a need to redefine and enhance its role in NTEP and strengthen them to achieve this potential considering the tight timelines of the national commitment to end TB.

Background

History of STDCs

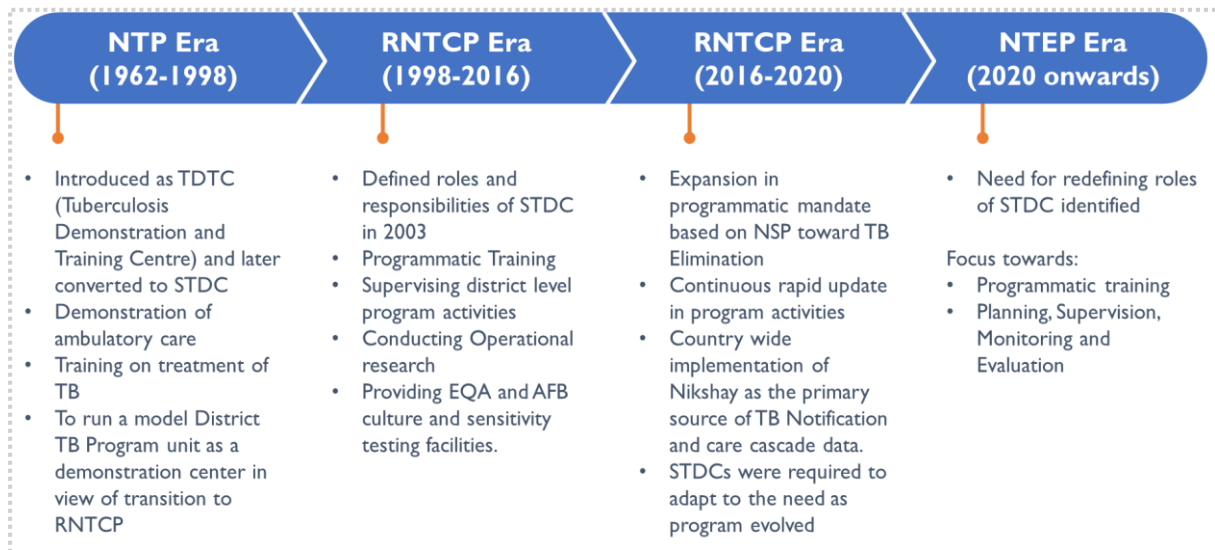


Figure 1: Evolution of STDC in TB program

State Tuberculosis Training & Demonstration Centres (STDC) are strategic state level institutions in the National TB Elimination Program (NTEP). They were originally established during the National TB Program (NTP) before 1998s as a TDTC (Tuberculosis Demonstration and Training Centre). The purpose of TDTCs was to demonstrate district-level organization of TB services under a District TB centre. It was later designated as the STDC (State Tuberculosis Training and Demonstration Centre) when RNTCP was implemented. The role of STDCs was initially published in 2003. At that time, it had broadly the following functions:

1. Training
2. Supervision, monitoring, and evaluation (SM&E),
3. External Quality assurance (EQA) of sputum microscopy,
4. Advocacy and information, education, and communication (IEC),
5. Operational research (OR).

Since then the program has considerably evolved, expanding in-depth and range of TB services, along with a drive to accelerate progress toward TB Elimination. New programmatic areas including PMDT, Nikshay, Nikshay Aushadhi, Direct Benefit Transfer (DBT), TB preventive treatment (TPT) evolved. Along with the program, some of the STDCs has evolved under the leadership of the State and have become an asset for the State TB Cell and NTEP. During the evolution, diagnostic and treatment grew with a separate system of reference laboratories (IRL, NRL) and DRTB Centres (NDRTBC and DDRTBCs). IRLs and NRLs have effectively taken up EQA of Microscopy and quality assurance of Molecular and other phenotypic tests across the country as a specialized function. State TB Cells have evolved to take up the general function of Advocacy and IEC.

Need for Assessment of STDCs

At present, there are 26 STDCs in the country (as depicted in Figure 2). These STDCs have been independently evolving along with the changes and updates in the TB program. This has resulted in differences in its administrative establishment, facilities and functioning. Due to this variation it has been difficult to compare STDCs and evaluate its performance against the requirements of the State TB program.

Considering the existing limitations, there is a need to also update the documented role of STDCs formally, in the context of newer policy/guidelines changes and newer initiatives after 2003 such as PMDT, Nikshay, Nikshay Aushadhi, Direct Benefit Transfer (DBT), TB preventive treatment (TPT). It is also critical to strengthen the execution of core functions of STDCs, including training of various cadres of NTEP staff; and supervision, monitoring, and evaluation to improve the overall program performance at the state level.

The iDEFEAT TB project intends to strengthen the execution of core functions of STDCs, including training of various cadres of NTEP staff, and supervision, monitoring, and evaluation. This aims at addressing existing program limitations and improving the overall performance at the state level. Before initiating the activities to strengthen STDCs, it was critical to establish a baseline of the performance of STDCs and their capacity. This would assist in the identification of the challenges and potential areas of strengthening, which would in turn inform the strengthening and improvement plan.

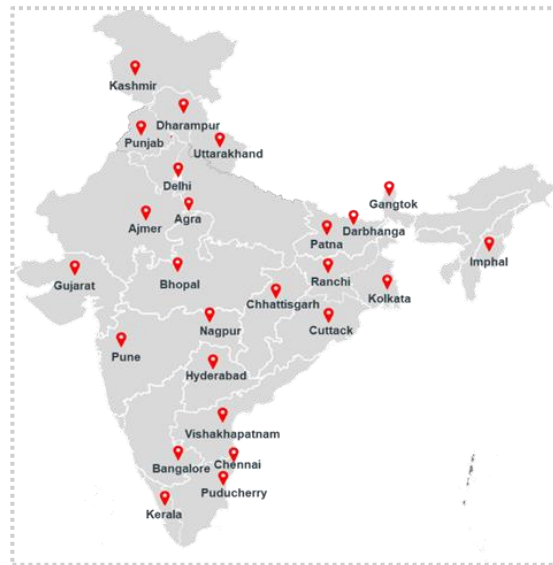


Figure 2: STDCs in India

Methods

Aim

The baseline assessment aimed to document the baseline status of STDCs, about the functions of training and conducting programmatic reviews, supervision, monitoring, and evaluations (SM&E) under the National Tuberculosis Elimination Program (NTEP).

The expected outcomes of the baseline assessment were as below:

1. Document existing functions and activities performed by STDCs
 - a. Programmatic Training
 - b. Supervision Monitoring & Evaluation including Planning, Advocacy, and OR
 - c. Additional assigned/mandated functions/ activities
2. The present capacity of STDCs (infrastructure, human resources, equipment, funds, and partnerships) to perform the activities mandated for STDCs
 - a. Variations amongst STDCs of different states and possible reasons
 - b. Existing processes, formats, and mechanisms, to deliver activities
3. Understand challenges, gaps, and opportunity areas for strengthening the capacity of STDCs
4. Identification and preparation of actionable evidence-informed recommendations for the improvement of the functioning of STDCs

Assessment Framework

The assessment framework was based on two key pillars – STDC capacity and STDC functionality as depicted in the figure below. Each pillar encompassed multiple sub-themes:

STDC Capacity:

- a) Infrastructure and equipment
- b) Human resources
- c) Material
- d) Funding and governance

STDC Functionality:

- a) Training and capacity building at the state-level
- b) Planning, Supervision, monitoring, programmatic review and evaluation, advocacy and operational research

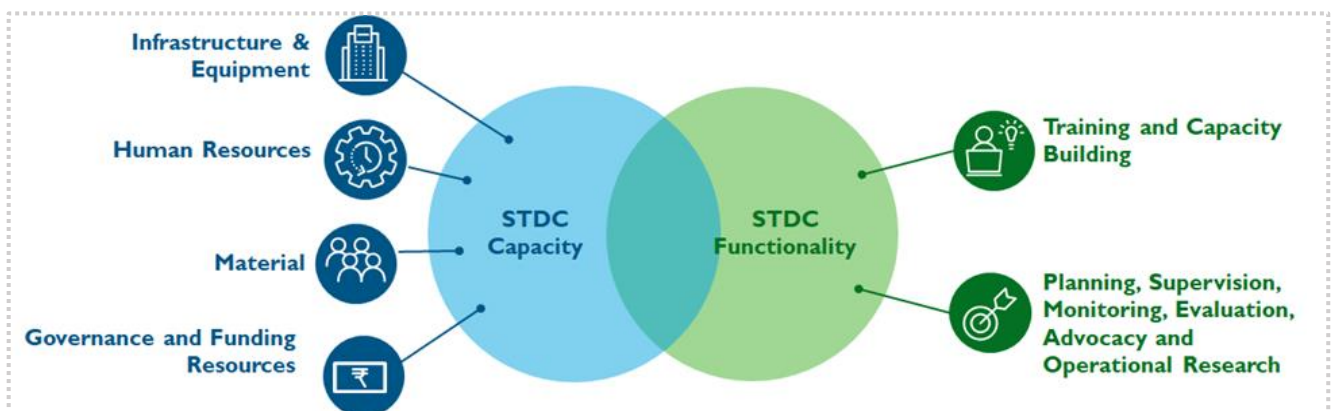


Figure 3: Assessment Framework

Assessment Approach

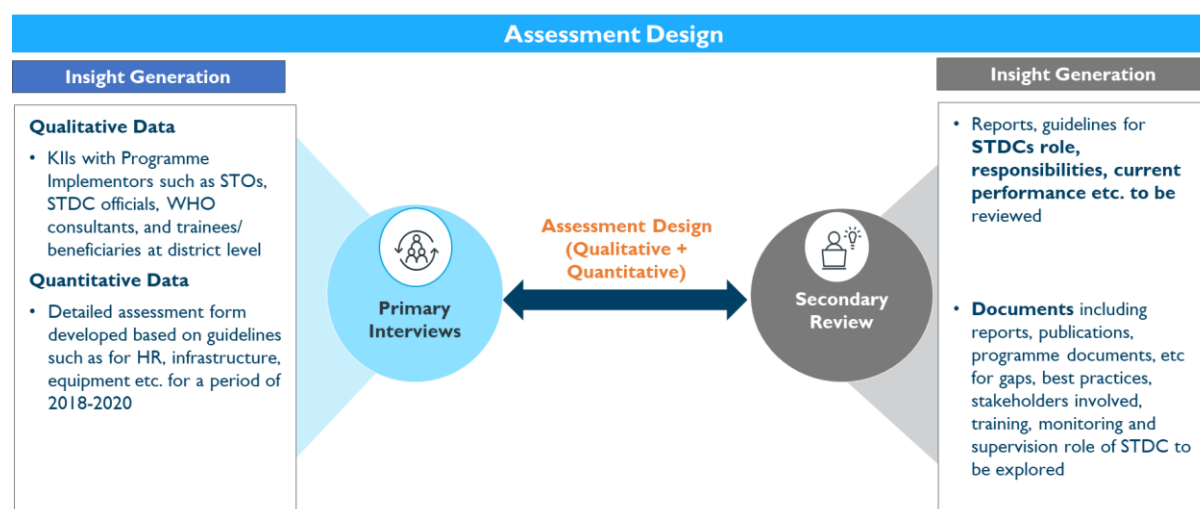


Figure 4: Assessment Approach: mixed methods

For conducting the baseline assessment of STDCs, the mixed methods approach was utilized, wherein both quantitative and qualitative data were collected.

Secondary Data and Literature Review

Before initiating the primary assessment, a detailed desk review was conducted to set the context, develop the framework, prepare the background for discussions/ interviews with key respondents and provide a formidable base for the development of assessment tools. Publicly available documents including reports, publications, and programme documents were reviewed.

Primary Data Collection and Assessment

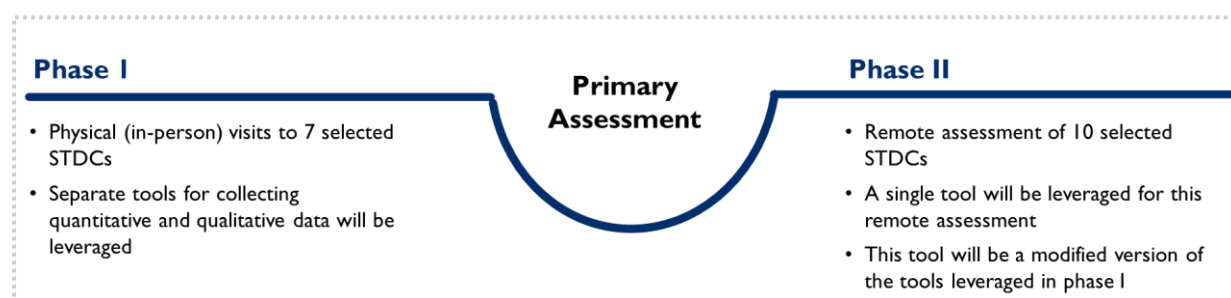


Figure 5: Primary Assessment Phases

Data Collection Components:

Quantitative Data:

- 1) **Tools:** This data was collected through a detailed STDC assessment form. This assessment form comprised of sub-sections based on the capacity (physical infrastructure, equipment, human resources, material) and functionality of STDCs (on training, supervision, monitoring and evaluation, and other miscellaneous responsibilities). The same assessment form was leveraged for both in-person as well as remote assessments. This tool was pre-tested and modified appropriately.

- 2) **CAPI** (computer-assisted personal interviewing) based system was used to collect data through this assessment form. KoBo mobile application was used to develop an online/digital version of the assessment form. This digitized way of data collection ensured:
 - a. real-time update of backend data for carrying out any quality checks
 - b. data safety as data was stored on a protected cloud-based server
 - c. no loss of information that may have occurred due to loss of hard copies/paper-based tools
 - d. availability of data in convenient (excel) downloadable format which was then used for analysis purposes

For both phases of assessment, the digitized version of the tool was used. During phase I (in-person assessment), the team members involved in data collection were either provided with Android tablets running 2.0 and higher or used their mobile smartphones along with registered login credentials. For phase 2 (remote assessment), an electronic link or a word document to access the assessment form was shared with the respondent state officials.

Necessary checks and skips were incorporated into the digitized version of the assessment form to minimize any errors and completeness and accuracy were ensured. Additionally, the data collection team coordinated virtually with the respondents during phase II assessments through a suitable platform. Further, the responses were validated at the back end for any missing information and the corresponding STDC was reached out for suitable clarifications. To minimize self-reporting bias, necessary supporting documents were requested from the STDCs and a virtual tour was conducted at the end of each state's assessment.

- 3) **Respondents:** The assessment form was administered to STDC staff involved in implementing activities under NTEP (as identified by the STDC Director). Quantitative data for key indicators was collected for the last three years – 2018, 2019, and 2020.
- 4) **Data Analysis:** The data obtained through the assessment form were analysed using Microsoft Excel.

Qualitative Data:

- 1) **Tools:** This data was collected through key informant interviews leveraging in-depth interview guides. This helped in gathering in-depth insights into the current scenario of STDCs. Different tools (discussion guides) were developed for a different type of stakeholders. For **this** assessment, four discussion guides were prepared for the State TB Officer (STO), STDC Director and STDC staff, WHO consultants, and district level officials/staff (*one for each of these stakeholders*). These guides captured the challenges, gaps, enablers, and barriers related to STDC functioning. Also, detailed expectations and recommendations for strengthening the capacity of STDCs were noted.
- 2) **Sampling and Data Collection:** A purposive sampling approach was adopted, and key informants were interviewed using a guide with necessary probes and follow-up questions.
- 3) **Key stakeholders for KIIs:** A total of 69 interviews including 52 in-person interviews (Phase 1) and 17 remote interviews (Phase 2) across 17 states were conducted. For in-person interviews, the key stakeholders shortlisted at each state for the assessment included:
 - a. State TB Officer (STO)
 - b. STDC Director
 - c. 02 STDC staff including epidemiologist in-charge and/or training in-charge/training coordinator or any staff as allocated by STDC Director
 - d. 1 WHO consultant at the state level
 - e. 03 Beneficiary/ trainees (DTOs or district staff) from the district level

For remote interviews, 01 STO and 01 STDC Director were interviewed. In Bihar, Kerala, Madhya Pradesh, Odisha, Telangana, Tamil Nadu, and West Bengal, the STO and STDC Director charge was being managed by the same person, thus, only 01 interviews were conducted for each of them. A detailed list of stakeholders interviewed in phase I and phase 2 of STDC baseline assessment are included in Annexure 1. A total of 10 male STOs, 01 female STO, 03 male STO/STDC Directors, 02 female STO/STDC Director, 03 male MO/STDC Directors, 08 male STDC Directors, 01 female STDC Director, 06 male WHO consultants, and 03 female WHO consultants were interviewed across 17 STDCs.

- 4) **Data Analysis:** Basic data cleaning was done after each day of data collection. The qualitative data obtained was transcribed for familiarization with the data and to gain its overview. The transcribed data were categorized based on the two pillars of the assessment framework (STDC capacity and STDC functionality). These data were further categorized into sub-themes such as human resources, infrastructure and equipment, governance and funding, training (resource pool, planning, execution, and feedback mechanism), supervision, monitoring, programmatic review and evaluation, SME templates, data analysis, Nikshay access, advocacy, and operational research, innovation and best practices, challenges, and suggestions. The transcribed data was consolidated, sorted, and analysed based on the mentioned sub-themes. IQVIA deployed dedicated qualitative data experts for analysis and data visualization. The analysis and data collection were conducted in parallel so that preliminary analysis could be used to decide which area should be examined in more detail.

Data Triangulation

The data collected during this baseline assessment including qualitative and quantitative findings were analyzed and triangulated to identify gaps, challenges, and areas of improvement and to draw comprehensive conclusions. This further assisted in the formulation of recommendations. The secondary research findings were further validated by primary research findings.

Primary Data collection

The primary data collection was done in two phases. Phase 1 was done through physical visits while Phase 2 was done virtually.

Phase I: This phase involved physical (in-person) visits to 7 selected STDCs viz., Delhi, Maharashtra (Pune), Gujarat (Ahmedabad), Madhya Pradesh (Bhopal), Telangana (Hyderabad), Tamil Nadu (Chennai), and West Bengal (Kolkata). Separate tools for collecting quantitative and qualitative data were leveraged (*detailed further below*).

Phase 1, was led by a two-membered team of consultants from IQVIA (India), in coordination with the UNION team and CTD consultants. This assessment was conducted in 07 identified states between 24th August 2021 and 1st October 2021 (approximately 4 days of assessment for every state visit). The schedule of state visits is depicted in the table below.

Table 1: Phase 1 State visit plan

State	26th Aug	31st Aug	06th Sept	13th Sept	20th Sept	27th Sept
	30th Aug	03rd sept	09th sept	16th sept	23rd sept	01st Oct
Delhi						
Maharashtra, Pune						
Madhya Pradesh, Bhopal						
Telangana, Hyderabad						
Tamil Nadu, Chennai						
Gujarat, Ahmedabad						
West Bengal, Kolkata						

The day-wise agenda followed during the visit are outlined below. The team adhered to the guidance of the STO/STDC Director for the final proceedings.

Table 2: Day wise agenda followed during the assessment visit

Day	Activity
Day 1 (travel day)	<ul style="list-style-type: none"> Initiate state visit - stakeholder coordination and introductions at STDCs Observation tour around the STDC Key informant interview with STDC Director
Day 2	<ul style="list-style-type: none"> Quantitative data collection through assessment form for assessing the capacity and functions of STDC. The major focus areas are: <ul style="list-style-type: none"> Infrastructure and equipment Material Human resource Training Planning, supervision, monitoring, evaluation, advocacy, and operational research Key informant interviews with 2 STDC Staff (as designated by STDC Director)
Day 3	<ul style="list-style-type: none"> Key informant interviews with the following: <ul style="list-style-type: none"> State TB Officer WHO Consultant of State District level official of District 1
Day 4	<ul style="list-style-type: none"> Key informant interviews with 2 district officials of District II and District III Any pending interviews or sections of assessment form Conclusion of state visit

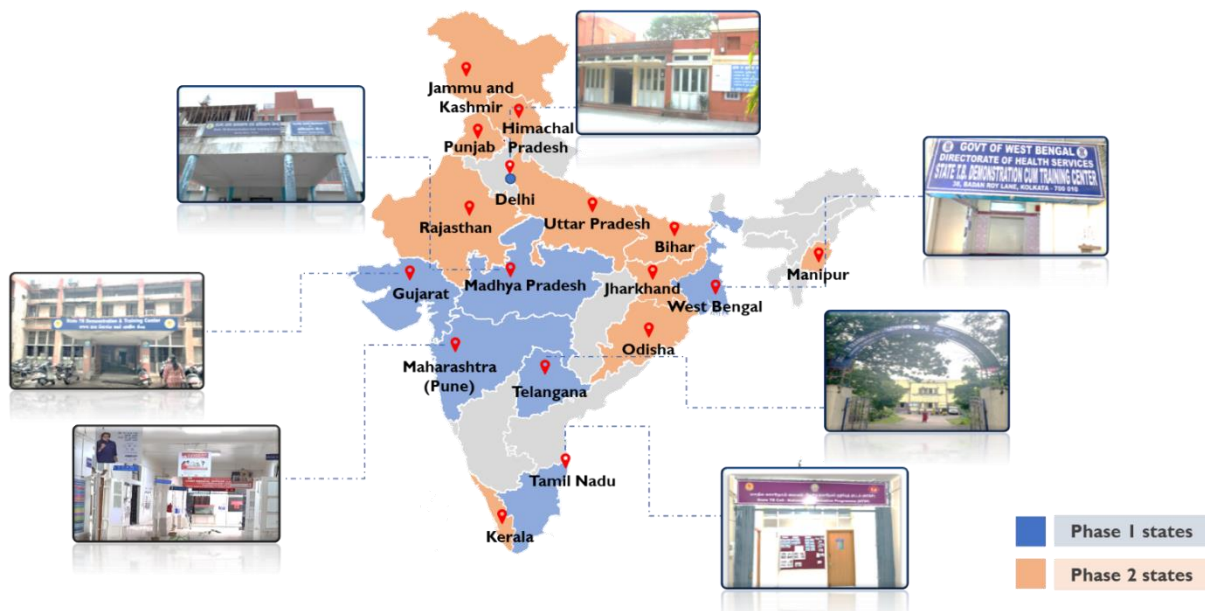


Figure 6: Assessment coverage

Phase II: This phase involved remote/virtual assessment of 10 selected STDCs viz., Bihar (Patna), Himachal Pradesh (Dharampur), Jharkhand (Ranchi), Kashmir (Srinagar), Kerala (Thiruvananthapuram), Manipur (Imphal), Odisha (Cuttack), Punjab (Patiala), Rajasthan (Ajmer) and Uttar Pradesh (Agra).

For Phase II, the STDC baseline assessment was led by a three-membered team of consultants from IQVIA (India) in support with the UNION team and CTD consultants. The phase II assessments were conducted virtually for 10 states on Microsoft Teams between 15th September 2021 and 24th February 2022(as outlined in Table 3). Also, virtual tour was conducted for each of the STDCs.

Table 3: Details of interviews in Phase II

STDC	Key Stakeholders	Date of Interview
Bihar	Medical officer (STDC Director and STO I/C)	19.01.2022
Himachal Pradesh	State TB Officer	22.10.2021
	STDC Director	27.10.2021
Jharkhand	State TB Officer	11.10.2021
	STDC Director	05.11.2021
Kashmir	State TB Officer	22.09.2021
	STDC Director	24.09.2021
Kerala	State TB Officer (STDC Director I/C)	27.11.2022
Manipur	State TB Officer	20.12.2021
	STDC Director	22.12.2021
Odisha	Medical officer (STDC Director I/C)	06.01.2021
Punjab	State TB Officer	30.09.2021
	STDC Director	05.10.2021
Rajasthan	State TB Officer	22.02.2022
	STDC Director	24.02.2022
Uttar Pradesh	State TB Officer	21.09.2021
	Consultant (appointed by STDC Director)	15.09.2021

Assessment Findings

All 17 selected STDCs were assessed (7 in-person and 10 virtual) between August 2021 and February 2022. A quantitative data form was sent ahead to all the states. During the assessment visits and interviews, the filled forms were reviewed and qualitative interviews were conducted by the assessment team. The data was collected finalized and filled into the CAPI by the assessment team. Quantitative data was largely incomplete for Bihar STDC and hence was excluded from the quantitative data analysis.

A summary of the findings of the remaining 16 STDCs is presented below.

STDC Capacity

Human Resources

At all 16 STDCs, the human resource was available for conducting routine activities of STDC. NTEP has an existing provision to support STDCs for 04 positions – epidemiologist, medical officer, Nikshay operator, and secretarial assistant and additional positions from state resources supplementing them. In this assessment, the staffing status of critical positions was evaluated- STDC director, epidemiologist, medical officer, training officer/coordinator, statistician, and data entry operator.

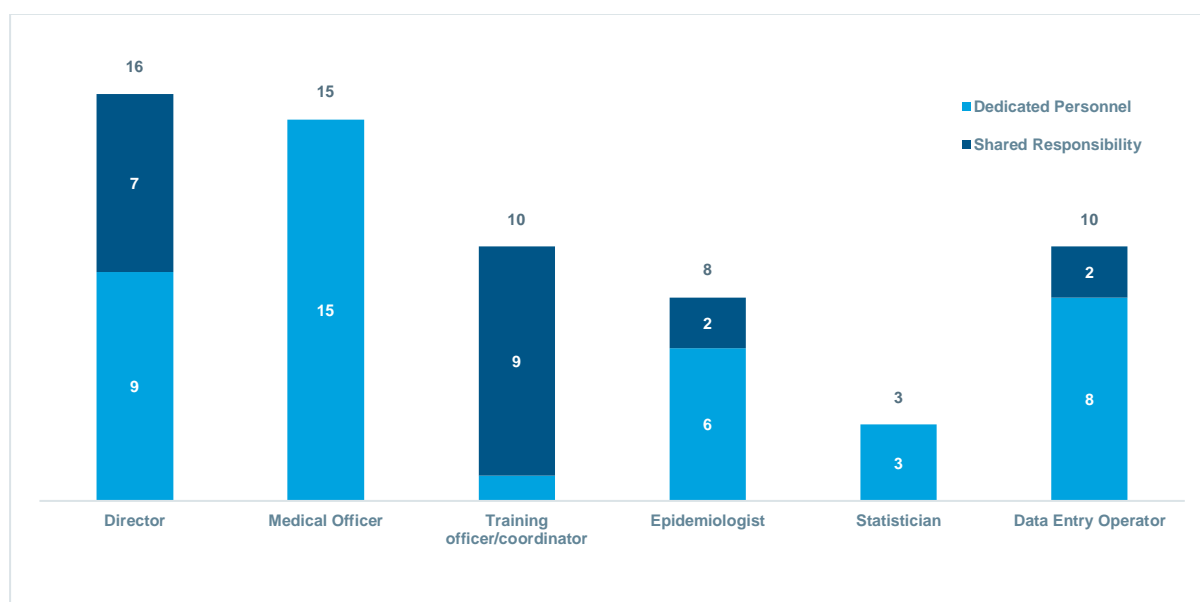


Figure 7: Availability of key Personnel at 16 STDCs

It was observed that all of the 16 STDCs had an **STDC director** designated. However, a dedicated STDC director led the STDC in 09/16 states only. These STDCs included STDC Delhi, Gujarat, J&K, Jharkhand, Madhya Pradesh, Manipur, Punjab, Rajasthan, and Uttar Pradesh. Whereas, in the remaining 07 STDCs, the STO or one of the existing medical officers played the role of STDC director. STDC Gujarat had a sanctioned post for deputy or additional director and the position was filled. There was a sanctioned post of **Medical Officer (MO)** in all 16 STDCs, and was filled in all of them except in STDC Manipur. There was a total of 42 Medical officers in place at the 16 STDCs and they usually took up the additional charge of unfilled positions and roles at the STDC.

09/16 STDCs had **in-charge training coordinator**, of which only 01 was dedicated to the role. These STDCs were STDC Delhi, J&K, Jharkhand, Pune, Tamil Nadu, Madhya Pradesh, Uttar Pradesh, and Himachal Pradesh), with STDC Kerala having a dedicated training officer/coordinator. The epidemiologist, additional director, and medical officer were given the additional charge of training coordinator in STDC Telangana, Gujarat, and West Bengal respectively. In Himachal Pradesh, the

epidemiologist was given the additional charge of the training coordinator. STDC director was executing additional responsibilities of training coordinator in STDC Jharkhand. The medical officer was executing additional responsibilities of training coordinator in STDC J&K, Maharashtra (Pune), Madhya Pradesh, and Uttar Pradesh. The senior stenographer and the state procurement officer were being given the additional charge of training coordinators in STDC Delhi and STDC Tamil Nadu respectively.

A dedicated **epidemiologist** was observed in 06/16 STDCs, and in two STDCs it was a shared/ in-charge position. Three STDCs (STDC Delhi, Kerala, and Telangana) had dedicated **statisticians**. Statistical Assistant positions were sanctioned only in 03/16 STDCs (STDC Himachal Pradesh, Kerala, and Manipur). Eight STDCs had dedicated **Data Entry Operators**. Detailed information on the staffing status of key personnel, stratified by states is mentioned in Annexure 2.

Infrastructure and Equipment

For effective execution of its core activities, STDCs should be well equipped with physical infrastructure, equipment, and material. This section discusses the current availability of various infrastructure and equipment at the STDCs assessed. This assessment was carried out to understand each of the below components:

- Physical Infrastructure (e.g., training hall, auditorium, hostel accommodation, basic amenities (such as toilets) internet, electricity, etc.)
 - Availability and maintenance
 - Capacity/ Quantity
 - Type (dedicated, shared, outsourced/hired)
 - Services and equipment available in each of these rooms
- Equipment (LCD projector, microphones, audio-video system, equipment for conducting virtual meetings/ training, laptops, flipchart, whiteboards, etc.),
 - Availability/ Quantity
 - Functional/non-functional
- Material (printed modules, standard presentation slides, facilitators' guides, and access to the latest modules and guidelines)
 - Availability
- Transportation facilities/provision for conducting supervisory visits

Presently, the staff of STDC Tamil Nadu has been absorbed into the STC and there is no physical infrastructure. STDC West Bengal leveraged the training hall at the State Institute of Health and Family Welfare (SIHFW) on a need basis. Hence, infrastructure, equipment, and material related to these two STDCs are excluded.

Fourteen remaining STDCs had dedicated infrastructure for training and meetings. Six STDCs (Delhi, Gujarat, UP, Punjab, Kerala, Maharashtra-Pune) could have meetings/ training involving over 100 people at the same time; and another six (Madhya Pradesh, Telangana, J&K, Jharkhand, Manipur, Rajasthan) could accommodate 50-100 people at the same time in dedicated halls/ meeting rooms. STDC Himachal Pradesh and Odisha had meeting rooms that could accommodate 30 people at a time.

State-wise data on physical infrastructure including the type of infrastructure and related frequency and capacity is detailed in Annexure 4.



Figure 8: Auditoriums at 1. STDC Delhi, 2. STDC Gujarat, 3. STDC Maharashtra (Pune), 4. STDC Madhya Pradesh

Seven STDCs had dedicated hostels (STDC Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra (Pune), Rajasthan, Telangana, and Uttar Pradesh). The average capacity of dedicated hostels across 07 STDCs ranged between 20 and 35. STDC Uttar Pradesh could accommodate 35 people, STDC Himachal Pradesh (n=30), Maharashtra (Pune) and Gujarat (n=25), Madhya Pradesh (n=22), Rajasthan and Telangana (n=20). All hostels could accommodate women trainees and be equipped with basic facilities such as electricity, water supply, bed/mattress, clean linen, and internet. Only STDC Maharashtra (Pune) and Uttar Pradesh had rooms with recreational activities such as indoor games, TV, etc.

Five STDCs had accommodation on sharing basis; STDC Kerala and West Bengal had provisions of the shared hostel of SIHFW in respective states, STDC Jharkhand had the provisions of shared hostels of Institute of Public Health and STDC Delhi used accommodation of the nearby National Institute of TB and Respiratory Diseases (NITRD) when needed. STDC Odisha rented out accommodation facilities as needed.

Specified arrangements are not available in Punjab, J&K, and Manipur for hostel/accommodation facilities for trainees.

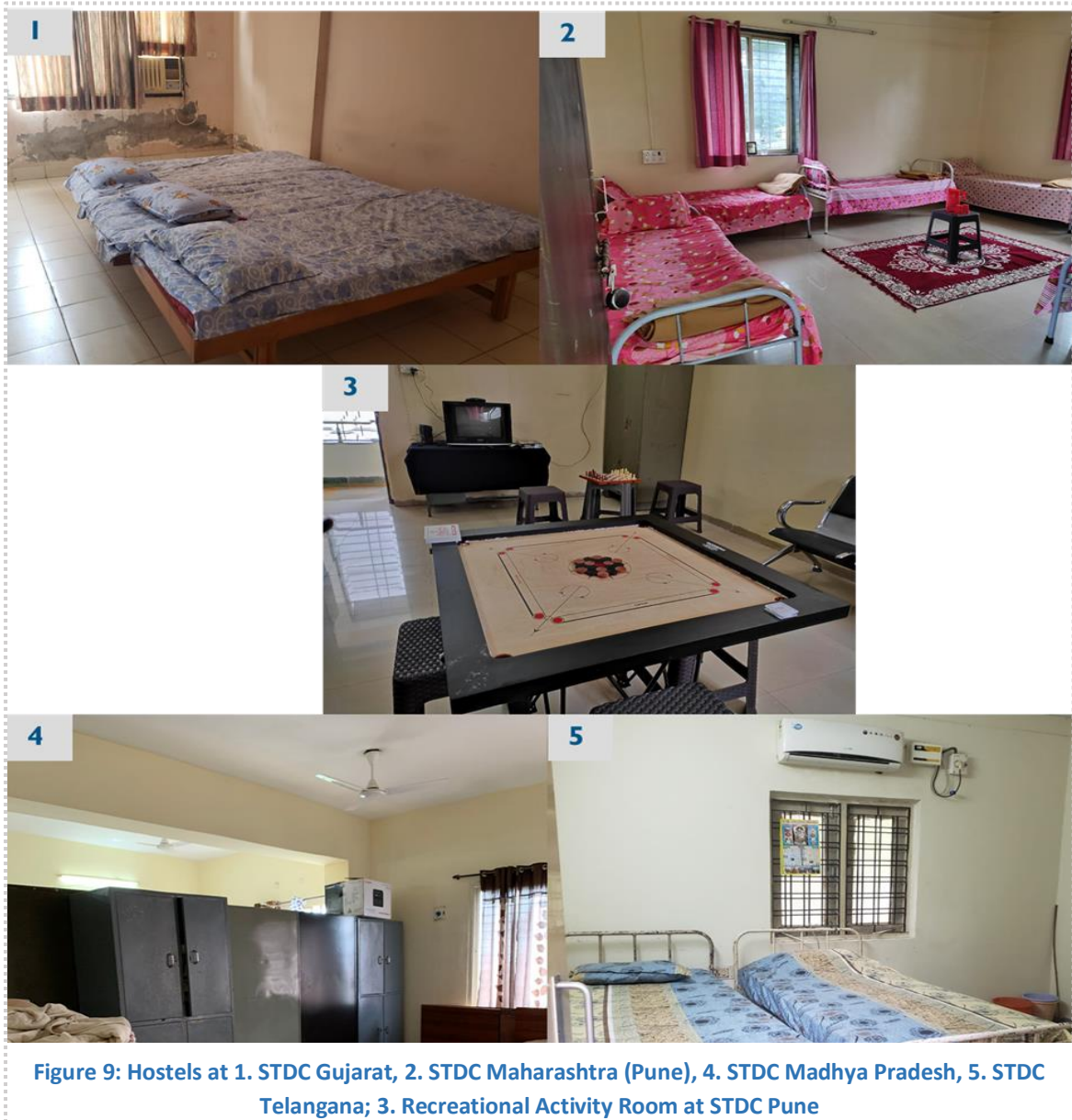


Figure 9: Hostels at 1. STDC Gujarat, 2. STDC Maharashtra (Pune), 4. STDC Madhya Pradesh, 5. STDC Telangana; 3. Recreational Activity Room at STDC Pune

State-wise data on resource available in hostel facilities is displayed below.

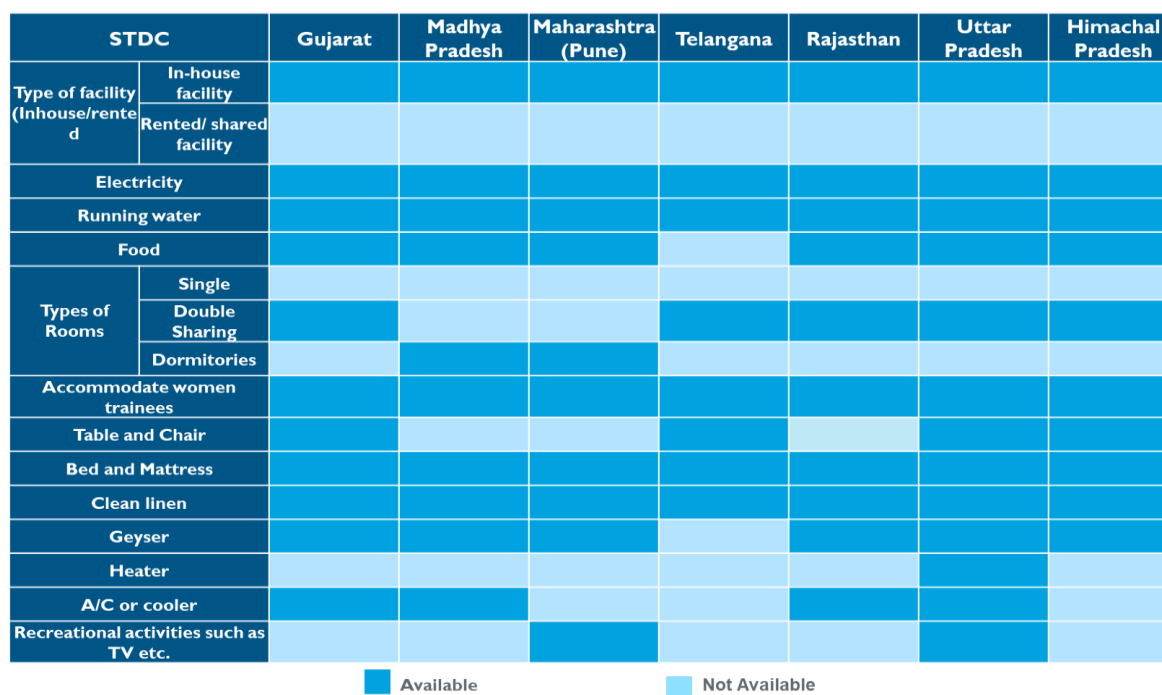


Figure 10: Availability of facilities at dedicated hostels in 7 states

LCD projectors, LCD screens/TV, and photocopiers were available in a majority of STDCs. Greatest number of LCD screens/TV (n=10) and photocopiers (n=17) were available in STDC Uttar Pradesh. All STDCs had access to a virtual training/meeting facility for conducting and participating in virtual training, reviews, and difficult to treat TB clinics. Only 02/16 STDCs (STDC Kerala and Uttar Pradesh) had computer training rooms. Dedicated laboratory rooms were available in 13/16 STDCs with capacities ranging between 10 and 45. For laboratory training, the IRL associated with the STDC was usually leveraged for providing hands-on training to the trainees. Detailed information on the number of available and functional equipment by states is provided in Annexure 5.

Training Material

The training and capacity building sessions were primarily based on the NTEP Training Modules 1-9 and other key documents/ guidelines such as Technical and Operational Guidelines for TB Control in India 2016, Index-TB Guidelines, Guidelines on Prevention and Management of TB in PLHIV at ART Centers, Guidelines for Programmatic Management of Drug-Resistant Tuberculosis in India.

Governance and Funding

It was observed that 15/16 STDCs were established as separate institutions/establishments designated by respective state governments. However, there were significant variations in how it was established and administered on a day-to-day basis. Some existed as institutions under the Public Health or Health and Family Welfare Department, others were placed under the administrative purview of the district, while some others existed under a Medical College.

There is significant variance in how each STDC of the county obtains financial resources for its operations. From a financial and administrative perspective, 03/16 STDCs (STDC Delhi, Uttar Pradesh, and Maharashtra (Pune)) were able to produce financial documents and plans specific to the STDC and also had a fair level of independence in delivering their existing functions/activities.

- STDC Delhi was established as a part of the New Delhi TB Centre, which is an institution under the Central Government Health Scheme (CGHS). This enables New Delhi TB Centre to receive funds from multiple sources including Central and state governments related to Health Services and NTEP programs and also from Project-specific research and development funds.
- STDC Maharashtra (Pune), West Bengal, Jharkhand and Himachal Pradesh received funding for its activities through NTEP and had financial independence for expenditure. STDC Maharashtra (Pune), has also leveraged multiple CSR and other donations to build up its infrastructure and facilities.
- Funds for STDC Uttar Pradesh were routed through the District Health Society (DHS). Funds planned and approved through the NTEP-NHM PIP process are routed to the DHS from the SIHFW, which in turn receives funds from the state NHM.

However, these three are exceptional cases, and the norm is that there is a significant dependence on the STC for conducting even prior approved activities. Often the STDC activities were planned as a continuation of the prior year's activities.

Financial constraints were reported in STDC Manipur. Central share was not released to STC Manipur from the state treasury for NTEP activities in the last financial year. This resulted in limited activities at the level of STDC also.

In all the states, the PIP budget/financial planning was led and conducted by the STC. As of now, there was no separate budget head for STDC under the NHM PIP budget plan. In the PIP budget, the funds were requested for human resources, infrastructure, procurement, training activities, etc. for the entire state, up to block level, and no separate funds for STDC were requested/ allocated/ assigned. Also, it was noted that there was no specific budget allocation for routine maintenance for STDCs.

Overall, all the STDCs echoed a similar sentiment of a lack of administrative and financial independence for the STDCs. STDCs were reliant on the STCs for financial planning, receipt, and expenditure of funds as there was no separate budget head for STDCs under the NHM PIP budget, thus, all funds were routed through the STC. Fund release to STDCs post allocation from NHM-state ROP was a time taking process which was further augmented by the approval process at the level of STC. As a result, the receipt of funds and approval by the STDCs was delayed. The STDCs needed to undertake a long exhaustive process to retrieve funds for any emergency or maintenance purposes such as infrastructure or equipment repair.



'The STDC receives fund through STC. There is no separate budget for STDC under NHM PIP. All activities have to be sanctioned and taken prior approval along with financial approval. Once approval is received, then only activity can be conducted.'

- STDC Official

There was no evidence of tools or mechanisms to review STDCs and their functions at any level. The performance of the STDC was often integrated into the performance of the state and could not be separated. This may have affected the overall accountability of this strategic institution.

Table 4: Funds Received and Spent by STDCs (2018, 2019 and 2020)

STDC	Year	Amount received (INR)	Amount Spent (INR)	Source of Budget	Remarks
Delhi	2018-2019	3,66,885	2,58,400	Central Government and State NHM	Budget details only for training activities of STDC
	2019-2020	2,90,360	3,89,598		
	2020-2021	1,97,953	1,49,091		
Gujarat	2018-2019	-	-	State NHM	Budget details for civil works, procurement, training, program management of the STDC including IRL and SDS
	2019-2020	5,67,58,000	4,76,20,000		
	2020-2021	2,16,20,000	25,70,000		
Himachal Pradesh	2018-2019	-	-	State Government and State NHM	Budget details only for training activities of the state.
	2019-2020	--	--		
	2020-2021	--	--		
Jammu and Kashmir	2018-2019	-	-	State NHM	Budget details for training, SME, procurement material and equipment for IRL
	2019-2020	--	--		
	2020-2021	--	--		
Jharkhand	2018-2019	-	-	State NHM	Budget details for civil works, procurement, training, program management of the STDC. Emergency funds for maintenance allocated to STDC as per PIP
	2019-2020	--	--		
	2020-2021	--	--		
Kerala	2018-2019	-	-	State NHM	Budget details only for training activities of the state
	2019-2020	--	--		
	2020-2021	--	--		
Madhya Pradesh	2018-2019	-	-	State NHM	Separate budget sub-head in state NHM-PIP for STDCs. Budget details for civil works, procurement, training of the STDC including IRL and SDS
	2019-2020	--	--		
	2020-2021	--	--		
Maharashtra (Pune)	2018-2019	25,00,000	15,94,000	State NHM	Budget details only for training activities of the state
	2019-2020	22,00,000	22,11,000		
	2020-2021	30,42,000	83,000		
Manipur	2018-2019	--	--	State NHM	Budget details only for training activities of the state
	2019-2020	--	--		
	2020-2021	--	--		
Odisha	2018-2019	39,53,000*	21,06,113	State NHM	Separate budget sub-head in state NHM-PIP for STDCs. Budget details only for training activities of the state
	2019-2020	32,53,000*	24,24,529		
	2020-2021	30,50,000*	2,37,879		
Punjab	2018-2019	--	--	State NHM	Budget details only for training activities of the state
	2019-2020	--	--		
	2020-2021	--	--		
Rajasthan	2018-2019	--	--	State NHM	Budget details for civil works, procurement, training, program management of the STDC. Emergency funds for maintenance allocated to STDC as per PIP.
	2019-2020	--	--		
	2020-2021	--	--		
Tamil Nadu	2018-2019	--	--	State NHM	Budget details only for training activities of the state
	2019-2020	80,00,000	--		
	2020-2021	56,00,000	--		
Telangana	2018-2019	47,50,000	38,19,550	State NHM	Budget details only for training activities of the state
	2019-2020	30,00,000	28,15,281		
	2020-2021	35,80,718	23,14,559		
Uttar Pradesh	2018-2019	8,62,73,000	4,01,22,683	District Health Society	Separate budget sub-head in state NHM-PIP for STDCs. Budget details for training activities only.
	2019-2020	2,50,00,000	2,32,90,137		
	2020-2021	3,00,00,000	1,28,61,905		
West Bengal	2018-2019	2,55,45,000	1,93,82,000	State NHM	Budget details for civil works (only STDC), training, supervision and monitoring activities of the state
	2019-2020	2,68,29,000	2,09,03,000		
	2020-2021	1,78,68,000	1,15,12,000		

Table 4 illustrates the funds received and spent by the STDCs in the past 3 financial years - 2018-2019, 2019-2020 and 2020-2021.

STDC FUNCTIONALITY

Training

Resource pool of trainers: the trainings were primarily facilitated by trainers at STDC with able and need-based support from WHO consultants and STC staff. Other personnel such as senior DTOs, medical college faculty, and private practitioners were also involved on an as-needed basis in some STDCs. Few of the STDCs did not have an adequate number of trainers for conducting trainings. Most of the STDCs did not have any collaboration or partnerships with medical colleges to conduct trainings. There were no available definitions to who is or can be a trainer/ facilitator for a cadre, or for a topic.

Figure 11: Details of Resource Persons for Training



Training execution:

In the last three years (2018-2020), approximately 1027 trainings were conducted across 16 STDCs, including 891 classroom trainings and 136 virtual trainings with about 36,086 personnel trained. The majority of the STDCs had conducted training for NTEP-affiliated staff; training of other general health system staff was only exceptionally conducted. The average training batch size for all training was 34 trainees per batch, generally ranging from 20-60 participants; virtual training had larger even had batches with over 200 participants in one session.

Topics for each training were a mix of theme-specific and cadre-wise content, utilizing presentations and documents released by CTD. Trainings were divided into induction, re-training, and update training, and duration ranged from 1day to 5 days depending upon the cadre and type of training.

Trainees were identified on a nomination basis from the district and it was unclear what proportion of the training requirement. There was an apparent lack of a system that provides the ability to monitor training of health staff. Consequently, the quantity of training or number of training batches that are required to be completed by each STDCs/State were not available. The training was monitored using need-based mechanisms, often as aggregate statistics as responses to queries on training activities from the center. Some of the states had partially implemented the TMIS (Training Management Information System) developed by the NHSRC (National Health System Resource Centre).

The majority of the STDCs maintained training related documents such as attendance sheets. Seven STDCs had conducted pre and post-assessment tests during trainings (STDC J&K, Jharkhand, Himachal Pradesh, Maharashtra-Pune, Punjab, Telangana, and Odisha).

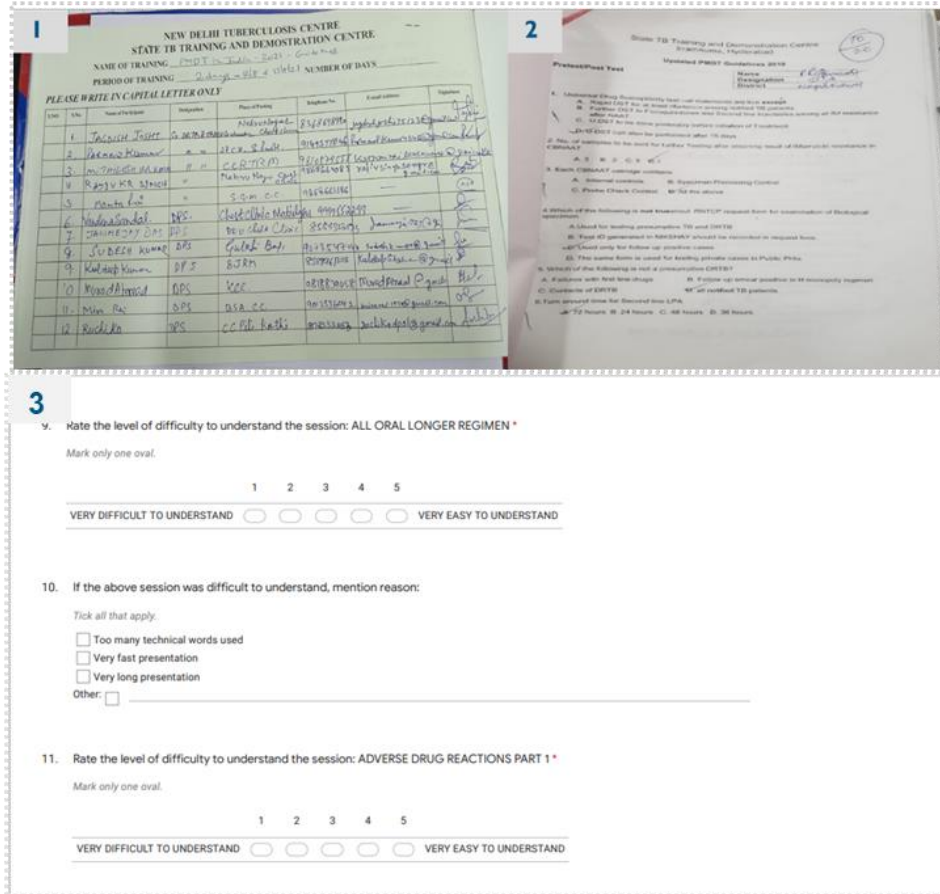


Figure 12: Documentation related to trainings maintained by various STDCs

There was an observed shift in the majority of STDCs to use a virtual mode of interaction with the help of video conferencing platforms such as ECHO/Zoom. Of 16 STDCs, 08 STDCs (STDC Delhi, Kerala, Manipur, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, West Bengal) adopted a hybrid mode of teaching in 2020. This allowed these states to impart the necessary training despite the lockdowns and travel restrictions. However, there was an expressed need for guidance on how to best leverage the virtual training mode, while not losing out on the advantages of physical training.

Five/16 STDCs (STDC J&K, Himachal Pradesh, Madhya Pradesh, Maharashtra (Pune), Punjab) conducted only classroom trainings. Pre and post COVID-19 pandemic, all trainings took place in the offline mode only in these STDCs. STDC Manipur reported no training has been conducted trainings due to financial constraints.

“
‘Post COVID-19 pandemic, we realized that trainings through e-platform are better than physical trainings as many people can join from their respective places without the hassle of traveling to the capital city. Also, slide sharing/sharing of content is smooth and easy’
”
 - STO cum STDC Director

“
‘STDC staff should be sensitized on how to conduct and participate in virtual trainings. Given digital revolution, it is important for STDC staff to adapt to technical complexities of virtual trainings.’
”
 - STDC Director

Training Planning: All 16 STDCs except STDC Punjab had a training plan/calendar in place which is often prepared along with the annual PIP processes, in consultation with STC. STDC Delhi also prepares training calendar monthly, (Annexure 7). The plans appeared to be prepared based on the previous year's training executed/ planned and was not based on any need assessment of the quantity or type of training required.

The training duration and batch size were often based on the norms provided by CTD. Training was planned as induction training, re-training, and update trainings, In STDC J&K and Manipur, feedback from DTOs was also taken into consideration whereas, in STDC Kerala, district performance was considered to identify trainees that need training.

Table 5: Planning and Monitoring of Trainings at various STDCs

STDC	Formats for capturing training information	Assessment of the training needs	Training related Indicators used for monitoring	Training content developed and available in local language
Delhi	✓	✗	✗	✗
Gujarat	✓	✗	✓	✓
Himachal Pradesh	✓	✗	✗	✗
Jammu and Kashmir	✗	✗	✓	✗
Jharkhand	✓	✓	✓	✓
Kerala	✓	✓	✓	✓
Madhya Pradesh	✓	✗	✗	✗
Maharashtra (Pune)	✓	✓	✗	✓
Manipur	✓	✓	✓	✗
Odisha	✓	✓	✓	✗
Punjab	✗	✗	✗	✗
Rajasthan	✓	✗	✗	✓
Tamil Nadu	✓	✗	✗	✓
Telangana	✗	✗	✗	✓
Uttar Pradesh	✓	✗	✗	✓
West Bengal	✓	✗	✗	✓

The trainings were aimed at all cadres of NTEP affiliated staff such as medical officers, senior treatment supervisors, lab technicians, ASHAs, and TB survivors. A detailed list of TB cadre is displayed below:

Table 6: Various cadres identified for trainings by STDCs

Identification of TB Cadre			
Overall Programme staff	State Level	District level	Others
	<ul style="list-style-type: none"> State TB Officer Epidemiologist (APO) MO - State TB cell TB HIV Coordinator PPM Coordinator DRTB Coordinator State IEC Officer state Accountant Technical Officer Proc & logistics Data Analyst DEO-STC Secretarial Assistant 	<ul style="list-style-type: none"> District TB Officer MO- DTC MO-TC MO-PHI District Program coordinator Senior DRTB - TBHIV supervisor District PPM Coordinator Accountant Senior Treatment Supervisor STS Senior TB Lab Supervisor STS Lab Technicians - RNTCP Contractual LT DMC - All Sources TBHV Data Entry Operator PPM Coordinators CHOs (Health & Wellness centers) ASHAs & Community Volunteers NUHM Staff (involved in TB Work) 	<ul style="list-style-type: none"> ANMs Community workers Treatment supporters TB champions

It was observed that STDC Delhi also conducted trainings for medical and para medical staff, nurses, undergraduate interns, and PG students of Delhi and neighboring states, along with key NTEP staff. Only 05/16 STDCs such as STDC Delhi, Gujarat, Jharkhand, Telangana, and West Bengal were involved in training of general health system staff (community health officer, MPHW, ANM, and ASHA, etc). For instance, in STDC Gujarat, Community Health Officer (CHO), Accredited Social Health Activist (ASHA), and Multi-Purpose Health Workers (MPHW) were generally imparted trainings on NTEP updates (utilizing presentations in local language) via SATCOM (satellite communication) or video conferencing facilities. In STDC Telangana, soft-skills training was given to Directed Initiatives for sustainable Health action (DISHA)-TB team including TB champions, local ASHA, and community volunteers who were responsible for disseminating TB awareness and services to the public. In STDC Jharkhand, CHO, ASHA/ Sahiyaas, and MPW were provided trainings on program updates through presentations in the local language.

Thematic areas for trainings were based on the grounds of newer initiatives, updated guidelines, and fresh recruitments. The content used for training were the 1-9 modules and the presentations shared by CTD based on the update. 09/16 STDCs customized the modules in the local language, especially for field staff (STDC Gujarat, Jharkhand, Kerala, Maharashtra (Pune), Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, and West Bengal).



‘It is critical to maintain proper communication with the trainees to ensure greater participation level. Also, trainings should be made more engaging for learners with maximized interaction between trainers and trainees.’

- STO

Innovations and Best Practice

1) Pre-employment TB Supervisor course

STDC Delhi started the TB Supervisor course as a pre-employment course in 2013. It was a three-month duration course comprising classroom teaching, practical training, field visits, and demonstrations. Key topics covered in the course include various aspects of TB viz. diagnosis, treatment, and prevention. A total of 21 batches comprising 302 students were trained for 2013-2020.

2) Learning corners

At STDC Maharashtra (Pune), there were learning corners with visual displays on various topics set up in the corridors of the building. These helped in imparting the visual as well as practical learnings to the trainees.

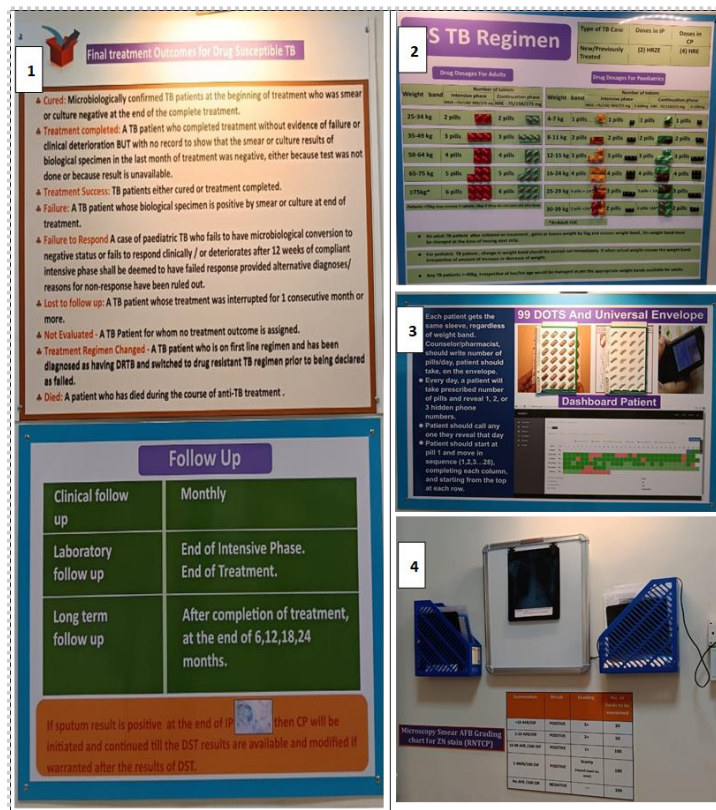


Figure 13: Learning corners at STDC Pune

3) Training materials

- STDC Telangana had prepared a community training module, namely Community Engagement-DISHA (Directed Initiatives for sustainable Health action)-TB to generate awareness among local communities. It was an in-house non-technical training material, containing information on the basics of health and TB including its causes, symptoms, treatment and other services, and success stories of TB survivors. The module was translated into the local language to ensure better understanding among the general public. The module was well appreciated and awarded as a good practice at the National Summit in Gandhinagar (2019). Also, the module was made available on the CTD website.
- STDC Gujarat customized training modules into brief presentations for MO-PHI. These modules were translated into the local language for field staff. Similarly, STDC West Bengal developed concise training content for cadres below medical officers in the local language.

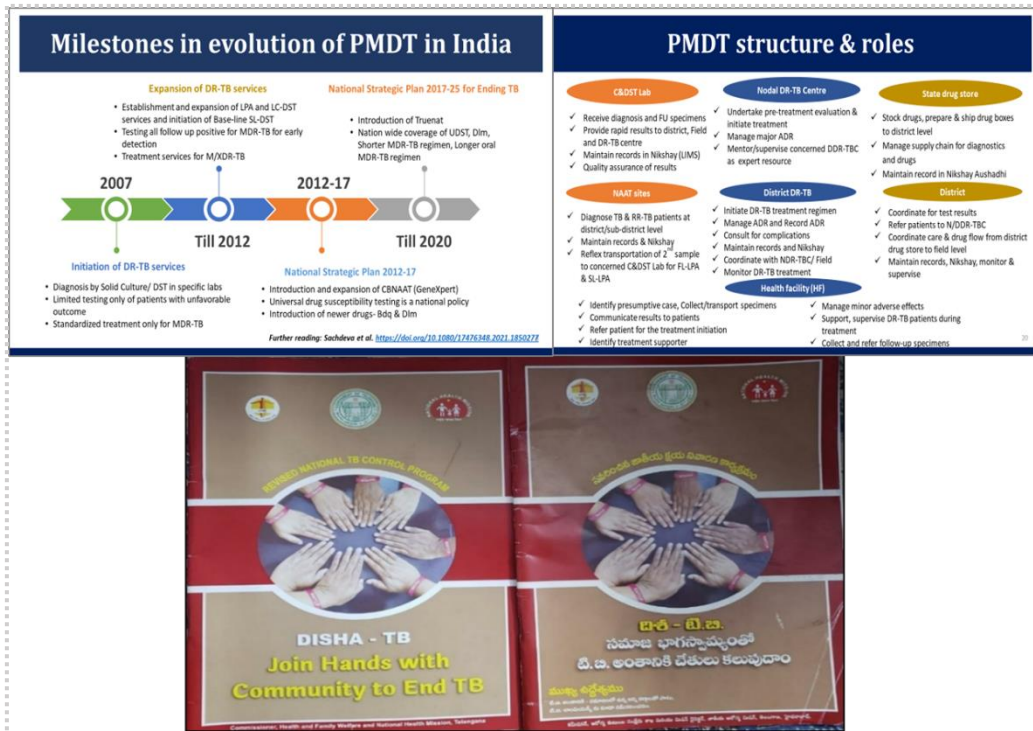


Figure 14: 1. STDC Gujarat - Sample Compact Training Presentation for MO-PHIs, 2. DISHA-TB Training Module (English/Telugu)

4) Documentation of training activities

- In STDC Madhya Pradesh, meticulous documentation was done for every training conducted, including tracking of training attendance, pre and post-training assessment scores, and group picture/photograph for every training. Each of these training details was then filed and records were maintained systematically.
- STDC Delhi and STDC Gujarat published detailed annual reports, containing information on trainings and other STDC activities.

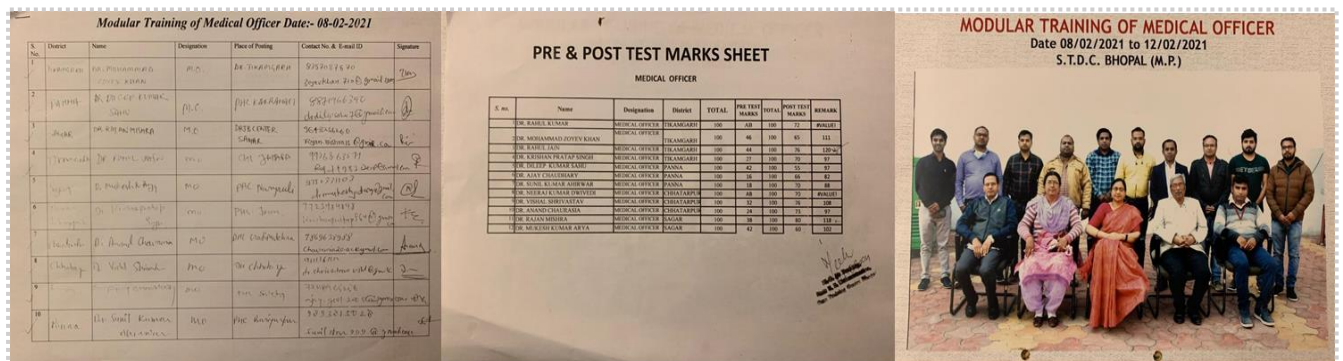


Figure 15: Documentation of training at STDC, Madhya Pradesh

5) Trainee recognition

- STDC Maharashtra (Pune) issued training certificates to the participants. These certificates were custom made for the respective trainings with a displayed snapshot of the training topic.



Figure 16: Custom made certificates issued by STDC Maharashtra

Supervision, Monitoring, Programmatic Reviews and Evaluation

Overall, 07/16 STDCs were found to be associated with supervision, monitoring, and evaluation (SME) activities. These STDCs were STDC Delhi, J&K, Tamil Nadu, Gujarat, Rajasthan, Uttar Pradesh, and West Bengal. However, only 2 STDCs (Delhi and Gujarat) took the lead in SME activities as part of the NTEP in the state including its planning and execution at the state and district level. Other functional STDCs did participate in supervisory and evaluation visits as per the instructions and guidance from STCs. Details of each type of SME activities are mentioned below:

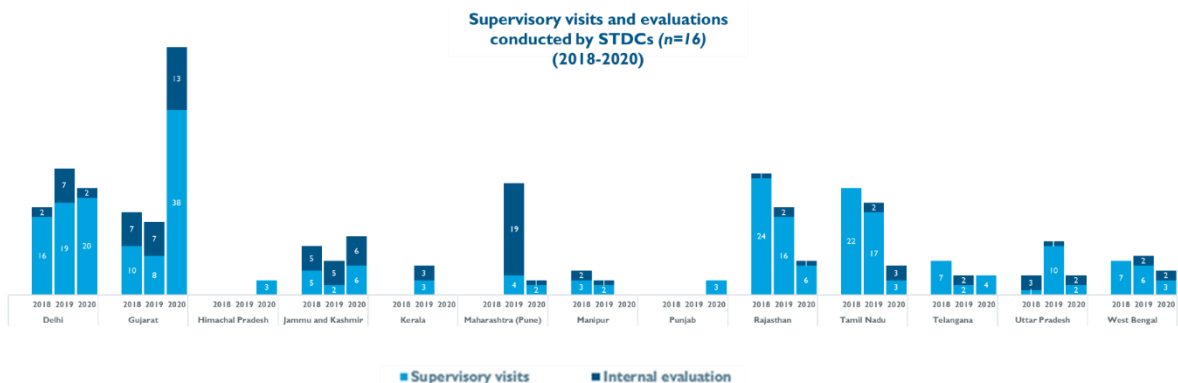


Figure 17: Number of supervisory visits to the districts- by STDCs 2018 – 2020

*Note: Supervisory visits and evaluation data for Madhya Pradesh and Odisha is not available

It was observed that 07/16 STDCs were actively involved in supervisory visits to districts. These visits were usually a one-day activity in which 1-2 members of the STDC visited a district. The frequency of these visits varied from state to state; however, the most common frequency was a monthly visit to at least 01 district for supportive supervision. However, due to the COVID-19 pandemic, the supervisory visits were greatly reduced in most of the states except Delhi and Gujarat wherein these visits continued to be conducted virtually as well as in person.

It was noted that only 06/16 STDCs such as STDC Himachal Pradesh, Kerala, Manipur, Odisha, Rajasthan, and West Bengal had an annual plan/calendar in place for conducting supervisory visits (please refer to Annexure 9 for a sample of STDC West Bengal's SME annual plan). In remaining STDCs, they were planned and conducted on a need basis. During these supervisory visits, the STDC staff provided feedback to the districts and TB workforce but there was no systematic mechanism of providing feedback and following up on the feedback provided to the districts (please refer to Annexure 10 for a sample supervisory report of STDC Rajasthan and Tamil Nadu). Although the state (STDC and STC) expected action taken reports from the districts, at present, they were not regularly submitted and followed up.

Most STDCs hired vehicles or used private vehicles for SME visits. Four STDCs (STDC Gujarat, Himachal Pradesh, J&K, and Punjab) had vehicles for STDC staff for conducting SME activities. There were observed difficulties in executing supervisory activities due to administrative delays in hiring a vehicle.

State Internal Evaluations: In this assessment, it was noted that 07/16 STDCs were involved in SIEs. Usually, the SIEs were 02-03 days' activity in which a team from the state, led by STO would visit the pre-decided districts. The selection of districts was based on their performance as reflected during programmatic reviews wherein one good performing and one poor-performing district were shortlisted for SIE. Nevertheless, there was flexibility in the selection of districts to accommodate for any need-based evaluations. The frequency of the SIEs varied from state to state, however, the most common frequency was the quarterly evaluation of at least 02 districts. However, since 2020, due to the COVID-19 pandemic, the SIEs were greatly reduced in almost all the states due to prevailing conditions and restrictions in movement due to multiple lockdowns. All the states utilized the standard SIE checklist/format that was approved by CTD for carrying out this activity.



'Frequency of supervision can be increased if we have adequate HR'

- State TB Officer

Monitoring and Programmatic Reviews: In almost all 16 states, it was observed that programmatic reviews were led by the STC. All the states were monitoring the nine indicators of the TB score card to assess the performance of districts. STDC Gujarat monitored additional indicators for monitoring district performance such as programmatic management of drug-resistant TB (PMDT) performance, active case finding (ACF) effectiveness, medical college performance, public-private mix (PPM) performance, drugs and logistics management, private sector engagement, pediatric TB, contact screening and TB-comorbidity, supervision and monitoring, DBT, finance, National Urban Health Mission (NUHM), and infrastructure. STDC West Bengal monitored the status/number of human resources, their training status, and any vacancies. STDC Odisha monitored DM screening status and tobacco usage screening as well.

Before the COVID-19 pandemic, the programmatic reviews were conducted as in-person meetings but since 2020, they were being conducted virtually. A PowerPoint presentation was prepared for these meetings and data from Nikshay were used for analysis and preparation of these meetings. Data analysis was usually led by STC staff with support from WHO consultants. There was minimal involvement of STDC staff in analyzing and interpreting this data for providing feedback except in STDC

Gujarat and Jharkhand wherein the STDC staff was primarily responsible for analyzing data for programmatic reviews.

Table 7: Frequency of SME activities in 16 STDCs

State	Supervisory visit	Programmatic reviews	Internal evaluation
Delhi	Need-based	Quarterly	Quarterly
Gujarat	Monthly	Quarterly (in addition, thematic reviews conducted fortnightly)	Monthly
Himachal Pradesh	Monthly	Monthly	Monthly
Jharkhand	Quarterly	Monthly	--
Kashmir	Monthly/Need-based	--	Quarterly or yearly
Kerala	Quarterly	Monthly	Monthly
Madhya Pradesh	Need-based (Observation based and internal template for recording observations)	Monthly	Monthly
Maharashtra (Pune)	Not mandated to perform SME activities		
Manipur	Monthly	Monthly	
Odisha	Monthly	Quarterly	Bi-annually
Punjab	Yearly (Observation based and no template for recording observations)	Quarterly	Quarterly
Rajasthan	Monthly	Monthly	Monthly
Tamil Nadu	Monthly	Quarterly	Bi-annually
Telangana	Need-based (Observation-based and no template for recording observations)	Need-based	Quarterly
Uttar Pradesh	Quarterly	Quarterly	Annually
West Bengal	Need-based (Observation-based and no fixed template for recording observations)	Monthly	Based on district performance

It was noted that 10/16 STDCs had (shared) access to Nikshay. These STDCs included STDC Delhi, Jharkhand, Punjab, Manipur, Kerala, Rajasthan, Tamil Nadu, Hyderabad, Gujarat, and West Bengal.



Figure 18: Details of access to NIKSHAY

Overall in the domain of SM&E, there was an observed general break down of systems and processes to provide regular feedback and monitor action taken based on the feedback.

Innovations and Best Practices

1) Remote Supervision

Both, STDC Delhi and STDC Gujarat conducted remote supervision of districts on a virtual platform (through ECHO-Hub) amidst COVID-19. This ensured continuity of monitoring and supervisory activities in the state. In addition, it was also leveraged as a platform for problem resolution that the districts might be facing due to COVID-19 and subsequent lockdowns.

2) Supplementary reviews in addition to regular programmatic reviews

- STDC Gujarat was actively involved in conducting regular thematic review meetings on a fortnightly basis. In these meetings, led by STDC staff, all districts were reviewed for their performance around a particular theme every fortnight such as TB notification or treatment adherence, U-DST, DBT, etc. This approach assisted STDC Gujarat in identifying and addressing the grass root challenges and implementing necessary corrective actions on time.
- In Madhya Pradesh, in addition to monthly reviews, weekly reviews were conducted with districts (division-wise) under the guidance of STO for key themes (indicators of TB score card) such as TB notification, TB treatment outcome, and DBT. Post the weekly review, a follow-up review was conducted to ensure feedback is being worked upon and if improvement was made and possible reasons for any lack of improvement.

3) Annual Report

STDC Delhi and STDC Gujarat published detailed annual reports, containing information on SME visits and other STDC activities.

Technical Assistance to the State

Support in Planning

Among 16 STDCs, 05 STDCs (STDC Delhi, J&K, Uttar Pradesh, Gujarat, and Maharashtra (Pune)) played a key role in state and district planning activities. During PIP preparation, STDC Delhi conducted a sensitization program for all DTOs and supported them in planning the training activities. At the state level, details on trainings such as type of trainings, training load, human resources, etc. were discussed with each of the DTOs which were eventually finalized in consultation with STC. Similarly, STDC Gujarat supported district officials in PIP budget planning across all thematic areas. STDC Maharashtra (Pune) coordinated with DTOs and assisted them with the preparation of an action plan for PIP. STDC Kerala supported STC in preparing the training plan. However, it did not play a key role in district planning activities. STDC Punjab supported district planning activities only for training purposes, as and when required.

Advocacy and IEC

Overall, the advocacy/IEC activities at the state level were led by STC. Generally, advocacy/IEC activities were more district-focused and driven at the district level. It was noted that only STDC Delhi, J&K, and Rajasthan were involved in IEC activities.



Figure 19: IEC materials of 1. STDC Delhi, 2. STDC Gujarat, 3. STDC Rajasthan, 4. STDC Hyderabad

Although other STDCs did not play a major role in IEC activities, they supported related activities as and when required. For instance, STDC Gujarat supported State IEC officers and District TB officers in preparing training materials in the local language and designing other IEC materials (e.g., an information booklet on basic TB facts, success stories of TB survivors, etc.). Also, the staff was involved in the creation of the TB Aarogya Sathi application. STDC Telangana designed IEC materials for peripheral health workers (e.g., a Patient information booklet on TB, DR-TB, and Bedaquiline, and a pamphlet on the DBT process), and prepared a user-friendly flipchart for PMDT coordinators, DR-TB coordinators and DTO (e.g., Revised PMDT guidelines).

Operational Research (OR)

Operational research was found to be a less prioritized area of STDCs in past years. However, it was noted that STDC Delhi actively undertook, aided, promoted, guided, and coordinated research activities in various aspects of tuberculosis including basic, epidemiological, clinical, and operational research. From 2018 to 2020, it co-supervised 35 projects and thesis (MD and DNB) and published 45 research papers.

Although OR was not an institutional mandate in other STDCs, they either supported OR interventions or conducted studies in collaboration with other institutions or partner organizations. In Telangana, STDC with support from a WHO NTEP consultant had collaborated to conduct research and publish papers at a personal level. STDC Telangana published 06 papers between 2018 and 2020. STDC Tamil Nadu conducted 05 research studies (of which 3 have been published) in the last 03 years, in partnership with State Task Force (STF) and medical colleges. STDC Kerala and Uttar Pradesh perform OR activities sporadically as and when opportunities came by. To date, STDC Kerala has published 05 research papers and STDC Uttar Pradesh published one research study on Tuberculosis Management in India during COVID-19 in 2020.

There is a need to build the capacity of STDC staff for carrying out OR activities which impacts program planning and its implementation.

External Quality Assurance for Microscopy

EQA was present as a functional responsibility of the STDC in the 2004 Terms of Reference. This was in the context where Intermediate Reference Laboratory had not been officially established as an Institution. Since then there has been considerable expansions in the functions of the IRL to include

rapid molecular tests (LPAs), and Liquid Culture and DST. These functional areas are monitored and technically supported by the National Reference Laboratories (NRLs). Currently the position of EQA microbiologist is a position under the IRL,

Most IRLs had been conducting EQA activities as per requirements. Generally, the IRL was linked to the STDC in all the states administratively. However, STDCs there appeared to have no technical role in the activities of the IRL.

Innovations and Best Practices

1) Publications

STDC Delhi was actively involved in basic research, operational research, and multi-centric studies in the field of tuberculosis. They collaborated and raised funds for conducting research activities thereby achieving beyond set OR targets (5 research projects/publications), with more than 10 research projects and publications every year.

2) Implementation & documentation of new initiatives

- The concept of a TB specialty clinic was introduced by STDC Telangana in February 2020, which was eventually rewarded as good practice at the National Summit (2020). With TB specialty clinic, it was envisioned to establish TB services under one umbrella for the convenience of TB patients. The clinic was pilot-tested in 4 districts resulting in improvements in TB indicators including TB notification and referrals. STDC Telangana also supported STC in the operationalization of 104 vehicles, which were utilized for sample transportation and drug dispensation during the pandemic. This initiative was identified as the best state initiative by CTD and awarded as a good practice at the National Summit (2020).
- STDC Gujarat took an active role in the Integrated Digital Adherence Technology (IDAT) Project initiated in 2 Districts (Surat Municipal Corporation & Surat-Rural) of Gujarat State for information and communication technologies (ICT) based treatment adherence (2019), Establishment of cough corner at the Community Health Center, District Hospital and Medical College (2020) and Yoga activity of cured TB patients for pulmonary rehabilitation (2020).

Recommendations

1) **Revise the functional framework and norms for STDCs:**

- a. STDCs need to be explicitly established as the Technical arm of the State TB Cell of each state. The states need to delegate these functional responsibilities in a transparent and accountable manner.
- b. The name “STDC” may be revised considering the significant change/ expansion in the functions. (Suggested name: State TB Technical Unit & Research Centre)
- c. There exists wide variation in the capacity and functionality of STDCs in the country. There is a felt need for setting up a norms and benchmarks for STDCs to improve their performance. To this end, existing TORs of STDCs may be revised and updated.
- d. The norms for capacity of the STDCs in terms of infrastructure, resources, human resources should be revisited based on the population of the state that it serves; in larger states additional regional training and program monitoring units/ facilities may be set up under the single state level STDC.
 - i) States having population more than 5 Crores/25 districts, there may additional Regional Training and Program Monitoring Centres that may be governed by the single STDC at the state.
 - ii) These regional centers may be inbuilt into any existing NHM/ State Health System infrastructure.
 - iii) Training coordinators and Epidemiologists at the STDCs/ regional centers may be provisioned for a block of 25 Districts.
- e. While revising the functional framework, Central TB Division may explore functional integration with respective SIHFW for training.

2) **Governance:**

- a. STDCs need to prepare annual plans according to the needs of the state and in concurrence with the STC, and CTD.
- b. They need to have autonomy in discharging their core functions of training, SME, and technical assistance to STC as approved in the annual plan.
- c. Their performance must be reviewed quarterly on the basis of this plan at both the state and central level. Their performance should be audited at all Supervisory, monitoring and evaluation visits from the Centre.
- d. STDCs need to be made responsible and accountable for:
 - i. Ensuring all entire health system (public and private sector) workforce is completely trained and able execute their roles as per the needs of the TB program.
 - ii. Leading supervision, monitoring, and evaluation in co-ordination with the STC as per the requirements and NTEP guidelines.
 - iii. Acting as a technical arm of the state and providing technical assistance to NTEP including:
 - (a) Support state and districts to prepare the annual PIP and budgets
 - (b) Strategically customize, scale up and implement any new interventions identified by Central Government or as per state requirements for TB Elimination.
 - (c) Evaluate, document, and disseminate best practices and publish related reports and periodicals.
 - (d) Identify priority areas and conduct operational/ implementation Research to generate appropriate evidence.
 - (e) Perform continuous surveillance, periodic disease burden estimation and support in the sub-national disease-free certification process.

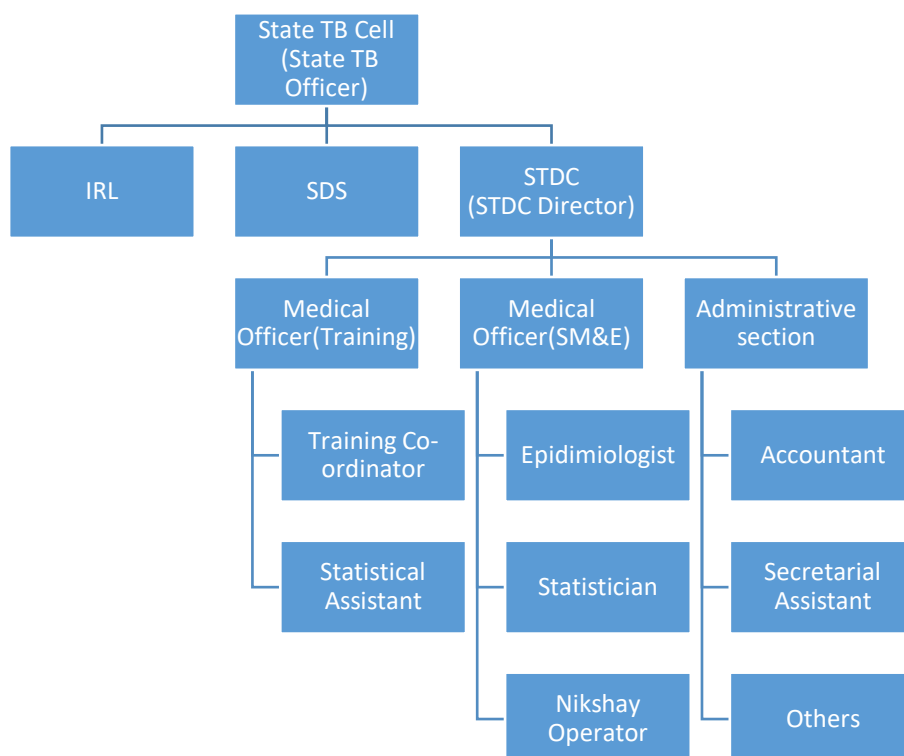
- (f) STDCs should Support the state in facilitating and driving the formation, meeting, and decision making as per program needs through various technical and advocacy committees and forums such as the State TB Forum, State PMDT Committee/ TB Comorbidity Committee.
- (g) They should advocate for evidence-informed programmatic changes to improve the effectiveness of program interventions.
- iv. Considering that the Intermediate Reference Laboratory (IRLs) as an institution has grown considerably in the technical area of bacteriology, functionally supervised and monitored by the National Reference Laboratories; Microscopy EQA, may be delegated to the IRL. STDCs need to monitor the service delivery performance of the IRL to the state, as a part of its monitoring functions, and conduct training of district/ sub-district Lab technicians in co-ordination with the IRL as a part of its training functions.
- e. STDCs with high performance and replicable best practices may be identified at national level as model STDCs. This may facilitate cross learning.
- f. STDC may be mentored and monitored by National Institutes. This includes training of trainers, continuous monitoring, periodic supervisory visits and review. They should provide periodic feedback to the STDCs and seek action taken report from them.

3) **Funding:**

- a. STDCs need to have a clearly defined budget allocation in the annual PIP for performing their main functions of training, SME, and activities under Technical Assistance to NTEP. Their plan and activities need to be approved annually. For the approved activities in the PIP, STDCs need not seek additional approvals.
- b. They may be provided with the necessary independence to receive research funds and grants from government or external agencies such as the ICMR and DBT.

4) **Human Resource:**

- a. STDC Director is a key position and should be a full-time role rather than being a shared role.
- b. STDCs need to have a designated Medical Officer (Training) and training coordinator at each STDC to conduct program training, calculate the training load, plan, execute and report training, at the state and district levels.
- c. STDCs need to have a designated Medical Officer (SM&E) along with epidemiologist, biostatistician, statistical assistants, and a Nikshay Operator, to conduct Supervision, Monitoring and evaluation activities, at the state and district levels.
- d. There appears to be vacancies and sharing of duties. Each STDC should ensure these positions are filled up to ensure adequate functioning.
- e. Following is a proposed minimum human resource structure for any STDC. STDCs of larger states may need to be provided with additional staff based on the load of activities (as described above), located out of the STDC, or additionally at Regional Program Monitoring and Training Units.



5) Infrastructure and equipment:

- a. STDCs should develop infrastructure and facilities to perform as per the requirements of the state TB Program. These may be planned built through the annual PIP mechanism or by contributions from appropriate sources.
- b. In cases where STDCs do not have dedicated infrastructure as per the evolving needs of the programme, there needs to be an established mechanism to leverage infrastructure available in the State with the general health system (SIHFW and other programmes), medical colleges (government, private and autonomous bodies like AIIMS), and development partners.
- c. STDCs should be provided with modern training equipment to conduct training both physically and virtually. This includes, live interactive displays and trainee level digital devices to consume online content, perform practical exercises, undertake assessments, and perform data analysis.

6) Training

a. Planning:

- i) There is a need for a standardized training plan for each type of training – induction, update, refresher, and re-training as per the actual needs of the state. This requires the ready availability of updated information of all potential staff (including general health system and private sector) and their training status.
- ii) Cadre wise training requirements needs to be clearly outlined; including the time, duration, resource person, and modes of training and should be considered in the planning.

b. Implementation:

- i) STDC needs to adopt a blended training approach with a fine balance between physical (in-person) trainings and virtual (remote) trainings.
- ii) The training content needs to be revised utilizing newer technology and multimedia and should be built based on adult learning principles.

- iii) For peripheral field staff and volunteers, the training content should be translated to necessary local languages.
 - c. **Facilitators and resource persons:**
 - i) There needs to be definitions of a Trainer for each cadre at a program level.
 - ii) State should maintain updated information of all qualified trainers so that they can be used to plan and execute training smoothly.
 - iii) Based on the definitions provided, STDCs need to expand the pool of resource persons with representation from STC, general health system, medical colleges, development partners, and private sector.
 - d. **Monitoring:**
 - i) A standard set of training performance indicators may be developed and used for monitoring in a standard way. The indicator needs to consider the actual load of training existing in the state.
 - ii) STDCs need to maintain individual level updated training status information of all its potential staff. This information may be used to calculate the standard training performance indicators.
 - e. **Health System Integration:** STDCs need to ensure training of the general state health system, wider NHM staff and private providers. They need to integrate NTEP training with respective SIHFWs at the state level and also with other government and private agencies. It is essential to look for opportunities to work in coordination with other stakeholders especially medical colleges and private practitioners and continue to innovate based on state needs.
- 7) **Supervision, Monitoring, and Evaluation:** SME should be established as a core function of the STDCs with support from STCs and overall lead activities in this area.
- a. Designated nodal personnel (Medical officers, Epidemiologists, Statistician, Nikshay Operator,) should be made accountable for regularly accessing data available from Nikshay and other program information sources. They should also be involved in preparing analyses and program performance updates and reports for presentations during review meetings.
 - b. Dedicated access to Nikshay: STDCs should facilitate the state-level review of NTEP with necessary feedback based on the analysis of the Nikshay data and other reports under the program. STDC's capacity for use of Nikshay and data analysis should be facilitated at the national level.
 - c. Data quality assurance in Nikshay and other information systems should be a key function of STDC.
 - d. They should regularly provide performance feedback to districts and monitor action taken. This may be based on observations during ongoing monitoring of Nikshay data, supervisory visits, periodic evaluations and review meetings.
 - e. STDCs should take lead in organizing and executing internal evaluations in co-ordination with the STC.
- 8) **Technical Assistance to NTEP:**
- a. Prepare and refine State level Strategies for accelerating progress toward TB Elimination: STDCs need to technically support the state in identifying bold programmatic changes designed to accelerate progress toward TB Elimination.
 - b. Research: STDCs need to be strengthened to independently plan and execute need-based operational/ implementation research (OR). This would include:
 - i) They need to conduct necessary capacity building sessions for interested program staff to design research studies and proposals.

- ii) 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.
 - iii) Identifying research priorities for the state
 - iv) Applying for and securing funds for executing research studies
 - v) Execute studies, disseminate results and advocate for policy/ operational changes in the state and the country.
- c. STDCs may document best practices in the state, publish and disseminate them for learnings and necessary programmatic uptake.
 - d. Advocacy: Based on state specific TB Elimination strategies, needs identified from field supervision, Nikshay data analysis, and OR results, STDCs needs to advocate with programme officers and policy makers for appropriate resources, administrative and political support.
 - e. TB Surveillance: STDCs should be able to perform analysis of available data and collect additional information, to understand/ estimate the time place and person changes in the burden of TB. They should also be able to support the Sub-National Disease free Certification process.
- 9) **Build institutional systems for strengthening STDCs**
- a. An easily searchable and updated/ live repository of all guidelines, directives and standard training materials should be built and maintained.
 - b. To facilitate training planning and monitoring, a live information system consisting of individual level detail for each staff across the health system along with updated training status should be built and maintained.
 - c. To provide performance feedback at national, state and district levels and maintain details of the action taken, a reporting system should be built and maintained. This would ensure that provision of feedback and action taken against it can be systematically tracked.

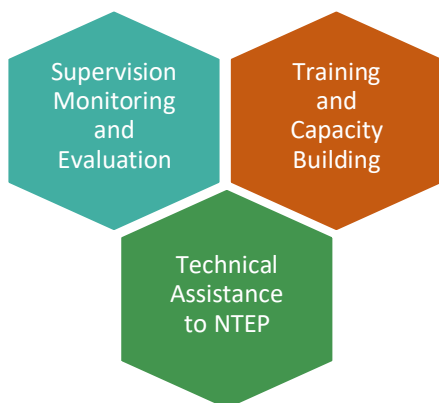
Annexures

Annexure I: Draft TOR

Norms for establishing a STDC

1. Each State should have one STDC. In larger states having population more than 5 Crores, there may be supported by additional Regional Training and Program Monitoring Centres that may be governed by the single STDC at the state.
2. For administrative convenience, effective coordination and sharing of responsibilities with the State TB Cell (STC), the STDC should preferably be located along with STC in the State capital.

Functions of STDC



The overall function of the STDC is to be the technical arm of the State NTEP being able to evaluate the current performance of the program and build capacity of systems and human resources in the state health system to effectively address the Tuberculosis emergency. Thus the functions of STDCs are described under these three thematic areas.

Training and Capacity Building

STDC is responsible for ensuring that the entire health system workforce is completely trained for optimally delivering NTEP services and each person has the capacity to execute their roles.

For this purpose, it needs to lead the planning and implementation of regular training at all levels in the state for all healthcare staff including private health sector, Health Volunteers, NGOs, and civil society and partners working in the fight against TB in the state. It also needs to monitor training delivery and evaluate its quality and take necessary action to ensure optimal human resource capacity. The following are the activities to be performed by the STDCs under the function of Training and capacity building.

1. Planning:
 - a. Maintaining updated Training Data (Staff data, Resource persons and Training log)
 - b. Annually calculate training load and plan training (number of batches, location etc).
 - c. Calculate and identify resources (facilitators, funds, material, venue)
 - d. Plan monitoring and evaluation of training.
2. Implementation:
 - a. Create training batches and schedule courses on the Learning Management System
 - b. Based on the plan co-ordinate the preparatory activities (registration on enrolment, execution of physical and virtual training).
 - c. Facilitate resource persons and participants throughout the various stages of the course till certification.
 - d. In the long term, training implementation and execution activities may be transitioned to respective SIHFW.
3. Monitoring:
 - a. Monitor execution of training against the state's plan
 - b. Evaluate quality of training delivery through ongoing supervisory and evaluation visits by the STDC
 - c. Update HR and Training database for requirement for any additional training.

Supervision, Monitoring and Evaluation

STDCs need lead the activities of supervision, monitoring and evaluation (SM&E) in the state as per the current supervision, monitoring and evaluation guidelines of NTEP. Following are the activities in relation to the same.

1. Continuously monitor the program performance using various programmatic indicators, by analysing, and interpreting data obtained through various program sources such as Nikshay (reports/ dashboards/ registers), LIMS, Nikshay Aushadhi, other reports (expenditure, HR etc) and others.
2. Plan, organize and conduct supervisory visits and State Internal Evaluations of its districts (based on the current Supervision Monitoring and Evaluation guidelines) and identify process bottlenecks, resource gaps etc. and facilitate corrective interventions.
3. Based on the insights garnered from SM&E activities, it needs to give regular technical inputs and guidance to the STC in the management of the program for increased performance. This includes giving technical inputs in periodic program reviews and regular performance feedback to the districts.
4. Review the actions taken against the assigned action points and feedback provided to the districts by the STC.

Technical Assistance to NTEP

In order to accelerate the progress toward TB Elimination, STDCs also need to

- a. Prepare and refine State level Strategies for accelerating progress toward TB Elimination: STDCs need to technically support the state in identifying bold programmatic changes designed to accelerate progress toward TB Elimination.
- b. Research: STDCs need to be strengthened to independently plan and execute need-based operational/ implementation research (OR). This would include:
 - i) They need to conduct necessary capacity building sessions for interested program staff to design research studies and proposals.
 - ii) Setup and host a formal Institutional Ethics Committee to review and approve any research proposals.
 - iii) Identifying research priorities for the state
 - iv) Applying for and securing funds for executing research studies
 - v) Execute studies, disseminate results and advocate for policy/ operational changes in the state and the country.
- c. STDCs may document best practices in the state, publish and disseminate them for learnings and necessary programmatic uptake.
- d. Advocacy: Based on state specific TB Elimination strategies, needs identified from field supervision, Nikshay data analysis, and OR results, STDCs needs to advocate with programme officers and policy makers for appropriate resources, administrative and political support. This may be done through the annual PIP mechanism, or through advocacy with potential non-government donors.
- e. TB Surveillance: STDCs should be able to perform analysis of available data and collect additional information, to understand/ estimate the time place and person changes in the burden of TB. They should also be able to support the Sub-National Disease free Certification process.

Capacity building of STDC

Being strategic institutions in the country, the key personnel at the STDCs should be technically adept, have expert level knowledge and skills to support the state. Thus, STDC personnel including the Head of Institution, MOs and any technical support staff need to be trained at National level in

all domains of NTEP. The capacity building will be organized by the Central TB Division periodically and based on need.

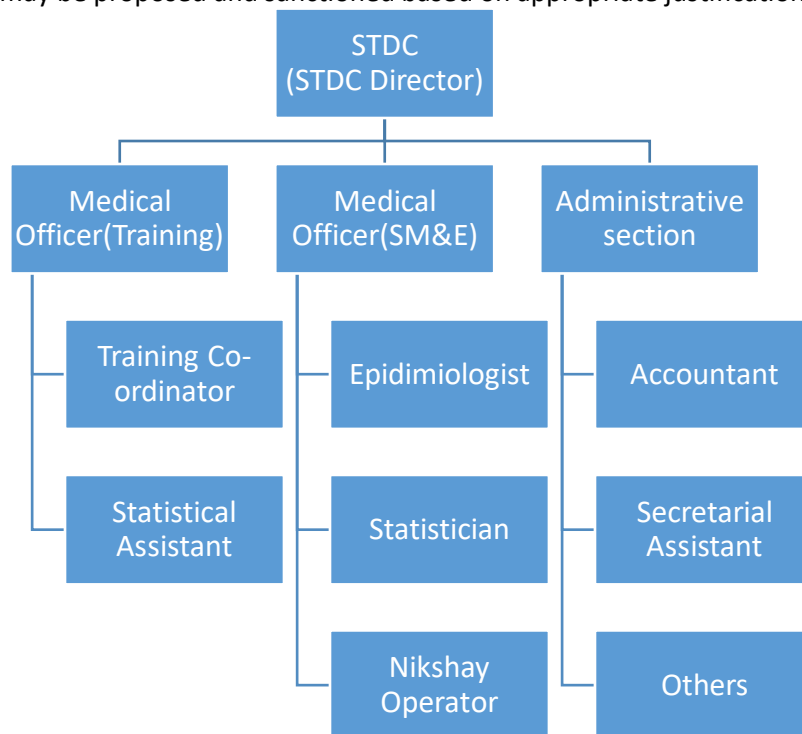
Human Resources

The STDC would be led by the Head of STDC, recruited / deputed / designated by respective State Government. The minimum staff of the STDC is as follows

Essential

1. Head of Institution/ Director - 1
2. MO (Training)- 1
3. Training Co-ordinator-1
4. Statistical Assistant- 1
5. MO (SM&E)- 1
6. Epidemiologist-1
7. Statistician-1
8. Nikshay Operator -1
9. Secretarial assistant-1
10. Accountant

Additional staff may be proposed and sanctioned based on appropriate justification through the PIP.



Resources - Infrastructure & Equipment

STDCs should be equipped with all necessary infrastructure and equipment such as office space, computers/notebooks, printers, software licenses, stable internet connection, furniture, and related annual maintenance as necessary to carry out its day to day functions.

Associated Training establishments needs to have, necessary equipment for training (projectors, Tablets), licenced video conferencing platform (such as ECHO/ Zoom, WebEx etc), necessary infrastructure such as training halls, catering and accommodation for participants.

The quantity of the above requirement needs to be provided to the STDCs based on the need / load and may be provisioned through in-house resources, through appropriate linkages with other institutions or through appropriate rented facilities.

Governance of STDCs

The STDC should be governed by an appointed senior state health official as the Head of institution. The Head of STDC need to annually plan its activities in consultation with the STO and secure necessary budget through the PIP processes. Once the PIP and budget is approved by NHM, the STDC should be able to implement and make independent expenditure for all planned and approved activities. The State will review the performance of the STDC based on the plan submitted each year.

Annexure 2: List of Stakeholders Interviewed for STDC Baseline Assessment

LIST OF STAKEHOLDERS INTERVIEWED IN PHASE-I			
Sr. No.	State	Name	Designation
1	Delhi	Dr Vashisht	STO
2		Dr KK Chopra	STDC Director
3		Dr Shankar Matta	Epidemiologist/Training-in-charge
4		Dr M. Hanif	Bacteriologist
5		Ms Sulekha	Senior Stenographer/Training coordinator
6		Dr Aman Gupta	WHO State Consultant
7		Dr Dinesh Kargwal	DTO
8		Dr Vishal Khanna	DTO
9		Dr Shalini Puri	Medical Officer
10	Gujarat	Dr Satish Makwana	STO
11		Dr Rushendu Patel	STDC Director
12		Dr P.D. Nimavat	Addl. Director/Training Coordinator
13		Dr Purvi Nayak	Medical Officer
14		Dr Jaydeep Oza	WHO State Consultant
15		Dr Hardik Nakshiwala	WHO State Consultant
16		Dr Ravindra	DTO
17		Dr Kamlesh	MO-DTC
18		Mr Suresh	DPC
19	Madhya Pradesh	Dr Varsha Rai	STO/STDC Director
20		Dr Pramod Khare	Medical Officer
21		Dr Neelam Dhawan	Medical Officer
22		Dr Vikas Sabarwal	WHO State Consultant
23		Dr Manoj Verma	DTO
24		Dr Rahul Srivastava	DTO
25		Dr Syed	DTO
26	Maharashtra	Dr Adkekar	STO
27		Dr N.D. Deshmukh	CMO STDC/STDC Director
28		Dr Telang	MO STDC
29		Dr Aniruddh	WHO State Consultant
30		Dr Dahiphale	Medical Officer
31		Dr Bala Sahib	DTO
32		Mr Chandrashekhar	STS
33		Mr Rajkumar	STS
34	Telangana	Dr A Rajesham	STO/STDC Director
35		Dr C. Sumalata	Epidemiologist/Training In Charge
36		Dr Sneha Shukla	WHO State Consultant
37		Dr Joshi Rao	DPC
38		Dr B. Sandhya	PO
39		Mr P. Naresh	PMDT coordinator
40		Dr Zameer	DRTB coordinator
41		Dr Neerja	Pharmacist
42	Tamil Nadu	Dr Asha Frederick	STO/STDC Director

Report on the Baseline Assessment of STDC, June 2022

43		Mr S.M. Anand Rajkumar	MO STDC/ Training Co-Ordinator
44		Dr Aarti	MO STDC
45		Dr Suma	WHO Consultant
46		Dr Lakshmi Murali	DTO
47		Dr Sudhakar	DTO
48		Dr Ganesh	MO DTC
49	West Bengal	Dr. Barun Santra	Jt. DHS/STO/STDC Director
50		Dr Suresh Das	Epidemiologist
51		Dr Sandip Roy	Medical Officer
52		Dr Bandita	WHO State Consultant
53		Dr Bipra	WHO State Consultant
54		Dr Paul	DTO
55		Dr Sukul	STS
56		Dr Tuhin Dutta	MO TC

LIST OF STAKEHOLDERS INTERVIEWED IN PHASE 2

Sr. No.	State	Name	Designation
1	Bihar	Dr BK Mishra	Medical officer (executing additional charge of additional STDC Director and STO)
2	Himachal Pradesh	Dr Gopal Beri	State TB Officer
3		Dr Gyaan Thakur	STDC Director
4	Jharkhand	Dr Ranjit Prasad	State TB Officer
5		Dr. Anindya Mitra	STDC Director
6	Kashmir	Dr Rubeena Shaheen	State TB Officer
7		Dr Shameen Wani	STDC Director
8	Kerala	Dr Sunil Kumar M	State TB Officer (executing additional charge of STDC Director)
9	Manipur	Dr Thangpa Serto	State TB Officer
10		Dr W. Shashi	STDC Director
11	Odisha	Dr Barada Prasanna Jena	Medical officer (executing an additional charge of STDC Director)
12	Punjab	Dr Rajesh Bhaskar	State TB Officer
13		Dr Vishal Chopra	STDC Director
14	Rajasthan	Dr Vinod Kumar Garg	State TB Officer
15		Dr Moti Asnani	STDC Director
16	Uttar Pradesh	Dr Santosh Gupta	State TB Officer
17		Dr Sanjeev Lavaniya	Consultant (appointed by STDC Director)

Annexure 3: Staffing Status of Key Personnel by State**Note: Data for STDC Bihar is not available.**

STDC	STDC Director					
	Sanctioned	In-place			Dedicated/Shared Responsibility	Type of staff
		Total	Male	Female		
Delhi	1	1	1	0	Dedicated Role	Others
Gujarat	1	1	1	0	Dedicated Role	State govt.
Himachal Pradesh	1	0	1	0	Shared Responsibility	State govt.
Jammu and Kashmir	1	1	0	1	Dedicated Role	State govt.
Jharkhand	1	1	1	0	Dedicated Role	State govt.
Kerala	1	1	1	0	Shared Responsibility	State govt.
Madhya Pradesh	1	1	0	1	Shared Responsibility	State govt.
Maharashtra (Pune)	1	1	1	0	Dedicated Role	State govt.
Manipur	1	1	1	0	Dedicated Role	State govt.
Odisha/assessment form	1	1	1	0	Shared Responsibility	State govt.
Punjab	1	1	1	0	Dedicated Role	Medical college
Rajasthan	1	1	1	0	Dedicated Role	State govt.
Tamil Nadu	1	1	0	1	Shared Responsibility	State govt.
Telangana	1	1	1	0	Shared Responsibility	State govt.
Uttar Pradesh	1	0	1	0	Dedicated Role	State govt.
West Bengal	1	1	1	0	Shared Responsibility	State govt.

STDC	Epidemiologist						Medical Officer					
	Sanctioned	In-place			Dedicated/Shared Responsibility	Type of staff	Sanctioned	In-place			Dedicated/Shared Responsibility	Type of staff
		Total	Male	Female				Total	Male	Female		
Delhi	1	1	1	0	Dedicated Role	Others	2	2	1	1	Dedicated Role	Others
Gujarat	1	1	0	1	Dedicated Role	NTEP	5	5	2	3	Dedicated Role	State govt.
Himachal Pradesh	1	0	1	0	Shared Responsibility	State govt.	1	1	1	0	Shared Responsibility	State govt.
Jammu and Kashmir	0	0	0	0	--	--	3	3	0	3	Dedicated Role	State govt.
Jharkhand	0	0	0	0	--	--	2	2	0	2	Dedicated Role	State govt.
Kerala	0	0	0	0	--	--	1	1	1	0	Dedicated Role	State govt.
Madhya Pradesh	0	0	0	0	--	--	4	4	3	1	Dedicated Role	State govt.
Maharashtra (Pune)	1	1	0	1	Shared Responsibility	State govt.	3	3	3	0	Shared Responsibility	State govt.
Manipur	0	0	0	0	--	--	0	0	0	0	--	--
Odisha/assessment form	0	0	0	0	--	--	5	2	2	2	Dedicated Role	State govt.
Punjab	1	1	1	0	Dedicated Role	State govt.	3	3	1	2	Dedicated Role	State govt.
Rajasthan	0	0	0	0	--	--	6	6	5	1	Dedicated Role	State govt.
Tamil Nadu	0	0	0	0	--	--	1	1	0	1	Shared Responsibility	State govt.
Telangana	1	1	0	1	Dedicated Role	State govt.	2	2	2	0	Dedicated Role	State govt.
Uttar Pradesh	1	0	0	0	Dedicated Role	State govt.	4	3	3	0	Dedicated Role	State govt.
West Bengal	1	1	1	0	Dedicated Role	State govt.	2	2	1	1	Dedicated Role	State govt.

Report on the Baseline Assessment of STDC, June 2022

STDC	Statistician						Data Entry Operator					
	Sanctioned	In-place			Dedicated/Shared Responsibility	Type of staff	Sanctioned	In-place			Dedicated/Shared Responsibility	Type of staff
		Total	Male	Female				Total	Male	Female		
Delhi	1	1	0	1	Dedicated Role	Others	0	0	0	0	--	--
Gujarat	0	0	0	0	--	--	1	1	1	0	Dedicated Role	NTEP
Himachal Pradesh	0	0	0	0	--	--	0	0	0	0	--	--
Jammu and Kashmir	0	0	0	0	--	--	0	0	0	0	--	--
Jharkhand	0	0	0	0	--	--	0	0	0	0	--	--
Kerala	2	2	0	2	Dedicated Role	State govt.	0	0	0	0	--	--
Madhya Pradesh	0	0	0	0	--	--	1	1	0	1	Dedicated Role	Others
Maharashtra (Pune)	0	0	0	0	--	--	2	1	1	0	Shared Responsibility	State govt.
Manipur	0	0	0	0	--	--	0	0	0	0	--	--
Odisha/ assessment form	0	0	0	0	--	--	2	2	2	0	Dedicated Role	NTEP
Punjab	0	0	0	0	--	--	0	0	0	0	--	--
Rajasthan	0	0	0	0	--	--	1	1	1	0	Dedicated Role	NTEP
Tamil Nadu	0	0	0	0	--	--	0	0	0	0	--	--
Telangana	1	1	1	0	Dedicated Role	State govt.	1	1	0	1	Dedicated Role	Others
Uttar Pradesh	0	0	0	0	--	--	2	2	2	0	Dedicated Role	Others
West Bengal	0	0	0	0	--	--	1	1	1	0	Shared Responsibility	NTEP

STDC	Training Officer/ Coordinator					
	Sanctioned	In-place			Dedicated/Shared Responsibility	Type of staff
		Total	Male	Female		
Delhi	1	1	0	1	Shared Responsibility	Others
Gujarat	0	0	0	0	--	--
Himachal Pradesh	2	2	2	0	Shared Responsibility	State govt.
Jammu and Kashmir	1	1	0	1	Shared Responsibility	State govt.
Jharkhand	1	1	1	0	Shared Responsibility	State govt.
Kerala	1	1	1	0	Dedicated Role	State govt.
Madhya Pradesh	1	1	0	1	Shared Responsibility	State govt.
Maharashtra (Pune)	1	1	0	1	Shared Responsibility	State govt.
Manipur	0	0	0	0	--	--
Odisha/ assessment form	0	0	0	0	--	--
Punjab	0	0	0	0	--	--
Rajasthan	0	0	0	0	--	--
Tamil Nadu	1	1	1	0	Shared Responsibility	NTEP
Telangana	0	0	0	0	--	--
Uttar Pradesh	1	1	1	0	Shared Responsibility	State govt.
West Bengal	0	0	0	0	--	--

Annexure 4: Total number of STDC staff by State*Note: Data for STDC Bihar is not available.*

STDC	Male	Female	Male (%)	Female (%)
Delhi	5	4	56	44
Gujarat	26	17	60	40
Himachal Pradesh	5	6	45	55
Jharkhand	8	1	89	11
Kashmir	6	11	35	65
Kerala	6	7	46	54
Madhya Pradesh	32	20	62	38
Maharashtra (Pune)	3	1	75	25
Manipur	5	4	56	44
Odisha	7	5	58	42
Punjab	10	6	63	38
Rajasthan	15	8	65	35
Tamil Nadu	1	2	33	67
Telangana	14	12	54	46
Uttar Pradesh	30	6	83	17
West Bengal	6	2	75	25

Annexure 5: Availability of physical infrastructure in 16 STDCs**Note: Data for STDC Bihar is not available.**

STDC	Type	Auditorium/ main training hall/ lecture hall/ Conference room		Break-out room		Dedicated Board room /meeting room	
		Number	Total Capacity	Number	Total Capacity	Number	Total Capacity
Delhi	Dedicated	4	146	0	0	1	45
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Maharashtra (Pune)	Dedicated	2	50	1	20	1	25
	Shared	1	100	0	0	1	100
	Outsourced or hired	1	100	0	0	0	0
Madhya Pradesh	Dedicated	2	80	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Telangana	Dedicated	2	65	0	0	1	25
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Gujarat	Dedicated	2	145	0	0	1	20
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
West Bengal	Dedicated	0	0	0	0	1	20
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Uttar Pradesh	Dedicated	3	150	1	35	2	75
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Punjab	Dedicated	1	100	1	20	1	20
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Jammu and Kashmir	Dedicated	1	50	0	0	2	30
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Jharkhand	Dedicated	1	60	2	16	1	8
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Manipur	Dedicated	1	50	0	0	0	0
	Shared	0	0	1	30	0	0
	Outsourced or hired	0	0	0	0	0	0
Kerala	Dedicated	2	50	2	40	2	10
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Himachal Pradesh	Dedicated	1	30	0	0	1	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Rajasthan	Dedicated	2	60	0	0	2	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Tamil Nadu	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Odisha	Dedicated	2	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0

STDC	Type	Resource center/ library		Records room		Computer training room	
		Number	Total Capacity	Number	Total Capacity	Number	Total Capacity
Delhi	Dedicated	1	10	1	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Maharashtra (Pune)	Dedicated	0	0	1	2	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Madhya Pradesh	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Telangana	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Gujarat	Dedicated	0	0	1	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
West Bengal	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Uttar Pradesh	Dedicated	1	20	1	0	1	12
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Punjab	Dedicated	1	15	1	4	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Jammu and Kashmir	Dedicated	1	0	2	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Jharkhand	Dedicated	1	8	1	8	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Manipur	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Kerala	Dedicated	1	5	0	0	0	0
	Shared	0	0	1	5	0	0
	Outsourced or hired	0	0	0	0	1	30
Himachal Pradesh	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Rajasthan	Dedicated	0	0	1	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Tamil Nadu	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Odisha	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0

STDC	Type	Laboratory room		Canteen services		Hostel facility	
		Number	Total Capacity	Number	Total Capacity	Number	Total Capacity
Delhi	Dedicated	2	40	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Maharashtra (Pune)	Dedicated	1	10	0	0	1	25
	Shared	0	0	0	0	1	25
	Outsourced or hired	0	0	0	0	0	0
Madhya Pradesh	Dedicated	1	20	1	40	1	22
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Telangana	Dedicated	13	27	0	0	1	20
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Gujarat	Dedicated	0	0	0	0	1	25
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
West Bengal	Dedicated	1	10	0	0	0	0
	Shared	0	0	0	0	1	0
	Outsourced or hired	0	0	0	0	0	0
Uttar Pradesh	Dedicated	1	20	1	10	1	35
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Punjab	Dedicated	1	30	0	0	0	0
	Shared	0	0	1	10	0	0
	Outsourced or hired	0	0	0	0	0	0
Jammu and Kashmir	Dedicated	1	10	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Jharkhand	Dedicated	1	45	0	0	0	0
	Shared	0	0	2	60	1	60
	Outsourced or hired	0	0	0	0	0	0
Manipur	Dedicated	1	10	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Kerala	Dedicated	1	20	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	1	20	1	100
Himachal Pradesh	Dedicated	1	15	1	30	1	30
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Rajasthan	Dedicated	9	0	0	0	1	20
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Tamil Nadu	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0
Odisha	Dedicated	0	0	0	0	0	0
	Shared	0	0	0	0	0	0
	Outsourced or hired	0	0	0	0	0	0

Annexure 6: Availability of Equipment In 16 STDCs**Note: Data for STDC Bihar is not available.**

Equipment																				
STDC	Computer		Tablets		Photocopier		LCD Projectors		LCD screens/TV		White Boards		Flip Charts		Binocular microscopes		Projecting microscope		Teaching head microscope	
	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New	Total	Relative y-New
Delhi	2	0	0	0	2	0	2	0	2	0	2	0	30	0	0	0	0	0	0	0
Gujarat	9	0	0	0	5	0	3	0	4	0	3	0	0	0	0	0	0	0	0	0
Himachal Pradesh	7	4	0	0	4	3	0	0	0	0	1	1	0	0	10	3	0	0	0	0
Jammu and Kashmir	3	0	10	0	5	0	0	0	0	0	2	0	0	0	19	0	0	0	0	0
Jharkhand	3	3	0	0	2	2	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Kerala	3	3	1	1	1	1	1	1	0	0	2	2	0	0	15	15	0	0	0	0
Madhya Pradesh	5	1	0	0	1	0	2	1	2	0	4	0	0	0	0	0	0	0	0	0
Maharashtra (Pune)	18	9	7	7	3	2	1	0	0	0	1	0	5	0	20	0	0	0	0	0
Manipur	1	0	0	0	1	0	1	0	1	1	1	0	0	0	8	0	0	0	0	0
Odisha	2	0	0	0	1	0	1	0	1	1	2	0	0	0	23	0	0	0	0	0
Punjab	6	0	10	0	3	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0
Rajasthan	3	2	2	0	2	0	2	0	2	2	1	0	0	0	12	0	0	0	0	0
Tamil Nadu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Telangana	3	1	0	0	4	1	2	0	2	2	2	0	1	0	4	0	0	0	0	0
Uttar Pradesh	24	12	6	0	17	6	9	2	10	10	30	30	0	0	8	0	0	0	2	0
West Bengal	12	3	0	0	2	0	1	0	1	1	3	0	0	0	16	0	0	0	0	0

Annexure 7: List of Trainers

S.No	STDC	Name of the Trainers
1	Gujarat	Dr Rashendu Patel
2	Gujarat	Dr Pankaj Nimavat
3	Gujarat	Dr Pranav Patel
4	Gujarat	Dr Purvi Nayak
5	Gujarat	Dr Zeel Kamdar
6	Gujarat	Dr Vijya Amin
7	Gujarat	Dr Rajendra Acharya
8	Gujarat	Dr Y. K. Jani
9	Gujarat	Dr Jaydeep Oza
10	Gujarat	Dr Hardik Nakshiwala
11	Gujarat	Dr Nirmal Prajapati
12	Gujarat	Dr R. N. Solanki
13	Gujarat	Dr Ganshyam Borisagar
14	Gujarat	Dr Chetna Desai
15	Himachal Pradesh	Dr.Satish pundir
16	Himachal Pradesh	Dr.Yogesh Gupta
17	Himachal Pradesh	Dr.Jureka Mankotia
18	Himachal Pradesh	Smt.Shipra
19	Himachal Pradesh	Sh Kuldeep Kanwar
20	Jammu and Kashmir	Dr. Shameem Wani Director STDC
21	Jammu and Kashmir	Dr. Shagufta Shaheen
22	Jammu and Kashmir	Dr. Basra Mir
23	Jammu and Kashmir	Dr. Deeba Syed MO-STDC
24	Jammu and Kashmir	Dr. Huma Majeed MO-STDC
25	Jammu and Kashmir	Mr. Zaffar Nowshad
26	Jammu and Kashmir	Mr. Javed Ahmad Kakroo
27	Jammu and Kashmir	Mrs. Arifa Syed
28	Jharkhand	Dr. A. Mitra
29	Jharkhand	Dr.Megha Priyadarshini
30	Jharkhand	Dr.Smiti Narain
31	Jharkhand	Dr.Brajesh Mishra
32	Jharkhand	Mr. Rupesh Kumar
33	Jharkhand	Dr. R. Pathak
34	Jharkhand	Dr. Anupama T Edward

Report on the Baseline Assessment of STDC, June 2022

35	Jharkhand	Mr. Ujjwal Kumar
36	Jharkhand	Mr. Shishir Priyadarshi
37	Kerala	Dr.Sunilkumar .M
38	Kerala	Dr.Arshad Kalliyath
39	Kerala	Dr.Manu.M.S
40	Kerala	Dr.Sanjeev Nair
41	Kerala	Dr.Shibu Balakrishnan
42	Kerala	Dr.Rakesh .P.S
43	Kerala	Dr.DeepuSurendran
44	Kerala	Dr.Rajeevan
45	Kerala	Dr.Dany .K.Thampi
46	Kerala	Dr.Prabhakumari
47	Kerala	Lekha.G.S
48	Kerala	Pushpakumari
49	Kerala	Hima .V Microbiologist
50	Maharashtra	Preeti Thokal
51	Maharashtra	Dr. Telang
52	Maharashtra	Dr. Shiras
53	Maharashtra	Dr Bharaswadkar
54	Maharashtra	Dr Shah
55	Maharashtra	Amruta
56	Maharashtra	Gujare
57	Maharashtra	Dr.Karad
58	Maharashtra	Girish Parmar
59	Maharashtra	Dr Pathak
60	Maharashtra	Dr Suryawanshi
61	Maharashtra	Dr Mandalecha
62	Maharashtra	Borkar
63	Maharashtra	Deepali
64	Maharashtra	Jadhav Bodre
65	Maharashtra	Jayganes
66	Maharashtra	Minal
67	Maharashtra	Katkar
68	Maharashtra	Vaishali
69	Maharashtra	Karuna
70	Maharashtra	Dr Manu
71	Maharashtra	Panda
72	Maharashtra	Nidhi
73	Maharashtra	Singh

Report on the Baseline Assessment of STDC, June 2022

74	Maharashtra	Dr Bansal Avikumar
75	Maharashtra	Jyoti
76	Maharashtra	Jagtap
77	Maharashtra	Mali
78	Maharashtra	Suraj
79	Maharashtra	Nilesh
80	Maharashtra	Dr Dhawalw
81	Odisha	Dr. Barada Prasanna Jena
82	Odisha	Dr. Debadatta Mallick
83	Odisha	Dr. Paresh Nath Mohanty
84	Odisha	Dr. Arghya Pradhan
85	Odisha	Dr. Subrat Panda,
86	Odisha	Dr. Balakrushna Panda
87	Odisha	Ispita Jena
88	Odisha	Ratnaprava Mohapatra
89	Odisha	Dr. Debi Prasad Mohapatra,
90	Odisha	Ahalya Jena
91	Punjab	Dr. Vishal Chopra
92	Punjab	Dr. Ashrafjit Singh Chahal
93	Punjab	Dr. Deepak Goyal
94	Punjab	Dr. Vidhu Mittal
95	Punjab	Dr. Kiranjit Kaur
96	Punjab	Mr. Harinder Singh
97	Rajasthan	Dr. Moti Asnani
98	Rajasthan	Dr. P. R. Agrawal
99	Rajasthan	Dr. Tarun Patni
100	Rajasthan	Dr. Rajesh Tekchandani
101	Rajasthan	Dr. Hemlata Meena
102	Rajasthan	Dr. Bharat Meharda
103	Rajasthan	Dr. Ritumbhara
104	Tamil Nadu	Dr. Asha Frederick
105	Tamil Nadu	Dr. Shibu Balakrishnan
106	Tamil Nadu	Dr. Dorai,
107	Tamil Nadu	Dr. Ashok,
108	Tamil Nadu	Dr. Suma Shivkumar,
109	Tamil Nadu	Dr. Pirabu Raghavan
110	Tamil Nadu	Dr. Delphina Pathinathan
111	Tamil Nadu	Dr. Sivavallinathan Arunachalam
112	Tamil Nadu	Dr. Bhavani Nivetha

Report on the Baseline Assessment of STDC, June 2022

113	Tamil Nadu	Dr. Raghavan Parthasarathy
114	Tamil Nadu	Dr. Jerome G. Thampi
115	Tamil Nadu	Dr S Siva Kumar
116	Tamil Nadu	Dr Padmapriyadharshini
117	Tamil Nadu	Dr.Bella
118	Tamil Nadu	Dr.Banurekha
119	Tamil Nadu	Dr. Bhavani
120	Tamil Nadu	Dr.Narendran
121	Tamil Nadu	Dr.Balaji
122	Tamil Nadu	Dr Prabhu Seenivasan
123	Tamil Nadu	Dr Radhakrishnan
124	Tamil Nadu	Dr Nandhini P
125	Tamil Nadu	Dr Radha Gopaldaswamy
126	Tamil Nadu	Mr. Pushparaj
127	Tamil Nadu	Mr. Rooban
128	Tamil Nadu	Dr. Sridhar
129	Tamil Nadu	Dr. Mahilmaran
130	Tamil Nadu	Dr. Vinothkumar
131	Tamil Nadu	Dr. Krishnamoorthy
132	Tamil Nadu	Dr. Rajarajeswari
133	Tamil Nadu	Dr. Ramesh
134	Tamil Nadu	Dr.Saravanan
135	Tamil Nadu	Dr. Sunder Raja Perumal
136	Tamil Nadu	Dr. Palaniyappan
137	Tamil Nadu	Dr.Prisilla Snehalatha
138	Tamil Nadu	Dr.Rajesh
139	Tamil Nadu	Dr Richa Gupta
140	Tamil Nadu	Dr. Jeyanthaseeli
141	Tamil Nadu	Dr. Sarath Balaji
142	Tamil Nadu	Dr. Arthi
143	Telangana	Dr. C. Sumalata
144	Telangana	Mr. Srikanth
145	Telangana	Dr. Rajesham
146	Telangana	Mr. Jithendra
147	Telangana	Mr. Anil
148	Telangana	Dr. Sneha Shukla
149	Telangana	Dr. Subba Rao
150	Telangana	Dr. Mohd Abdul Zameer
151	Telangana	Dr. Jaya Krishna

152	Telangana	Dr . Sneha
153	Telangana	Dr. Vijay Kadam
154	Telangana	Dr. Zameer
155	Telangana	Mr. Satyanarayana
156	Telangana	Ms. Neeraja
157	Telangana	Ms. Padmaja
158	Telangana	Dr. Sree Krishna
159	Telangana	Mr. Ravi
160	Telangana	Mr. Shanth Kumar
161	Telangana	Mr. Sreekanth
162	Telangana	Mr. Satyanarayana
163	Telangana	Dr. Mohd Abdul Zameer
164	Telangana	Dr. Shazia
165	Telangana	Dr. Sandeep Chauhan
166	Telangana	Dr. Mahesh
167	Telangana	Dr. Srigana
168	Uttar Pradesh	Dr. Bharat Bajaj
169	Uttar Pradesh	Dr. Sanjeev Lawaniya
170	Uttar Pradesh	Dr. Anurag Srivastava
171	Uttar Pradesh	Dr. Avijit K Awasthi
172	Uttar Pradesh	Shri Brahmanand Rajput

Annexure 8: Sample Training plan- STDC Delhi, Gujarat, Kerala, Telangana and West Bengal

STDC Delhi

STATE TB TRAINING AND DEMONSTRATION CENTRE - DELHI STATE

NTEP DELHI STATE

PROPOSED TRAINING CALENDAR - FOR AUGUST 2021

S.NO.	DATE	TOPIC	TARGET AUDIENCE	DURATION	APPROX. NO. OF PARTICIPANTS
1	06.08.2021	Sensitization on TPT and TPT Tool	DTOs	2 Hrs.	125
			Mos		
			Supervisors		
2	09.08.2021 and	Training on PMTPT - Guidelines	DTOs	2 days	75
	10.08.2021		MOs		
			DRTB site Nodal Officers		
			MOs Referral Units		
3	11.08.2021	Difficult to Treat TB case	DTOs, Mos, Supervisors	1 Hr.	125
4	12.08.2021	Training on PMTPT - Guidelines	Supervisors	1 day	75
5	13.08.2021	Training on PMTPT - Guidelines	TBHV's	1 day	175
6	16.08.2021 to	Training on PMDT 2021 guidelines	DTOs	3 days	40
	18.08.2021		DRTB site Nodal Officers		
			MO Referral Units		
7	23.08.2021 to	Training on PMDT 2021 guidelines	MOs	3 days	40
	25.08.2021		MOs State TB Cell		
8	26.08.2021 to	Training on PMDT guidelines	Supervisors	2 days	75
	27.08.2021				

STDC GUJARAT

NTEP Training Plan							
Name of State	GUJARAT			Gujarat			
Activity	No. in the District	No. already trained in	No. planned to be trained in RNTCP during each quarter of FY 2021-22	Expenditure (in Rs) planned for FY	Estimated Expenditure for the next	Justification/ remarks	

Report on the Baseline Assessment of STDC, June 2022

		NT EP					2020- 21	financi al year for which plan is being submit ted		
										(Rs. In Lakhs)
			Q1	Q2	Q3	Q4				2021- 22
State Level Training	(a)	(b)	(c)				(d)	(e)	(f)	
			7	6	2	1				
DTO on TOG & RPMDT	36	33	36	0	0	0	0	0.5	(1) Upcomi ng New PMDT Guidelin e (2) Turnov er of staff (3) New Modular training (4) Updates in Nikshay and Nikshay Aushad hi (5) CBNAAT and TruNAT inductio n	
MO TC on TOG & RPMDT	306	294	20	20	20	20	750000	7.5		
Re Orientation STS & STLS on TOG & RPMDT	456	440	0	0	0	0	0	0		
STS & STLS on TOG & RPMDT	456	440	20	16	0	0	310000	3.1		
District level Coordinator(DPS) on TOG & RPMDT	38	38	38	0	0	0	37000	0.37		
Training on partnership guidelines / PPM	35	33	0	0	0	0	35000	0		
Training on pediatric TB			0	0	0	0	0	0		
Training on TB comorbidity			0	0	0	0	0	0		
Training of TB Champions			0	0	0	0	0	0		
Training of Community Health Officers			0	0	0	0	0	0		
Training on LTBI management			0	0	0	0	0	0		
Training on sample collection for non-sputum samples			0	0	0	0	0	0		
Any other (specify) TrueNAT training			35	35	0	0	0	0.7		
DEO Update Training on Nikshay	38	35	0	38	0	0	37000	0.37		
Update Training for DPC	35	29	0	0	35	0	35000	0.35		
Accountant Re-Training	36	35	36	0	0	0	35000	0.35		
Drug and Logistic Training for Pharmacist	36	36	0	36	0	0	35000	0.35		
LED FM & CBNAAT Training			30	30	0	0	70000	0.7		
Culture and DST Training			0	0	0	0	100000	0		
STATE LEVEL TOTAL	1472	1413	144	140	55	20	1444000	13.09		

STDC KERALA

STATE TB TRAINING AND DEMONSTRATION CENTRE						
TRAINING CALAENDER						
2018-2019						
Sl No	category	Type of training	Number of participants	Duration (in days)	Proposed date	Proposed month
1	STS	Initial training	25	5	17 to 21	April
2	LT Lakshadweep	Initial training	10	3	25,26,27	April
3	STS	Initial training	25	5	15 to 19	May
4	STLS	Initial training	12	5	22 to 26	May
5	DTC Accountant	PFMS Training	14	1	29	May
6	TBHV	Nikshay training	25	2	6 to 7	June
7	STS	initial training	25	5	19 to 23	June
8	LT	initial training	12	3	26 to 28	June
9	MOTC	induction	25	5	9 to 13	July
10	STLS	Initial training	12	5	17 to 21	July
11	STS	Nikshay training	25	2	26,27	July
12	DTO	update training	14	2	8,9	August
13	LT	Initial training	14	3	16 to 18	August
14	STLS	induction	12	5	11 to 15	September
15	TBHV	Nikshay training	25	2	18,19	September
16	TBHV	Nikshay training	25	2	24,25	September
17	LT	induction	14	3	27,28,29	September
18	SA DTC	update	14	2	11,12	October
19	TBHV	Nikshay training	14	5	16,17	October
20	STLS	induction	21	5	23 to 27	October
21	T O	update	12	2	8,9	November
22	MOTC	induction	20	5	13,17	November
23	LT	Induction	14	3	22,23,24	November
24	LT	Induction	14	3	28,29,30,	November
25	STLS	Induction	14	5	11 to 15	December
26	data entry operator	update	14	2	20,21	December
27	LT	induction	14	3	27,28,29	December
28	LT	induction	14	3	8,9,10	January
29	MOTC	induction	25	5	15 to 19	January

Report on the Baseline Assessment of STDC, June 2022

30	TO	update	20	2	22,23	January	
31	DRTB coordinator	update	14	2	29,30	January	
32	LT	induction	14	3	12,13,14	February	
33	DTC pharmacist	update training	16	2	19,20	February	
34	DTC Accountant	update training	14	2	25,26	February	
35	LT	update training	14	3	11 to23	March	
36	LT	update training	14	3	21 to 23	March	
37	LT	update training	14	3	21 to 23	March	
38	LT	update training	14	3	25 to 27	March	

STDC TELANGANA

Training Schedule for the Year 2021												
Dates	January	February	March	April	May	June	July	August	September	October	November	December
3									STS PMDT TRAINING BATCH	LT Refresher Training		
4						LT Refresher Training						
5		Refresher to DTCOs/PO-Tb					STS PMDT TRAINING BATCH					
6								Refresher to DTCOs/PO-Tb				
7												
8												
10									2 batches of STLS Each Batch=24/TOG Refresher Training			2 batches of STLS Each Batch=24/TOG Refresher Training
11						STLS PMDT TRAINING 2 BATCHES						
12			2 batches of STLS Each Batch=24/TOG Refresher Training								Nikshay Aushadhi TRAINING TO PHARMACISTS	
13												
14					2 batches of STLS Each Batch=24/TOG Refresher Training							
15												
16				DPS PMDT TRAINING COMPLETED								
17												
18						STS PMDT TRAINING 2			STS PMDT TRAINING 2BATCHES			
19	2 batches of STS Each Batch=24/T											Nikshay Aushadhi TRAINING TO PHARMACISTS
20											2 batches of STLS Each	

21	OG Refresher Training	PMDT TRAINING TO PO'S AT HYDERABAD				BATCHES		STLS PMDT TRAINING 2BATCHES			Batch=24/ TOG Refresher Training				
22															
23															
24		PMDT TRAINING TO PO'S AT WARANGAL					2 batches of STS Each Batch=24/ TOG Refresher Training								
25		2 batches of STS Each Batch=24/ TOG Refresher Training	LT Refresher Training							REFRESHERS TRAINING FOR PO'S					
26															
27									STLS PMDT TRAINING 1BATCH						
28															
29															
30						STS PMDT TRAINING 1 BATCH									

STDC WEST BENGAL

Annual Training Calendar for 2020			
Month	Topic	Category	Duration
1st Qtr 2020	NTEP	MT(Lab) / LT	5 days
	Revised PMDT	District DRTB Coordinator	2 days
	Revised PMDT	District Programme Coordinator	2 days
	Revised PMDT	MOTC	2 days
	Revised PMDT	MOTC	2 days
	NTEP	MT(Lab) / LT	5 days
	Revised PMDT	MOTC	2 days
	Revised PMDT	MOTC	2 days
	NTEP	MT(Lab) / LT	5 days
	NTEP	MT(Lab) / LT	5 days
2nd Qtr 2020	Revised PMDT	MOTC	2 days
	Revised PMDT	MOTC	2 days
	Revised PMDT	DTO	2 days
	Revised PMDT	MOTC	2 days
	NTEP	MT(Lab) / LT	5 days
3rd Qtr 2020	NTEP	MT(Lab) / LT	5 days
	NTEP	MT(Lab) / LT	5 days
	Revised PMDT	MOTC	2 days
	Revised PMDT	MOTC	2 days
4th Qtr 2020	Revised PMDT	MOTC	2 days
	Revised PMDT	MOTC	2 days
	Revised PMDT	MOTC	2 days
	NTEP	MT(Lab) / LT	5 days

Annexure 9: Number of personnel trained in classroom and virtual trainings (2018, 2019, and 2020)

		Classroom training	Virtual training	Total personnel trained
Delhi				
	2018	1453	0	1453
	2019	2061	0	2061
	2020	430	1851	2281
Gujarat				
	2018	1314	0	1314
	2019	642	0	642
	2020	0	272	272
Himachal Pradesh				
	2018	148	0	148
	2019	357	0	357
	2020	106	0	106
Jammu and Kashmir				
	2018	239	0	239
	2019	229	0	229
	2020	233	0	233
Jharkhand				
	2018	315	0	315
	2019	150	0	150
	2020	116	0	116
Kerala				
	2018	1084	0	1084
	2019	415	0	415
	2020	14	0	14
Madhya Pradesh				
	2018	223	0	223
	2019	316	0	316
	2020	1161	0	1161
Maharashtra (Pune)				
	2018	483	0	483
	2019	940	0	940
	2020	292	0	292
Manipur				

		Classroom training	Virtual training	Total personnel trained
	2018	171	0	171
	2019	130	0	130
	2020	0	0	0
Odisha				
	2018	447	0	447
	2019	467	0	467
	2020	218	0	218
Punjab				
	2018	194	0	194
	2019	301	0	301
	2020	32	0	32
Rajasthan				
	2018	625	0	625
	2019	295	0	295
	2020	1496	0	1496
Tamil Nadu				
	2018	235	0	235
	2019	380	0	380
	2020	20	777	797
Telangana				
	2018	1119	0	1119
	2019	909	0	909
	2020	534	2899	3433
Uttar Pradesh				
	2018	2321	0	2321
	2019	2418	0	2418
	2020	510	3580	4090
West Bengal				
	2018	497	0	497
	2019	119	0	119
	2020	181	367	548

Annexure 10: Sample SM&E Plan For STDC West Bengal

Supervisory Visit (2020): District Distribution among Officers				
Sl. No.	Name	Designation	Place of Posting	Districts Allotted
1	Dr. Barun Santra	SPO	STC	South 24 Pgs.
				Diamond Harbour HD
				North 24 Pgs.
				Basirhat HD
				Howrah
2	Dr. Suresh Das	Director	STDC	Hooghly
				Purba Midnapore
				Paschim Midnapore
				Jhargram
				Nandigram HD
3	Dr. NK Ojha	ADHS	STC	Bankura
				Bishnupur HD
				Purulia
				Purba Bardhaman
				Paschim Bardhaman
4	Dr. Paramartha Chattopadhyay	OSD & ADHS	STDC	Birbhum
				Rampurhat HD
				Nadia
				Murshidabad
				Malda
5	Dr. Sandip Roy	MO	STDC	Uttar Dinajpur
				Dakshin Dinajpur
				Alipurduar
				Jalpaiguri
				Kalingpong
6	Dr. Swapana Mukhopadhyay	MO	STDC	Darjeeling
				Coochbihar
				Alipur
				Bagbazar
				Behala
7	Dr. Rita Mukherjee	APO	STC	Hazi
				Maniktala
				Manasatala
				MTM Boral
				Strandbank
				Tollygunge
				Tangra