

# **NATIONAL TUBERCULOSIS INSTITUTE BENGALURU**



**Government of India  
NATIONAL TUBERCULOSIS INSTITUTE  
Ministry of Health and Family Welfare  
'Avalon', No.8, Ballari Road, Bengaluru-560 003  
INDIA**

**ANNUAL REPORT  
2022-2023**

**WHO Collaborating Centre  
For  
Tuberculosis Research and Training**

**ANNUAL REPORT  
2022-2023**



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## **LIST OF ABBREVIATIONS**

ACSM	Advocacy Communication & Social Mobilization
AI	Artificial intelligence
BSc(N)	BSc in Nursing
CBNAAT	Cartridge Based Nucleic Acid Amplification Test
CDSCO	The Central Drug Standards Control Organization
CPWD	Central Public Works Department
CTD	Central Tuberculosis Division
DCGI	Drug Controller General of India
DRTB	Drug Resistance Tuberculosis
DST	Drug Susceptibility Testing
DTC	District Tuberculosis Centre
DTO	District Tuberculosis Officer
ECHO	Extension for Community Healthcare Outcomes
ERD	Epidemiology and Research Division
EQA	External Quality Assurance
FIND	Foundation for Innovative New Diagnostics
FMR	Foundation for Medical Research
GCP	Good Clinical Practices
GeM	Government e-Market
GNM	General Nursing and Midwifery
HRD	Human Resource Development
IEC	Institutional Ethics Committee
ICELT	International Centre of Excellence for Laboratory Training
ICMR	Indian Council of Medical Research
ICT	Immuno chromatographic Test
IRL	Intermediate Reference Laboratory
JSS	Joint Supportive Supervision

LC	Liquid Culture
LIMS	Laboratory Information Management System
LPA	Line Probe Assay
LT	Laboratory Technician
MGIT	Mycobacterial Growth Indicator Tube
MO	Medical Officer
MOTC	Medical Officer TB Control
MOHFW	Ministry of Health and Family Welfare
NABL	National Accreditation Board of Laboratories
NAAT	Nucleic Acid Amplification Test
NIRT	National Institute for Research in Tuberculosis
NORC	National Operation Research Committee
NRL	National Reference Laboratory
NTEP	National Tuberculosis Elimination Programme
NTEG	National Technical Expert group
NTI	National Tuberculosis Institute
NTM	Non- Tuberculosis Mycobacterium
OR	Operational Research
OSE	On-Site Evaluation
PMDT	Programmatic Management of Drug Resistant Tuberculosis
POD	Prevention of Disease
RDC	Research Documentation Cell
STDC	State Tuberculosis Training and Demonstration Center
STLS	Senior Tuberculosis Laboratory Supervisor
STO	State Tuberculosis Officer
TB	Tuberculosis
ToT	Training of Trainer
TU	Tuberculosis Unit
WGS	Whole genome sequencing
WHO	World Health Organization

## **FOREWORD**

I am pleased to present the Annual report of National Tuberculosis Institute for the year 2022-2023. This report highlights the major activities and newer initiatives undertaken by the Institute during the year and has a blend of both administrative and technical activities.

The Institute has been functioning as the technical arm of the Central TB Division and is designated as a WHO collaborating center. NTI is in the forefront of training large number of health personnel involved in TB Control Programme. The Technical Activities carried out at NTI include building the capacity of human resources for effective implementation of NTEP, and to undertake Operational Research to strengthen the roll out services under NTEP. The Laboratory at NTI is NABL accredited and functions as one of the National Reference Laboratories of the country. The NRL assess the performance of the Intermediate Reference Laboratories located at the state level to ensure quality assured laboratory diagnosis of pulmonary and extrapulmonary tuberculosis.

The core activity of the Institute is to build the capacity of programme managers and equip them with adequate knowledge and skills pertinent to NTEP. The Institute shoulders the responsibility of training medical and paramedical personnel from various states in several aspects of Tuberculosis control and elimination. Training for NTEP Programme Managers, training on guidelines for PMTPT in India – 2021, National TB Operational Research on protocol development (Module-1) , training for Post-graduate Students were some of the important training programmes conducted during the period of report. The Laboratory training courses included diagnosis in Molecular Methods – LPA, MGIT for Culture & DST, training on EQA of Sputum Smear Microscopy and training on Preventive Maintenance & Minor Repairs of binocular microscopes. A workshop for strengthening of State TB Training and Demonstration Centres (STDCs) across the country and the South Zone Task force meeting of medical colleges were also held in the institute during the year. The ICELT at NTI imparts trainings on WHO

endorsed Newer Diagnostic Techniques for TB. A novel Training-cum-Workshop on Quality Improvement and Building Health System Resilience during disaster situations was also conducted as a part of the WHO collaborative work plan.

The NRL at NTI provides diagnostic support to three districts of Karnataka, and also supervises & monitors the quality of sputum smear microscopy network across three States in our country viz. Karnataka, Maharashtra and Rajasthan. The quality of all NTEP certified/approved NAAT sites all over the country was also assessed. The NRL also imparts training to laboratory personnel for the diagnosis of drug susceptible and drug-resistant TB. The NRL plays an important role in certification of the public and private laboratories to perform culture and Drug Sensitivity testing to detect drug sensitive and resistant TB. The institute is also mentoring the NRL at Bhopal Memorial hospital & Research Centre.

Operational research is one of the functions of the institute. The status of ongoing and forthcoming research studies is briefly described in the ensuing pages. The ongoing studies during the year were “*A Plan-Do-Study-Act (PDSA) project for quality improvement of counseling by health workers during initial home visits of TB patients in Tumkuru District*” and “*A Phase III randomized, double blind, three arm placebo-controlled trial to evaluate the efficacy and safety of two vaccines VPM1002 and Immuvac (Mw) in preventing Tuberculosis in healthy household contacts of newly diagnosed sputum positive pulmonary TB patients*”. A National database on tuberculosis research which is an open access repository for abstracts of published scientific papers from all major national institutes is functional under the TB Net project.

The Director is the member of most National Advisory Committees, NORC and NTEG on various thematic areas of NTEP. The officers of the institute participated in the periodical Joint supportive supervision conducted by Central TB Division in collaboration with partner organizations to assess the performance of NTEP in field settings.



The ACSM Division at NTI plays a key role in sensitizing students on TB and NTEP. Additionally, awareness on TB among the general public was generated using mass media, social media and through ACSM activities on World TB Day. A rally for creating TB awareness among the general public was also undertaken on World TB Day

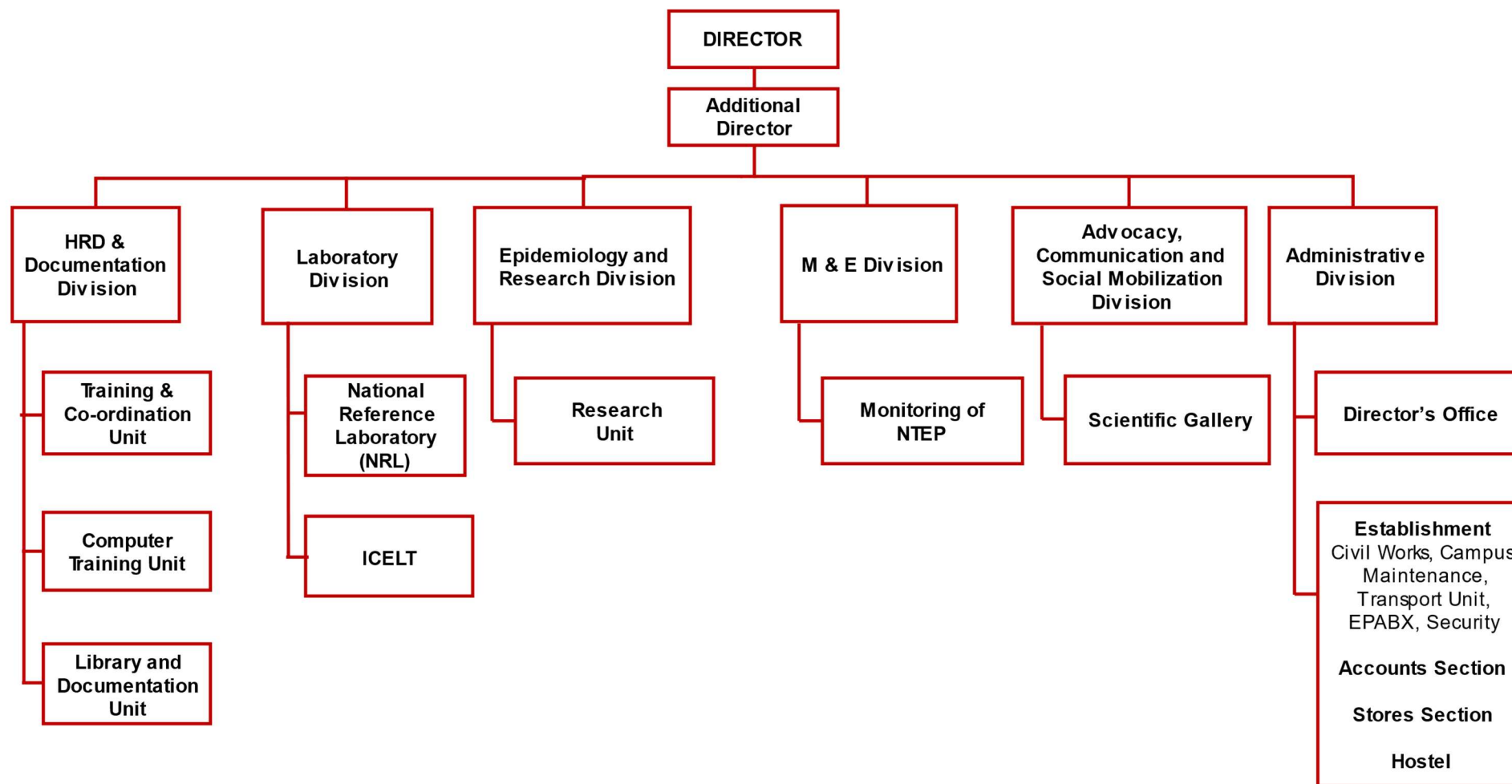
A fleeting reference has been made on the organizational set up and the staff position of the institute. The role of administrative division is briefly described and participation of officials in various meetings, training programmes, seminars, conferences, workshops and continuing medical education have been highlighted in this report.

I acknowledge the persistent co-operation and hard work of all the members of the NTI family and I solicit the same degree of motivation and dedication from all in times to come.

I also express my gratitude to the Ministry of Health and Family Welfare, Government of India and the Central TB Division for their continuous guidance, support and encouragement.

Dr. N. Somashekar,  
Director

# ORGANOGRAM



## **1. HUMAN RESOURCE DEVELOPMENT & DOCUMENTATION**

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One of the salient functions of the Institute is to support human resource development, build and strengthen the capacity of programme managers for elimination of TB through skill development activities relevant to National TB Elimination Programme (NTEP).

The three units of the Division are:

- A. Training and Coordination Unit
- B. Computer Training Unit
- C. Library & Documentation Unit

### **A. Training and Coordination Unit**

The objective of the NTEP training programmes is to ensure that programme managers, teachers of Medical Colleges, Medical Officers and Paramedical Staff are equipped with adequate knowledge and skill set required to implement TB elimination activities, this includes quality assured diagnosis of TB, management of drug sensitive & drug-resistant TB, data management and building partnerships with all sectors involved in TB activities.

The tentative training calendar for the ensuing year is prepared and sent to CTD, which in turn communicates the same to all State TB Officers for nominating the participants based on their training need. This ensures a staggered nomination of eligible candidates in appropriate batch sizes and allows suitable time to ensure relieving of participants from their offices at attending the training programmes.

The Training Unit works synchronously with the Computer Training Unit, Hostel, Stores and Transport Units of the Institute to ensure smooth organization of training activities. Training courses and workshops with respect to many aspects of TB elimination are conducted to accommodate the ever-increasing requirement of trained personnel.

The details of the various training programmes conducted in the Institute during the year are as follows:

i. NTEP Modular Training					
Sl. No.	Category of Personnel	From	To	No. of days	No. of participants
1.	STO's/DTO's/Medical Officers from different states	18-04-2022	30-04-2022	12	32
2.		23-05-2022	04-06-2022		34
3.		25-07-2022	06-08-2022		31
4.		14-11-2022	26-11-2022		16
5.		05-12-2022	17-12-2022		19
6.		30-01-2023	11-02-2023		16
TOTAL					148
ii. Training-cum-Workshop on Quality Improvement in TB care and Building Health System Resilience during disaster situations for National Level Programme Managers.					
1.	DTO's from Karnataka, Andhra Pradesh, Telangana and Kerala	13-06-2022	22-06-2022	10	8
iii. National Level Training in guidelines for PMTPT in India – 2021					
1.	STO's/DTO's/STDC Director's & Medical Officers from different states.	23-08-2022	25-08-2022	3	19
2.		21-12-2022	23-12-2022		9
TOTAL					28
iv. National TB Operational Research training course on Protocol development (Module – 1)					
1.	Faculty from medical colleges of Karnataka	07-11-2022	11-11-2022	5	15

v. Training for Post-graduate Students					
1.	Post Graduate medical students of Community medicine, Pulmonary medicine and Microbiology from medical colleges of Karnataka and Telangana	12-09-2022	16-09-2022	5	32
2.		27-03-2023	31-03-2023		24
TOTAL					56
vi. National Training on introduction of shorter 3RH TPT regimen under PMTPT (Blended/Hybrid)					
1.	State & District level officers	04-08-2022		1	15
vii. NTEP orientation programme for PG students (ONE DAY)					
1.	Post graduate residents form Dept. of Community medicine from JNMC – Belagavi, Sapthagiri Institute of Medical Sciences & Research Centre – Bengaluru and Dept. of Community medicine – AFMC, Pune	27-04-2022		1	12
		18-01-2023			9
		28-03-2023			9
viii. Workshop for strengthening of STDC's					
1.	STDC Director's & Staff, STO's, WHO Consultants, IRL Microbiologists and others from different states	07-04-2022	08-04-2022	2	117

<b>ix. Zonal Task force Meeting (South Zone)</b>					
1.	Medical college faculty and CTD officials working for Task force	20-04-2022		1	59
<b>Laboratory Trainings</b>					
<b>x. Training in Molecular Methods – LPA</b>					
1.	Medical Officers, Bio-	04-04-2022	08-04-2022	5	7
2.	medical engineer, Data	19-09-2022	23-09-2022		10
3.	analyst, Microbiologists &	06-06-2022	10-06-2022		11
4.	Sr. Laboratory	02-01-2023	06-01-2023		7
5.	technicians, Laboratory technicians from different states	16-01-2023	20-01-2023		10
<b>TOTAL</b>					<b>45</b>
<b>xi. MGIT for Culture &amp; DST</b>					
1.	Associate Professors,	09-05-2022	13-05-2022	5	9
2.	Asst. Professors,	01-08-2022	05-08-2022		8
3.	Microbiologists & Sr. Laboratory technicians, Laboratory technicians from different states	13-02-2023	17-02-2023		11
<b>TOTAL</b>					<b>28</b>
<b>xii. Training on EQA of Sputum Smear Microscopy</b>					
1.	Medical Officers, Microbiologists & Sr. Laboratory technicians	11-07-2022	15-05-2022	5	19
2.	and Laboratory technicians from different states	06-03-2023	10-03-2023		12
<b>TOTAL</b>					<b>31</b>

<b>xiii. Training on Preventive Maintenance and Minor Repairs of Binocular Microscopes</b>					
1.	STLS and Laboratory technicians from the state of Karnataka	28-09-2022	30-09-2022	3	9
<b>xiv. NABL 3<sup>rd</sup> Meeting QMS Workshop (Conducted by ICELT in collaboration with NTI, FIND and CTD)</b>					
1.	Microbiologists, Laboratory technicians from different C & DST laboratories of different states.	14-03-2023	16-03-2023	3	55

#### **Newer Initiatives:**

1. Training cum Workshop on Quality Improvement & Building Health System Resilience during disaster situations:  
A first of its kind activity undertaken by NTI as a WHO collaborating Centre. Providing high quality care is most critical to achieve the desired progress towards ending TB. It is known that the Covid pandemic has pushed back the TB program from achieving what it had aimed at. Hence, in order to improve the quality of care for TB patients and to establish a resilient health system for TB care in any future disaster situation that may affect TB care, NTI conducted a training cum workshop on “Improving the Quality and Health system resilience in TB care”.
2. NTEP sensitization cum Training (Virtual) on “TB Operational Research” in Karnataka.
3. Entered into MOU with Empower School of Health as knowledge partner to technically support Empower in the iDEFEAT TB project.

## **NTEP Modular Training**





## **PMTPT Training**





**Training cum Workshop on Quality Improvement & Building Health System Resilience**



**NTEP Training -Postgraduates**





**Training on EQA of sputum smear microscopy**



**Training on LC & DST Testing for 1st & 2nd line anti TB drugs (MGIT 960)**



## **International Center of Excellence for Laboratory Training (ICELT)**

The activities held in ICELT during the period of April 2022 to March 2023 are given below:

1. Phase II (Phase IIA & IIB)– Truenat EQA panel preparation and verification, Truenat EQA virtual sensitization and Truenat EQA round
2. Supported CBNAAT EQA virtual sensitization and CBNAAT EQA round
3. Truenat training material & SOP's preparation
4. NABL 3rd mentoring workshop, 55 lab staff attended the workshop.
5. Truenat EQA panel dispatch (2149 panels to 11 IRL's/ 12 states)
6. Truenat onsite trainings at Kerala Telangana, Bihar, Jharkhand, Tamil Nadu, 421 Participants were trained
7. Panel stability Study (Started in Aug 2022)
8. QMS documents review & updates.
9. JSSM visit to Uttar Pradesh (Bareilly & Lucknow)
10. 3 Virtual Truenat training & 4 CBNAAT EQA sensitization workshop were conducted and a total of 4565 participants were trained/sensitized

## **B. Computer Training Unit**

The Computer Training Unit supports the following major areas:

- Facilitate in organizing need-based training with relevance to program and customized application related trainings
- The support Information and Communication Technology (ICT) Initiatives in the context of the Programme.
- The support Data Management and Statistical Analysis of research studies and other MIS.
- Caters to the need of maintenance of website / upkeep / up-gradation of IT infrastructure of the Institute.
- The unit provided assistance for 51 video conferencing related activities (both joining & hosting the VC)

### **NTI website support services**

- Application server configuration and maintenance for the following websites: [www.ntiindia.org.in](http://www.ntiindia.org.in), [www.tbresearch.ntiindia.org.in](http://www.tbresearch.ntiindia.org.in).
- Domain renewal of NTI Websites.
- Maintaining E-mail services at NTI.
- Periodic uploading of content and notifications to NTI Website

### **• Other IT Support Services:**

- Configuration of Broadband internet with the help of Internet service providers.
- Periodic licensing server configuration & maintenance of software's.
- Maintenance of access to subscribed Journals.
- Co-ordinated with the Stores Unit, NTI for the installation of CCTV Cameras in the office.
- Monitoring of recordings of various CCTV Cameras in the institute.
- Periodic maintenance of IT Equipment of the institute.
- Renewal of Rainmail Server services.
- Periodic maintenance of Aadhaar Enabled Biometric Attendance System (AEBAS) undertaken.

- Periodic licensing server configuration such as Email Server, Proxy Server, Firewall, Anti-Virus protection etc.
- Coordinated with MTNL Cloud Attack intelligence network to blacklist and block suspicious IP addresses.
- Handling matters pertaining to AMC of computers / UPS and issues pertaining to server configuration / Internet services / mailing services.
- Monitoring services provided by 'Techno Lifts' for regular maintenance.

**Other Support Services:**

- Internal shifting, configuration and stock updating of computers.
- Handled classes on NI-KSHAY.
- Coordinated with FIND, AKSHARA and KPMG to facilitate maintenance of LIMS.
- Interaction with developer team to update the features of LIMS.
- Upkeep and configuration of Video Conference Unit to support all VC interactions like ECHO clinic.

### **C. Library and Documentation Unit**

Major activities undertaken by Unit are:

- Collection and Maintenance of Core periodicals on TB & respiratory diseases, documents on TB research, reports, proceedings, souvenirs, WHO unpublished documents, selected papers.
- Coordinating with CTU in digitization of important research studies and hosting the same on the internet/intranet.
- Library provided the information needs of the faculty, staff of the Institute besides Medical and Para-medical trainees and delegates/visitors from medical fraternity.
- Co-ordinates the publication activities of the Institute. The major responsibilities of this unit are to oversee the regularity of the publication NTI Annual reports and other specialized publications.

## **2. LABORATORY DIVISION**

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The laboratory has been designated as one of the National Reference Laboratory in the country and also is NABL accredited. The NTI laboratory participates in EQA program with WHO Supra National Reference Laboratory (SNRL) Prince Leopold Institute of Tropical Medicine Antwerp, Belgium and has successfully passed all rounds of proficiency testing.

The NTI laboratory provides diagnostic support to 3 NTEP districts of Karnataka. NRL supervises and monitors the quality of the sputum smear microscopy, culture and drug susceptibility testing services in the network of laboratories in the three states allocated viz, Karnataka, Maharashtra and Rajasthan. NTI-NRL is responsible for assessing the quality of all NTEP certified/approved NAAT sites all over the country.

NRL is also responsible for accrediting state Level laboratories i.e., the IRLs, Medical Colleges and other private laboratories for Culture and Drug Susceptibility Testing for detection of Drug Resistant Tuberculosis (DR-TB) and also supporting State Level Drug Resistance Surveillance (DRS) and PMDT activities. NTI is mentoring the NRL at Bhopal Memorial hospital & Research Centre, Bhopal.

Besides these activities, laboratory division coordinates with training unit in conducting laboratory related trainings for laboratory personnel Comprehensive Training for Laboratory Personnel, Whole Genome Sequencing (WGS) Training for Laboratory Personnel, Training courses for Laboratory Personnel in Line Probe Assay, Training in Liquid Culture and Drugs Sensitivity were the trainings conducted during the year of reporting.

The details of the laboratory trainings are mentioned in training unit report.



## Specimens processed at NRL NTI during the period April 2022 to March 2023

<b>Registration</b>		
Total Specimens registered ( <i>Sputum + XDR Culture +Universal DST+NTM and OP</i> )		7349
Number of Universal DST Samples <i>registered</i> for LPA		6239
Number of Rejected samples		48
<b>Tests Carried out</b>		
Number of Microscopy done		6870
Total No. of specimens subjected for decontamination		7349
Total number of specimens subjected to NAAT	CBNAAT	476
	Truenat	1144
Total no. of Line Probe Assay performed for First Line DRT		5424
Total no. of Line Probe Assay performed for second Line DRT		675
Total number of specimens put up for primary inoculation in MGIT		2556
Total number of specimens subjected for ICT ( identification test)		1028
Total number of drug susceptibility test performed by MGIT		471

### Other activities

Virtual CBNAAT EQA and Truenat EQA Sensitization program were conducted in phased manner covering all the states in the country.

### 3. EPIDEMIOLOGY AND RESEARCH DIVISION

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#### **Major functions of Epidemiology & Research Division are as under: -**

- To conduct epidemiological, operational and implementation research in TB including preparing generic protocols, implementing, monitoring & supervising, data management, analysis and report writing.
- To Provide Technical and Operational support to other Organizations /Institutions in the country for conducting TB Epidemiology and operational research studies.
- To provide mentorship and training in the operational, implementation and epidemiological research on TB under the sponsorship of either CTD, Union or the State.
- To undertake mathematical modeling for forecasting TB burden and programme performance based on the implementation of the existing strategies and proposed new strategies under NTEP and to provide inputs for course correction targeted towards ending TB by 2030.
- To provide technical inputs for NTEP activities including the development of training modules & guidelines; for policy development, in monitoring & supervision of the programme and facilitating modular training.
- Since 2019, the ERD has shouldered the responsibility of being a part of a pioneering multi-centric national-level vaccine trial for the prevention of TB disease conducted by ICMR. To enable the conduct of such high-quality regulatory clinical trial, NTI established trial clinics in two state-run hospitals to fulfill the regulatory requirements of the Drug Controller General of India (DCGI).

#### **A. Research Studies - Planned**

***1. Factors associated with long term unsuccessful outcomes of patients treated under National TB Elimination Programme (NTEP) with all oral H mono/poly regimen between June 2019 and July 2020 in selected districts of southern Karnataka***

**Objectives:**

- ✓ To determine the patient and health system factors associated with unsuccessful treatment outcome (treatment failure, loss to follow-up, regimen change after one month of treatment initiation, not evaluated, death during treatment) among adult Hr-TB patients initiated on all oral H mono/poly treatment regimen under NTEP.

**Methodology:**

A case-control study design will be adopted, a Case is referred to as a patient declared to have an unsuccessful treatment outcome (failure, loss to follow-up or death during ATT, not evaluated, regimen change after one month of treatment initiation) at the end of treatment and control is defined as patients with successful treatment outcome (cured and treatment completed).

Cases and controls will be matched by district and declaration of treatment outcome within the same quarter of the year.

The data on selected variables will be obtained primarily from NIKSHAY database. For missing data and perceived possible errors in NIKSHAY data, data will be taken from PMDT register and Intermediate Reference Laboratory registers.

**Expected outcome:**

This will be probably the first study in our country to explore the factors associated with unsuccessful treatment outcomes of patients initiated on H-mono/poly regimen. The results of this study will be useful in understanding the health system and patient-related factors associated with unsuccessful treatment outcomes, thereby providing insights for better patient management.

**Current status:**

A revised protocol along with the budget proposal was re-submitted to NORC Central TB Division in line with the prescribed standard template.

## **B. Research Studies - Ongoing**

1. ***A Plan-Do-Study-Act (PDSA) project for quality improvement of counseling by health workers during initial home visits of TB patients in Tumakuru District.***

### **Objectives:**

1. Provide correct information on cause, available diagnosis & treatment for TB
2. Clarify the myths and misconceptions related to TB and counsel for stigma mitigation
3. Explain the modes of spread of disease and counsel on practicing cough hygiene, hand hygiene, safe sputum disposal and airborne infection control (AIC) measures
4. Explain the importance of adherence to treatment, treatment completion & curability of TB; and counsel to take full course of anti-TB treatment (ATT) without any interruption
5. Explain the options of treatment supporters and facilitate choosing the most suitable one
6. Provide information on regular intake of proper nutritious diet, related weight gain & improvement in general physical health during ATT; explain the link between a nutritious diet and TB cure
7. Provide general counseling and reassurance aimed at psychosocial support
8. Explain the common adverse drug reactions (ADRs) associated with ATT; reassure that most are self-limiting, and when and whom to approach for management of persisting ADRs
9. Provide information on Ni-kshay Poshan Yojana (NPY) and the TB Arogya sathi App
10. Assess the need for community support and facilitate enrolment on Ni-kshay Mithra scheme
11. Explain the importance of regular periodic clinical and bacteriologic follow-ups and counsel to adhere strictly to these follow-up schedules
12. Clarify how smoking and alcohol can increase ADRs and affect treatment success, and counsel for abstinence; facilitate linkages to cessation clinics for the needy patients.

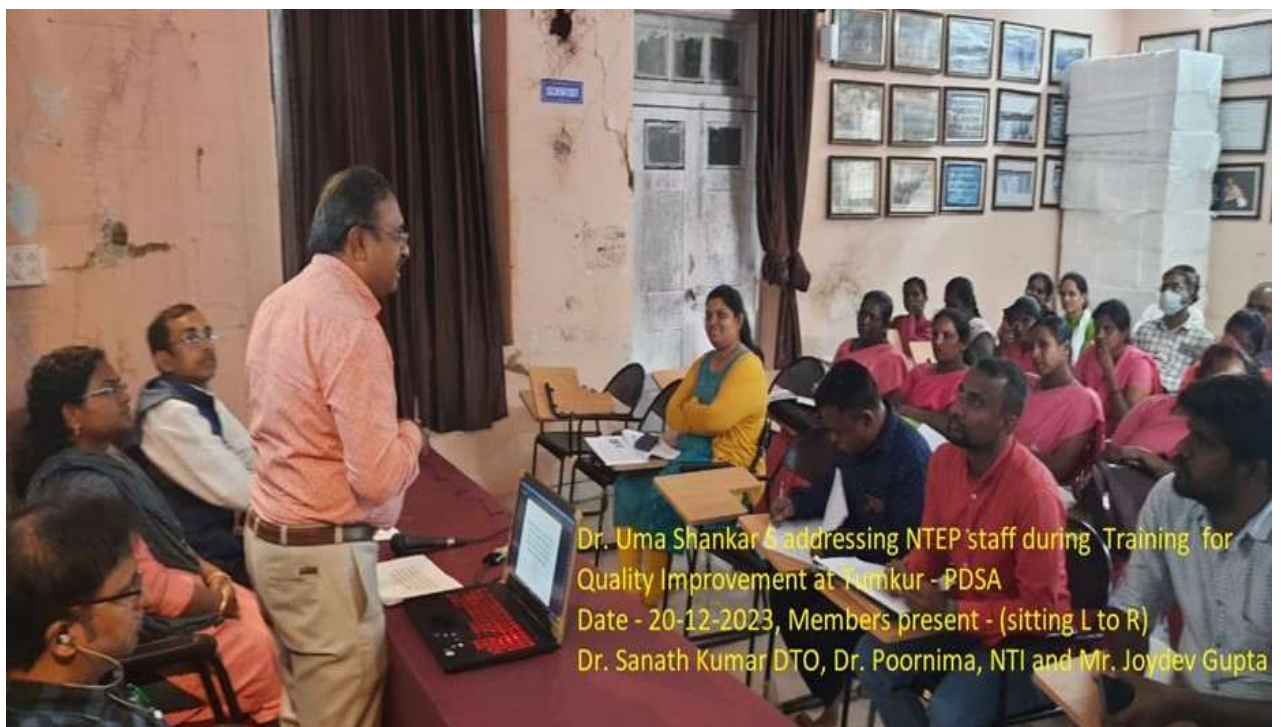
13. Educate and motivate household contacts (HHCs) with symptoms suggestive of TB to undergo sputum and any necessary examinations
14. Motivate eligible HHCs without TB symptoms to take appropriate TB preventive treatment (TPT); counsel on the importance of uninterrupted intake and completion of TPT course
15. Develop and facilitate the usage of flipcharts by health workers for patient health education, counseling and motivation during home visits

**Methodology:**

We started with desk planning, field planning and conduct root cause analysis for identifying suboptimal performance in patient health education, counseling, public health actions and contact tracing during initial home visits were done. Then team building and brain storming sessions of NTEP/General Health System staff of Tumakuru were conducted to identify the gaps and they were trained on key components of health education, counseling, public health actions and contact tracing. We developed training material/PPTs and health education and counseling tool- Flipchart to aid the health workers during the initial home visit. This was followed by telephonic calls to microbiologically confirmed TB patients to conduct a baseline assessment of the quality and coverage of activities under initial home visit. Subsequently, as part of the intervention we promoted the use of Flipchart and provided handholding and support during home visits by the health workers to standardize and improve the quality and coverage of activities under initial home visit. Finally, post-intervention assessment was done through telephonic calls to TB patients to assess the quality and coverage of health of activities under initial home visit.

**Outcome:**

We found a 40%, improvement in initial home visits within one week of treatment initiation, a 75% improvement in > 20 minutes spent with patients during home visits and a 57% improvement in coverage of health education and counseling of TB patients. The report was presented to the CETI iDefeat Team.



**C. Study undertaken by NTI under India TB Research Consortium:**

2. *A Phase III randomized, double blind, three arm placebo-controlled trial to evaluate the efficacy and safety of two vaccines VPM1002 and Immuvac (Mw) in preventing Tuberculosis (TB) in healthy household contacts of newly diagnosed sputum positive pulmonary TB patients. Version 1.5 dated 3<sup>rd</sup> Oct 2018.*

**Study objectives:****1. Primary Objective:**

To evaluate the efficacy of VPM1002 and Immuvac by comparing the reduction in incidence of TB over 3-year period among Indian healthy household contacts of newly diagnosed sputum positive PTB patients vaccinated with VPM1002 and Immuvac in comparison to placebo.

**2. Secondary Objective:**

- i. To evaluate the efficacy of VPM1002 and Immuvac in the prevention of LTBI in healthy household contacts of newly diagnosed sputum positive PTB patients in comparison to placebo [in a sub-set of population at Sites – Delhi (NCR), Hyderabad and Chennai].
- ii. To evaluate the safety of VPM1002 and Immuvac in Indian healthy household contacts.
- iii. To evaluate the Immunogenicity of VPM1002 and Immuvac in healthy household contacts as compared to placebo against tuberculosis. (in a sub-set of population at Sites – Delhi (NCR), Pune and Chennai).

**Methodology:**

The study was approved by DCGI vide their letter File No: BIO/Form44/FF/2018/9536 dated 20-Dec-2018. The trial was cleared by the NTI-Institutional Ethics Committee for the respective trial sub-sites, namely General Hospital, Jayanagar (JGH) and K. C. General Hospital (KCGH), Malleswaram.

The details of the sputum positive PTB cases presenting to the DOTS centre / clinic/OPD of the implementing institute in the last 4 weeks was obtained. The index case was contacted and visited to explain about the study and sensitized to provide details of Household contacts (HHC). All relevant details of the index case such as name, age, gender, address (corresponding and permanent), contact number, date of diagnosis and initiation of anti-tuberculosis treatment (ATT), sputum smear grade and drug sensitivity pattern will be recorded in site records. A list of HHCs was obtained from the index case by the health staff.

Household contacts eligible and willing to be screened were registered for the study. The study procedures include three phases: screening phase, enrollment phase and follow-up phase. Only those found to be eligible upon screening were vaccinated twice, one month apart with the Investigational Product (VPM1002, Immuvac or Placebo).

**Expected outcome:**

- ✓ To compare the percentage of confirmed TB cases (PTB and EPTB) as per NTEP guidelines in the vaccinated and placebo groups from two months after first dose of vaccine up to endpoint till 38 months follow-up period (VPM1002, Immuvac and Placebo).
- ✓ Number of participants developing LTBI.
- ✓ Incidence of adverse events and serious adverse events in study participants till the end of study period.
- ✓ Immunogenicity of VPM1002 and Immuvac will be compared with placebo to be measured by (Will be done at AIIMS, Delhi; NARI, Pune; and NIRT, Chennai):
  - FACS (Fluorescence activated cell sorting): CD3, CD4/CD8, TNF-alpha IFN-gamma, IL2 [Time Frame: screening, month 2, month 6, and those who have developed PTB will be followed up during the course of study].
  - LUMINEX:IL2, TNF-alpha IFN-gamma ,IL 10, IL12, IL 17 [Time Frame: screening, month 2, month 6, and those who have developed PTB/EPTB will be followed up during the course of study].
- ✓ There were a few more secondary outcomes too.

**Total target:**

Initial target for NTI and its sub-sites was fixed as 2000 participants. NTI was supposed to have 4 sub-sites as per the Protocol Number - ICMR/ITRC/VAC/001/2018, Version 1.5 to achieve the target of 2000 enrolments, however following the inspection by CDSA (Sponsor authorized monitors) it was communicated that only 2 out of the 4 state government-run hospitals were eligible to undertake clinical trials as per the CDSCO/DCGI norms and hence the target was reduced to 1000.



**Current Status:**

- Vaccination/ enrollment under the vaccine trial was done at two sub-sites of NTI, Bengaluru namely, Jayanagar General Hospital and KC General Hospital. The site was initiated on 29<sup>th</sup> November 2019.
- The enrolment of new participants for vaccination was stopped on 31<sup>st</sup> Dec 2020 as per the directions given by the sponsors, ICMR. We enrolled a total of 803 participants under the sub-sites of NTI. The follow-up of the participants enrolled at both JGH and KCGH was done at KCGH initially and subsequently at NTI
- A Participant Retention Plan specifically for NTI was prepared for timely follow-up and all efforts were made to complete all the follow-ups within the scheduled period. Accordingly, the job allocation has been made to all the vaccine trial project staff .

**Progress of the Trial at Jayanagar General Hospital (JGH) and KC General Hospital (KCGH) carried out in NTI campus from 1<sup>st</sup> April 2022 to 31<sup>st</sup> March 2023**

Seven TB cases and seventeen Serious Adverse Event (SAE) were reported during the 2077 follow up visits and 53 unscheduled visits undertaken during the period of report.

**D. Research Studies –Completed:**

‘INDEX guidelines for extra pulmonary tuberculosis: Knowledge and practice among physicians’ – Final manuscript reviewed by Authors is submitted for publication in the Indian Journal of Tuberculosis

**E. Other technical activities:**

Coordinated in implementing the study titled “**Multi-centric prospective cohort study of TB recurrence-free cure among microbiologically confirmed new PTB patients treated under NTEP with the 4-month moxifloxacin containing daily regimen**” in Tumakuru District of Karnataka.

### **List of publications (NTI faculty as author/co-author)**

1. Giridharan P, Selvaraju S, Rao R, Rade K, Thiruvengadam K, Asthana S, Balachandar R, Dipak Bangar S, Bansal AK, Bhat J, Chakraborty D, Chopra V, Das D, Dutta S, Rekha Devi K, Kumar S, Laxmaiah A, Madhukar M, Mahapatra A, Mohanty SS, Rangaraju C, Turuk J, Zaman K, Krishnan R, Shanmugam S, Kumar N, Panduranga Joshi R, Narasimhaiah S, Chandrasekaran P, Gangakhedkar RR, Bhargava B. *Recurrence of pulmonary tuberculosis in India: Findings from the 2019-2021 nationwide community-based TB prevalence survey*. PLoS One. 2023 Dec 21;18(12):e0294254.
2. Singh, S. and Chadha, V. K. (2022) *Drug-resistant tuberculosis control in India – recent updates* International Journal of Science Academic Research. 2022, 3 (10). pp. 4515-4520.
3. Singh, S. and Kelaskar, R. P. (2022) *Epidemiology of Drug Resistant Mycobacterium Tuberculosis in Bengaluru City, Karnataka: A Cross Sectional Study* Int J Med Res Prof. 2022, 8 (3). pp. 6-13.
4. Singh, S. and Kelaskar, R. P. *Treatment outcomes and its trends amongst drug-resistant Mycobacterium tuberculosis patients treated under programmatic conditions in Bengaluru city (2017-2020)* Int Arch BioMed Clin Res. 2022, 8 (2). CM1-CM5.

#### 4. MONITORING AND EVALUATION DIVISION

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Monitoring and Evaluation is a critical component of NTEP of India to ensure effective implementation of the program as per plan. Currently the Monitoring of the program in India is done by digital health based app like Nikshay, Arogya setu and prevent TB app. With the help of electronic case based web based app Nikshay the real time data can be generated for analysis by the program officials at various levels. The data generated are routinely analyzed by program officials at various level to improve the program performance. Proposal related to training of program officials at NTI in basic analysis of program data generated in Nikhsay was submitted by M&E officials.

Evaluation of the program is currently done by internal evaluation by central TB division called joint supportive supervision as per planned protocol. Officials of NTI support central TB division in Joint supportive supervision of the states for ensuring effective implementation of the program. In the year 2022-23 NTI officials supported Central TB division in joint supportive supervision by visiting 3 states.

Operational research proposals related to Monitoring & Evaluation was also submitted by the officials of the division.

As a co-investigator in vaccine trial being conducted in the Institute by ICMR, I/C Monitoring and Evaluation supported in x-ray reading for early diagnosis of TB in participants.

The following officials of NTI took part in Joint Supportive Supervision Mission of NTEP at various states:

Name	States visited
Dr. Umashankar .S	Buxar district; Bihar and Nalbari district; Assam from 10 <sup>th</sup> to 16 <sup>th</sup> July, 2022 & 24 <sup>th</sup> to 30 <sup>th</sup> July 2022 respectively
	Nalgonda district, Telangana State from 11 <sup>th</sup> to 17 <sup>th</sup> Sept 2022

**Glimpses of Joint Supportive Supervision of NTEP in Bihar and Tripura**



## **5. ADVOCACY, COMMUNICATION AND SOCIAL MOBILIZATION DIVISION**

The Advocacy, Communication and Social Mobilization Division in short the ACSM Division was set up to enable and enhance the TB Control Program at different fronts. The Division plays a key role in sensitizing the younger generations from nursing, paramedical, life sciences and medical students on TB and NTEP.

### **1. Scientific Gallery**

The Scientific Gallery has been established to disseminate the general information on TB, the evolution of the programme, research conducted by NTI and achievements of the Institute since its inception. Considering the needs of the diverse categories of visitors like, Health officials from state government departments, doctors and para-medical personnel from government and private sector and various categories of health-sector trainees, regular in-house sensitization programme/training have been conducted by the division.

### **2. Sensitization Programme**

Sensitization/ training on TB & NTEP for paramedical and basic life science students are regularly conducted by ACSM division as and when requested by the respective colleges. Also from the year 2020 onwards the division has initiated virtual orientation/sensitization training for the students who cannot not visit NTI for in-house sensitization programme

During the year of reporting, a total of 945 students (Paramedical and Life Science) on TB and NTEP virtually in 8 batches were sensitized. On world TB day 99 students were sensitized at NTI and 330 students were sensitized virtually.

The details of the sensitization/ training conducted during the year are appended below:

Sl.No	Date	Category of Students	Organization	No. of Students
1.	01.04.2022	III <sup>rd</sup> Yr. GNM	Sri. Devraj Urs College of Nursing	33
2.	24.06.2022	Final Yr. B.Sc nursing	MVJ College of Nursing	99
		II <sup>nd</sup> Yr B.Sc nursing	St. Johns College of Nursing	25
3.	28.06.2022	II <sup>nd</sup> & IV <sup>th</sup> Yr. B.Sc Nursing	Acharya College of Nursing	50
		IV <sup>th</sup> Yr. B.Sc Nursing	Viswasai College of Nursing	56
		IV <sup>th</sup> Yr. B.Sc Nursing	College of Nursing, Command Hospital, Air Force	20
4.	30.06.2022	III <sup>rd</sup> Yr. GNM	Viswasai College of Nursing	54
		B.Sc Nursing	Chinmaya College of Nursing	38
		Health Inspectors	Medical Training Centre, Air Force	35
5.	19.01.2023	IV <sup>th</sup> Yr. B.Sc Nursing	Sri Devraj Urs College of Nursing, Kolar	95
6.	10.03.2023	IV <sup>th</sup> Yr. B.Sc Nursing	St. Marthas College of Nursing	59
7.	15.03.2023	IV <sup>th</sup> Yr. B.Sc Nursing	Acharya Nursing College	51
8.	24.03.2023	B.Sc Nursing students	MVJ College of Nursing	200
			Vishwasai College of Nursing	130
Total No. of students trained virtually				945
9.	24.03.2023	B.Sc Nursing	R.V. College of Nursing	52
			Acharya Nursing College	47
Total No. of students sensitized at NTI on World TB Day				99
10.	24.03.2023	B.Sc Nursing	Vishwa Sai College of	130

			Nursing	
			MVJ College of Nursing	200
<b>Total No. of students sensitized Virtually at NTI on World TB Day</b>				<b>330</b>

### 3. World TB Day 2023 Commemoration at NTI

During the year of report, Commemoration of World TB Day was done in association with R.V. College of Nursing and Acharya College of Nursing.

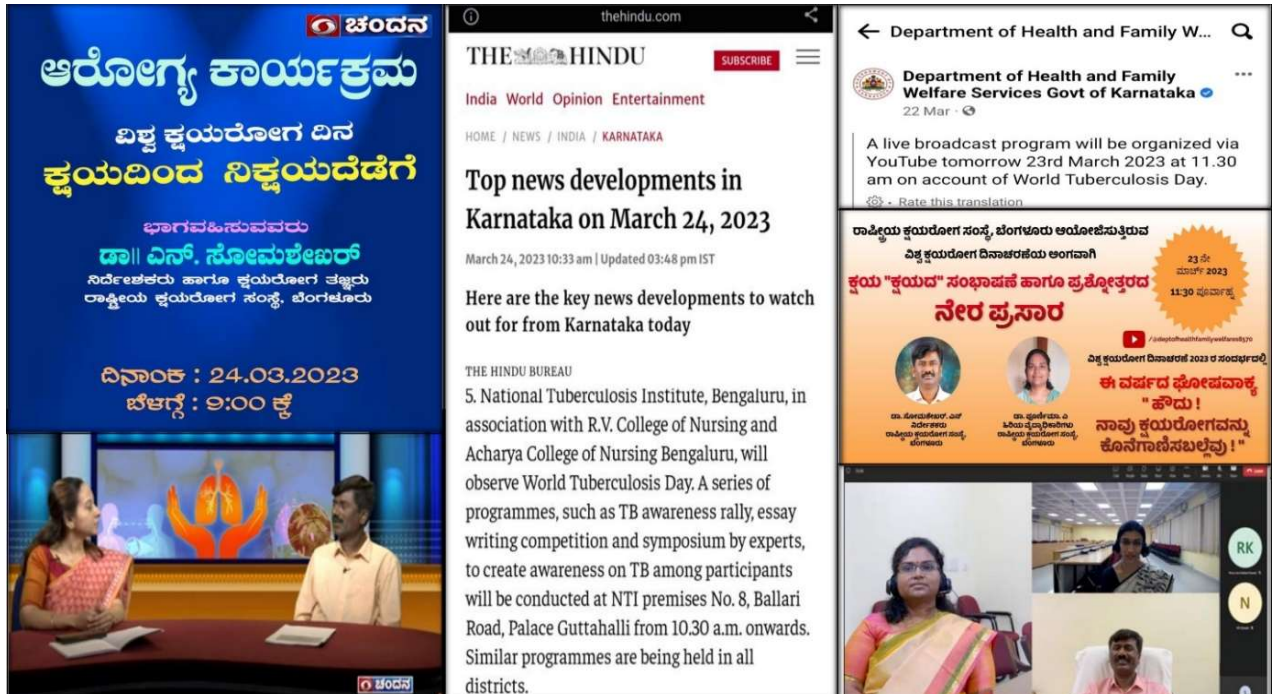
Accordingly, the following events were organized for World TB Day:

- **Essay writing competition for nursing students:** The essay topic on “Role of nursing staff in elimination of TB” was given to the students at their respective colleges, 51 students from R.V and 41 students from Acharya College participated. 1st, 2nd & 3rd prizes for the best essay papers were chosen and prizes were distributed on World TB Day at NTI.
- **Rally by NTI officials, nursing faculty and students:** A rally for creating TB awareness among the general public was undertaken on World TB Day. NTI officials, 101 nursing students and 4 faculties from R.V. College and Acharya nursing College participated in the rally. Slogans and songs related to TB were used to sensitize the general public. Banners and Placards depicting IEC messages on TB were also displayed. The best placard was awarded prize during the commemoration of world TB Day at NTI.
- **Technical presentations by NTI officers:** “NTI history and its current activities” by Dr. Poornima. A and “Recent Developments and Newer Initiatives” by Dr. V.K. Chadha were presented.
- **Cultural Event:** R.V. College students performed a dance and skit on TB awareness.
- **Virtual sensitization on TB and NTEP:** A Virtual Sensitization on TB and NTEP for students of Vishwa Sai College of Nursing and MVJ College of

Nursing was conducted on World TB Day. 330 students and 8 faculty from both the colleges participated in the virtual session.

- **Sensitization on TB using mass media and social media:** Mass media and social media were used for creating awareness about TB to general public.
  - Dr. N. Somashekar, Director, NTI participated in a Health talk on TB in DD Chandana which was telecasted on World TB Day
  - A live broadcast programme on YouTube and Facebook was organized in association with Department of Health and Family Welfare, Karnataka on 23.03.23 to create TB awareness among general public. Dr. N. Somashekar, Director NTI, Dr Poornima A. Division Head, ACSM and Dr. Mamatha.H.G. participated in the webinar.
  - A press note on World TB Day commemoration at NTI was published in the newspaper 'The Hindu'.

### Sensitization on TB using mass media and social media





## Essay writing competition for nursing students



## Rally on World TB Day 2023





### **Prize Distribution to the students and cultural events**



### **Felicitation to the Chief Guests**



## 6. ADMINISTRATION DIVISION

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The Administration Division of NTI caters to all the administrative requirements of the Institute. The major activities of the units for the financial year 1<sup>st</sup> April 2022 to 31<sup>st</sup> March 2023 are briefly furnished below.

### **Establishment**

The unit caters to the administrative matters, general upkeep of campus through CPWD, provision of contractual manpower to various divisions, and service matters pertaining to the staff viz., Framing of Recruitment Rules in respect of all Group 'B' & 'C' posts as per the recommendation of VII CPC and its onward transmission to the CTD for its notification, holding of DPC for considering cases of promotion, confirmation, grant of MACP, processing of legal issues pertaining to service matters coming under the purview of Central Administrative Tribunals and Honorable High Court of Karnataka & SLP in the Supreme Court. The details of the staff position are as under:

Sl.No.	Category	Sanctioned	In Position	Vacant
1.	Group 'A'	14	12	2
2.	Group 'B'	02	01	1
	Gazetted Non-Gazetted	38	28	10
3.	Group 'C'	71	54	17
		125	95	30

### **Promotions**

Sl. No.	Name	Designation	Date
	NIL	NIL	

**Retirements on attaining the age of superannuation**

Sl. No.	Name	Designation	Date
1.	Sri. Udhiya Kumar	MTS	31.08.2022

**Retirements other than superannuation/ Demise:**

Sl. No.	Name	Designation	Date
1.	Sri.M.Raju	MTS	06.04.2022
2.	Sri.R.Ashok Kumar	Driver	10.04.2022
3.	Sri.T.Narayanaswamy	Helper	26.07.2022 (VRS)

*Sl. No. 1 and 2 Death***Transfers from NTI: Nil****Transferred to NTI: Nil****Requirements were made for EQA and research project**

Sl. No	Name of the Project	Date of Interview	Total No of Posts
1	EQA/NRL	-	-
2.	A Phase –III Randomized, Double-blind, Three-arm Placebo-controlled Trial to Evaluate the Efficacy and Safety of two vaccines VPM 1002 and Immuvac ( Mw) in Preventing Tuberculosis (TB )in Healthy Household Contacts of Newly Diagnosed sputum Positive Pulmonary TB patients	07-03-2023	02

**Departmental Promotion Committee meetings conducted - Nil**

**MACP**

<b>Sl. No</b>	<b>Total no. of MACP Cases Processed</b>
1.	4

**Court Cases**

<b>Sl. No</b>	<b>Name of the Court</b>	<b>Total No. of Cases</b>	<b>Dispose</b>
1.	Supreme Court	1	1
2.	High Court	-	--
3.	CAT	1	--

**CGHS**

<b>Sl. No</b>	<b>Total No. of Permissions Granted</b>
1.	51

**Pay Fixation**

<b>Sl. No</b>	<b>Total No. of Pay Fixations</b>
1.	04

**CPWD, CIVIL, HORTICULTURAL & ELECTRICAL WORKS AND MAINTENANCE**

The civil, Horticultural and Electrical works of the Institute are being executed through the Central Public Works Department (CPWD), under the Ministry of Housing and Urban Affairs, Government of India, out of the budget sanctioned to NTI during each financial year.

A budget of Rs. 43,55,600.00/- Under the head of account PLAN CAPITAL – MAJOR WORKS and Rs. 66,72,543.00/- Under Machinery & Equipment was allocated to the Institute during the financial year 2022-23 for carrying out maintenance and new works. The following Civil and Electrical works were executed during the period under report, in addition to other routine repair & maintenance work.

#### **CPWD, Civil Works**

1. Routine maintenance of office campus and staff quarters.
2. Renovation of toilets in Training Block and CTU
3. Replacing of damaged soil pipes of toilets at Benjamin Block

#### **CPWD, Electrical Works**

1. Running and Maintenance 2nos of 125 KVA DG Set and 1No of Passenger Lift at NTI Campus
2. Replacement of old lift.
3. Staff quarters electrical maintenance.
4. Procurement of CCTV for office premises.

#### **TRANSPORT UNIT**

The Institute has fleet of 8 functional vehicles and the unit is responsible for the upkeep of the vehicles including in-house repair of vehicles, if feasible. The unit also maintains all documents pertaining to registration and condemnation of vehicles.

#### **Key activities performed during April 2022 to March 2023**

- Condemnation of Three Vehicles and letters regarding the condemnation of the vehicles have been communicated.
- 365 Gate passes were issued which includes the regular monthly vehicle touring for the POD-Vaccine Trial Study, the Institute related duties (administrative, technical and training duties), field visits

pertaining to PDSA study and duties pertaining to the regular functioning of the Institute.

- Fitness Renewal for the Bolero Vehicle has been carried out.
- Election duties have been performed during March 2023

## **HOSTEL**

The hostel unit of the institute caters to the accommodation needs of medical & paramedical trainees attending various training programmes and also officials visiting from headquarters and other Institutions/Offices. The Institute has two hostel blocks viz., Krishna Nivas and Cauvery Nivas and a Guest House. Krishna Nivas block has 25 double bedded rooms; Cauvery Nivas has 9 single rooms & 5 guest rooms and the Guest House has 7 beds. The Mess attached to the Hostel provides hygienic boarding facility.

## **STORES**

Stores cater to the logistic needs of various Units/Divisions of the Institute. It is responsible for procurement and supply of stores items for the smooth functioning of the Institute. This involves extensive procedures viz., receipt of indents from individual Units and their compilation, calling for quotations/tenders, BOQ bids, arrangements for opening the tenders, technical evaluation, preparation of comparative statements and submission of the same to the Purchase Committee for its recommendations for further necessary action. The other functions of Stores Unit includes:

- I. All major procurements are made through GeM.
- II. Maintenance of Stores and Stock Registers.
- III. Arrangement for Annual Maintenance of equipments held by different units/Divisions.

Details of purchases and other activities performed during 2022-23:

1. Items purchased against Annual Indent 2022-23 as decided and approved by the director and issued to various Units.

2. Stationery Items, General Stores Items and Sanitization items are purchased Through GeM & issued to various Units.
3. Laboratory chemicals, consumables etc., purchased and issued to Laboratory Unit.
4. Hostel items like steel utensils, teakwood cot etc., purchased and issued to Hostel Unit.
5. Purchase of Photo copier machines to Laboratory and ERD division.
6. Purchase of Laptops to Director's office and CTU.
7. Purchase of Smart board to Director's office and CTU.
8. Purchase and installation of CCTV Cameras and its accessories for the institute.
9. Stationery, General stores items and Training bags are purchased for Training unit and issued for their various Training activities.
10. Vehicle spares purchased and issued to Transport Unit.
11. IT Peripherals are purchased and issued to Computer Training Unit.
12. Procurement of Batteries for Online UPS held by CTU and Laboratory.
13. Circular issued and correspondence made for Annual Physical Stock verification.
14. Reimbursement of Office Bags / Briefcases for the eligible officers and officials.
15. Fire safety alarm installed in Laboratory unit.
16. Process for initiation of Calibration work for laboratory instruments to NABL activities.
17. Annual Maintenance Contract for computers, printers etc., renewed.
18. Annual Maintenance Contract for online UPSs renewed.
19. Annual Maintenance Contract for laboratory Instruments/Equipment's were renewed.
20. Disposal of Bio-medical waste contract renewed.
21. Repair and servicing of Laboratory Instruments held by Laboratory Unit.
22. Repair and servicing of Air conditioners held by this institute.
23. Repair and servicing of water purifiers held by this institute.



24. Servicing and refilling of Fire extinguishers held by this institute was initiated.
25. Stationery items and miscellaneous items purchased and issued for POD Vaccine Trial.
26. Deep Cleaning of Hostel and office wash rooms.

### **ACCOUNTS**

The unit caters to the financial matters of the Institute. Details of Budget received under Non Plan and Plan and Expenditure in the F.Y. 2022 -2023 is as follows:

	<b>Budget Estimate</b>	<b>Expenditure</b>
<b>Revenue</b>	17,09,00,000.00	16,01,05,000.00
<b>Capital</b>	1,25,00,000.00	1,12,00,000.00
	<b>18,34,00,000.00</b>	<b>17,13,05,000.00</b>

**7. PARTICIPATION IN MEETINGS / PROGRAMMES / SEMINARS /  
CONFERENCES / WORKSHOPS / CME ETC.**

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The Director, faculty and technical staff of NTI participated as facilitators, resource person / delegate in Conference / workshops / training programmes conducted in both at NTI and outside. The details are furnished below:

<b>Sl. No.</b>	<b>Particulars</b>	<b>Date</b>	<b>Resource person/Participants</b>
1.	NAPCON at Deen Dayal Hasthakala Sankul Varanasi	01.04.2022	Dr. Somashekar N Dr. Udanisha N
2.	Vaccine trial progress update meeting with the ICMR experts every fortnight	Once every fortnight	Dr. S. Uma Shankar
3.	Zonal Task Force (ZTF) Workshop for Medical College	05.04.2022	Dr. Somashekar N
4.	National Consultative Workshop on STDC strengthening' under USAID supported iDEFEAT TB Project organized at Bengaluru	07.04.2022- 08.04.2022	Dr. Somashekar N.
5.	76 <sup>th</sup> National Conference of NATCON at Mullana, Ambala, Haryana	11.04.2022 & 13.04.2022	Dr. Somashekar N. Dr. V. K. Chadha Dr. C. Ravichandra Dr. S. Uma Shankar Dr. S. K. Tripathy Dr. Poornima A Dr. Sarika Jain Agrawal Mrs. Leena S. Mr. Rony Jose Kokkad Mr. R. Padmesha

			Mr. V Magesh Mr. Joydev Gupta Mr. S. Jameel Ahmed Mr. Govindanarayanaswamy Mr. O. Srinivasalu Dr. Reena K Dr. Mamatha H G Mr. Somashekharayya H.
6.	Zonal Task Force Workshop for Medical College for West Zone held at Panjim Goa.	18.04.2022 to 19.04.2022	Dr. Somashekar N.
7.	Zonal Task Force Workshop for Medical Colleges for South Zone – I (Bengaluru)	20-04-2022	
8.	Experience Sharing meeting in Delhi for Revised OSE formats and root cause analysis of invalids in Truenat testing by CTD & IDDS	20.04.2022	Dr. Somashekar N. Dr. Reena K Dr. Mamatha H G
9.	FMR Echo Session on WGS	21.04.2022	Dr. Somashekar N. Dr. Reena K Dr. Mamatha H G
10.	TB Summit at Hotel Shangri La Eros, New Delhi organized by the Union South East Asia in partnership with CTD.	27.04.2022	Dr. Somashekar N.
11.	Participated in the webinar on the recently released, updated guidelines on management of child and adolescent TB organized by WHO SEARO in	27.04.2022	Dr. Somashekar N.

	collaboration with HQ		
12.	Discussion with FIND EQA team for finalizing NAAT EQA reports and protocols	27.04.2022	Dr. Reena K Dr. Mamatha H G
13.	BD STRIDES & NRL joint assessment visit to IRL Ajmer	29.04.2022	Dr. Reena K
14.	Joint Assessment visit to IRL KGMU, Lucknow	19.05.2022 to 20.05.2022	Dr. Reena K
15.	Participated in the virtual meeting of the National Technical Expert Group under NTEP	23.05.2022- 25.05.2022	Dr. Somashekar N.
16.	Virtual meeting with IDDS: IRL EQA OSE visit checklist and reporting format discussion with IRL Bangalore and IRL Pune	25.05.2022	Dr. Reena K Dr. Mamatha H G
17.	Technical specification meeting Karnataka	08.06.2022	Dr. Reena K
18.	Virtually participated in National Consultation workshop on Revised standards for TB care in India	21.04.2022 and 22.06.2022	Dr. Somashekar N
19.	STDC strengthening workshop conducted by the UNION, CTD	24.06.2022	Dr. Somashekar N. Dr. C. Ravichandra Dr. S. Uma Shankar
20.	AMC of equipment transition meeting with Maharashtra state, FIND and CTD	30.06.2022	Dr. Reena K Dr. Mamatha H G
21.	Onsite Training for Truenat at Koratagere site, Tumakuru	06.07.2022	Dr. Reena.K Dr. Mamatha H G

			Ms. Pushpa
22.	Pilot visit to DTC Tumakuru in connection with the Multicentric Prospective cohort study of TB recurrence free cure among microbiologically confirmed new pulmonary TB patients treated under NTEP with the 4 months moxifloxacin containing daily regimen.	22.07.2022	Dr Somashekar N.
23.	Participated in the Webinar Series; International Knowledge sharing platform (i-DEFEAT TB Project) - Experience on BPaL Regimen rollout	28.07.2022	Dr. Somashekar N.
24.	Onsite training of lab staff of SPMC, Bikaner, SMS Jaipur & Jhalawar medical college and operationalization of SPMC Bikaner	01.08.2022 to 05.08.2022	Dr. Reena K
25.	Virtually participated in the National Consultation on TB Elimination – Building Synergies for a TB MUKT Bharat	03.08.2022	Dr. Somashekar N
26.	Chaired the Technical Committee meeting for Updating STDC Guidelines held at NTI Bengaluru and provided technical inputs for	04.08.2022- 05.08.2022	Dr. Somashekar N

	updating the guidelines.		
27.	NAAT EQA steering committee meeting with FIND and CTD officials.	17.08.2022	Dr. Reena K Dr. Mamatha H G
28.	Visit of NRL Bio medical engineer to STDC Karnataka for checking UPS connected to MGIT machine and CBNAAT instrument	18.08.2022	Mr. Mohammed Sadiq
29.	Represented NTI as Guest of Honour on invitation from NIRT Chennai in Commemoration of 65 <sup>th</sup> annual day celebration	20.08.2022	Dr. S. Uma Shankar
30.	Annual NRL EQA OSE visit to STDC Nagpur	22.08.2022 to 26.08.2022	Dr. Mamatha H G Ms. Vinutha Mr. Charan Ms. Benzir
31.	Participated in Six month Online Program Managers (DTO) Executive Course under iDEFEBAT TB Project	27th August 2022 to 04th February 2023	Dr. S. Uma Shankar Dr Poornima A
32.	Meeting with Karnataka state officials for general lab consumables procurement	29.08.2022	Mr. Somashekharayya
33.	Virtual discussion with CTD, IDDS team and all NRLs regarding TB Biosafety manual	29.08.2022	Dr. Reena K Dr. Mamatha H G

34.	Conducted TOG training for DTOs of Karnataka at STDC Bengaluru	06.09.2022	Dr. S. Uma Shankar
35.	Virtually participated in the Launch of Pradhan Mantri TB Mukht Bharat Abhiyaan on 9th September 2022.	09.09.2022	Dr. Somashekar N
36.	BD Strides assessment visit to CDST lab Aurangabad	13.09.2022	Dr. Reena K
37.	Guest speaker at IAMM PG Assembly central zone at AIIMS Raipur	15.09.2022	Dr. Reena K
38.	Health Programme in Doordarshan Chandana telecasted on 22-09-2022 and re-telecasted on 23-09-2022. Spoke on Pradhan Mantri TB Mukht Bharat Abhiyaan, Nikshay Mitra, General awareness on TB and NTEP activities	22-09-2022	Dr. Somashekar N
39.	Virtual discussion with CTD and states regarding decentralization of AMC for equipment	22.09.2022	Dr. Reena K Dr. Mamatha H G
40.	On site assessment visit to Cooper hospital Mumbai for reviewing lab layout	27.09.2022	Dr. Reena K Dr. Mamatha H G
41.	WGS workshop at Mumbai	28.09.2022 & 29.09.2022	Dr. Reena K Dr. Mamatha H G

42.	On site truenat training of newly recruited LTs and STLS in Nagpur Division	10.10.2022 to 13.10.2022	Ms. Vinutha Umashankar Mr. JayaGanesh K
43.	Meeting with Dr.Sarabjeet Chadha and Dr.Tarak Shah FIND, India	11.10.2022	Dr. Somashekar N Dr. Reena K
44.	Participated in the meeting with Mr. Christine S, Tuberculosis Branch Chief, CDC India/Division of Global HIV and TB and Dr. Toufique to discuss the data use and NIKSHAY	26.10.2022	Dr. Somashekar N
45.	Attended In-Person Meeting of DTOs under Program Managers (DTO) Executive Course under iDEFEAT TB Project at Sheraton Grand Bangalore Hotel at Brigade Gateway	15.11.2022 to 16.11.2022	Dr. Somashekar N Dr. S. Uma Shankar Dr Poornima A
46.	Presented a guest key not during the International Conference titled “Recent Advances in Allied Health & Biological Sciences Research” held at the School of Allied Health Sciences, REVA University, Bengaluru	18.11.2022- 19.11.2022	Dr. Somashekar N
47.	Virtually participated in the NTEG meeting to discuss the research protocol on BCG re-vaccination implementation in	01.12.2022	Dr. Somashekar N



	India.		
48.	Participated in the Regional Workshop on Preventing and Responding to Sexual Exploitation, Abusive and Harrassment held at Lemon tree Premier Hotel, Gurgaon, Haryana	08.12.2022- 09.12.2022	Dr. Somashekar N
49.	Meeting with Dr. Atul Goel, Director General of Health Services, on various technical and administrative issues of NTI during his visit to NTI.	16.12.2022	Dr. Somashekar N
50.	National TB biosafety manual: proof reading meeting at New Delhi	19.12.2022 to 20.12.2022	Dr. Reena K
51.	Facilitated NTEP staff in Quality Improvement “Plan-Do-Study-Act PDSA under iDefeat TB Project” in Tumakuru	20-12-2022	Dr. S. Uma Shankar Dr Poornima A Mr. Joydev Gupta
52.	Virtually participated in the Inter Ministerial Review Meeting on Bhavishya / CPENGRAMS portal through Bharat VC, under the Chairmanship of Secretary (Pension & PW)	02.01.2023	Dr. Somashekar N
53.	Participated in the International Conference on Recent Advancements in TB	11.01.2023	Dr. Somashekar N

	and HIV Research, organized by The Ohio State University's Global Gateway (India) and the Foundation for Neglected Disease Research (FNDR) at Hotel Shangri-La, Bengaluru		
54.	Participate in the launch of CBNAAT and hand held X-ray machine at BBMP Babu Jagjeevan Ram Referral Hospital Bengaluru, an initiative of Pradhana Mantri TB Mukht Bharat Abhiyaan by Sri. Lahar Singh Siroya, Hon'ble MP, Rajyasabha	17.01.2023	Dr. Somashekar N
55.	Supervision visit to Tumakuru to for Quality Improvement "Plan-Do-Study-Act PDSA under iDefeat TB Project" in Tumkuru.	18-01-2023	Dr. S. Uma Shankar
56.	Visit to NIRT Chennai for visiting newly established lab at Thiruvallur	24.01.2023 & 25.01.2023	Dr. Reena K Dr. Mamatha H G
57.	Meeting with Swamiji from Ramakrishna Ashram TB Sanatorium, Ranchi and had discussion on various aspects of TB Control activities.	25.01.2023	Dr. Somashekar N
58.	Workshop on 'Reduction in the incidence of TB among household contacts treated for malnutrition and diabetes in	27.01.2023 to 28.01.2023	Dr. S. Uma Shankar

	addition to PMTPT after ruling out TB: A model-based approach' at SSHIL, Puttaparthi, Andhra Pradesh.		
59.	Participated in the workshop on Capacity Building for TB Research under Programmatic Setting held at NIRT-ICMR, Chennai under the aegis of the South East Asia Regional Research Platform (SEAR RRP) jointly organized by National Institute for Research in Tuberculosis, Chennai in collaboration with The Union.	14.02.2023- 16.02.2023	Dr. Somashekar N
60.	Participated as resource persons for the training of BBMP medical officers, Bengaluru on	21.02.2023	Dr Poornima A Dr. Mamatha H G
61.	As a guest speaker, delivered a talk on PMTPT at KGMOA 30 <sup>th</sup> State Conference held at Siddhartha Medical College, Tumakuru.	11.02.2023	Dr. S. Uma Shankar
62.	Participated in online Site Audit of KCG Hospital and Jayanagar General Hospital	17.02.2023 and 20.02.2023	Dr. S. Uma Shankar
63.	Visit to GTB Sewree Lab and Rehabilitation facility, Mumbai as a part of supervision.	20.02.2023& 21.02.2023	
64.	77 <sup>th</sup> National Conference on Tuberculosis and Chest	27.02.2023 to	Dr. Somashekar N. Dr. V. K. Chadha

	Diseases held at Agra, Uttar Pradesh.	01.03.2023	Dr. C. Ravichandra Dr. S.Uma Shankar Dr. S. K. Tripathy Mr. Rony Jose Kokkad Mr. Sanjay Singh Mrs. Umadevi G. Mr. Sarvanan M. P. Mr. Hemath Kumar K. R. Mr. B. A. Shivashankar Mr. Shyam Krishnan Mr. Ranganatham A. Mrs. Vinutha Umashankar Ms. Pushpa T. J.
65.	Virtual meeting with Indonesia staff for CBNAAT EQA	07.03.2023	Dr. Somashekar N Dr. Reena K Dr. Mamatha H G Mrs. Vinutha
66.	Virtual meeting with Dr. Shiva Kumar for support to SEA countries	07.03.2023	Dr. Reena K Dr. Mamatha H G Mrs. Vinutha
67.	In person meeting with Dr. Sivakumar regarding strengthening SEA countries	10.03.2023	Dr. Reena K Dr. Mamatha H G
68.	CME on cleaning Biosafety cabinets-STDC Telangana	18.03.2023	Dr. Reena K
69.	Conducted Essay writing competition for nursing students at R.V college of nursing and Acharya College of nursing.	20.03.2023	Dr. Poornima A Mrs Suganthi.P Mr. Joydev Gupta
70.	Participated in a Health talk	22.03.2023	Dr. Somashekar N

	on TB in DD Chandana which was telecasted on World TB Day		
71.	Participated in a live broadcast programme organized in association with Department of Health and Family Welfare, Karnataka on YouTube and Facebook to create TB awareness among general public	23.03.2023	Dr. Somashekar N, Dr. Poornima A. Dr. Mamatha.H.
72.	Virtually participated as speaker during the CME organized by the Dept of Microbiology and delivered a talk on "Overview of NTEP".	24.03.2023	Dr. Somashekar N
73.	Participated virtually as a resource person for the World TB Day Observation conducted by Vishwa Sai College of Nursing and MVJ College of Nursing at their respective colleges students and faculty members from both the nursing colleges were sensitized on TB and NTEP	24.03.2023	Dr. Poornima A
74.	Presentation on TB lab design to Cooper hospital ,Mumbai	24.03.2023	Dr. Reena K
75.	Virtual meeting with NIRT Chennai- DRS Study –Indian Tuberculosis Genomic Surveillance Consortium:	27.03.2023	Dr. Reena K Dr. Mamatha H G

76.	Participated and delivered a talk titled " Promoting TB Awareness through Community Engagement " during the monthly event and as part of the education program in linking the academicians with scientists and the public at large held at Indian Institute of Science, Bengaluru, jointly organized by the Divecha Centre for Climate Change Indian Institute of Science and Lakeside Education Trust	30.03.2023	Dr. Somashekar N
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## **INSTITUTIONAL ETHICS COMMITTEE MEETINGS**

During the period under report, following NTI - IEC meetings were held:

1. The 28<sup>th</sup> NTI-IEC meeting was held in the Institute on 19<sup>th</sup> August, 2022 under the Chairmanship of Dr. Srigiri S Revadi.
  - Brief presentation on the three protocols submitted for ethical clearance was made by the Principal Investigators/Presenters and ethical issues pertaining to each protocol was discussed. Progress of previously approved protocols were also reviewed by the NTI-IEC committee.
  - All the three research protocols were approved by the Chairman and committee members.

## **8. RESEARCH DOCUMENTATION CELL (RDC)**

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The Research Documentation cell is carrying out the responsibility to digitize and upload the published TB research in Indian context as a nodal centre of NTI. The uploaded research articles are available in the research documentation portal [www.tbresearch.ntiindia.org.in](http://www.tbresearch.ntiindia.org.in).

The following activities were undertaken by Research Documentation Cell during the year:

### ***(A) Research Documentation Cell:***

- Web Administration of TB research portal [www.tbresearch.ntiindia.org.in](http://www.tbresearch.ntiindia.org.in)
- Correspondence with all the participating nodal centers.
- Processed access request to the documentation portal as & when requested.
- Digitization, metadata formation and uploading of Indian TB research articles (48 Nos) received from collaborating Centre's and published in various publications viz. Int J Tuberc & LD, IJMM, IJMR, IJTb, PHA etc.

### ***(B) Institutional Ethics Committee (NTI - IEC)***

- Drafted 18 sets of Standard Operating Procedure documents for re-registration of NTI-IEC with the licensing authority (CDSCO, New Delhi) in accordance to the NDCT guideline 2019.
- Assisted Member Secretary in organization of 28th NTI IEC meeting held on 19/08/2022 during the year 2022-2023.
- Maintaining the records and correspondence between NTI IEC and researchers

### ***(C) Technical Assistance to Director's Office***

- Assisted publication section in compilation of annual reports (2021-2022) of the Institute.
- Assistance in compilation of annual report of MoH&FW 2022-23.
- Compilation of material for TB India Report 2023.
- Support to NTI Website Committee.

### ***(D) WHO CC Activities***

- Compiled and submitted Annual Report of NTI as WHO CC pertaining to approved work plan for the period 2021-2022.
- Coordination with respective divisions in correspondence with WHO SEARO.