

# **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  
2018-19**

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

**ANNUAL REPORT  
2018-19**



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

**Email: [nti@ntiindia.org.in](mailto:nti@ntiindia.org.in)  
<http://ntiindia.kar.nic.in>**

**Year of Publication: 2019**  
**No of copies: 100**

**Facilitator**  
Dr. N. Somashekar

**Compiled & Edited**

Mr. Krishan Murari Singh  
Mr. Sanjay Singh

**Publisher**  
**National Tuberculosis Institute, Bengaluru-560 003**

## CONTENTS

---

	PAGE NO.
ABBREVIATIONS	
FOREWORD	
ORGANOGRAM	
1. HUMAN RESOURCE DEVELOPMENT DIVISION	01
2. LABORATORY DIVISION	14
3. EPIDEMIOLOGY AND RESEARCH DIVISION	22
4. MONITORING AND EVALUATION DIVISION	34
5. ADVOCACY, COMMUNICATION AND SOCIAL MOBILIZATION DIVISION	36
6. ADMINISTRATIVE DIVISION	40
7. PARTICIPATION IN CONFERENCES, WORKSHOPS, CONTINUING MEDICAL EDUCATION, TRAINING PROGRAMMES, MEETINGS, OTHER ACTIVITIES	46
8. ACKNOWLEDGEMENTS	57

## **LIST OF ABBREVIATIONS**

AIIMS	All India Institute of Medical Sciences
ARTI	Annual Risk of Tuberculous Infection
BCG	Bacillus Calmette Guerin
BBMP	Bruhat Bangalore Mahanagara Palika
CDSCO	The Central Drug Standards Control Organization
CMO	Chief Medical Officer
CPWD	Central Public Works Department
CTD	Central Tuberculosis Division
Dte.GHS	Directorate General of Health Services
DCGI	Drug Controller General of India
DGNM	Diploma in General Nursing & Midwifery
DMC	Designated Microscopy Centre
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment Short course
DRS	Drug Resistance Surveillance
DST	Drug Susceptibility Testing
DTO	District Tuberculosis Officer
EQA	External Quality Assurance
GCP	Good Clinical Practices
HIV	Human Immuno deficiency Virus
HRD	Human Resource Development
IEC	Institutional Ethics Committee
ICMR	Indian Council of Medical Research
ICH	International Council for Harmonisation
IRL	Intermediate Reference Laboratory
JALMA	Japanese Leprosy Mission for Asia
LPA	Line Probe Assay

MDR	Multi Drug Resistance
M.TB	Mycobacterium tuberculosis
NDRS	National Drug Resistance Survey
NIRT	National Institute of Research in Tuberculosis
NRL	National Reference Laboratory
NTEG	National Technical Expert Group
NTI	National Tuberculosis Institute
NTP	National Tuberculosis Programme
NFSG	Non-Functional Selection Grade
OSE	On-Site Evaluation
PMDT	Programmatic Management of Drug Resistant Tuberculosis
PPM	Public Private Mix
PPs	Private Practitioners
RNTCP	Revised National Tuberculosis Control Programme
RDC	Research Documentation Cell
SAARC	South Asian Association for Regional Co-operation
STDC	State Tuberculosis Demonstration and Training Center
STLS	Senior Tuberculosis Laboratory Supervisor
STO	State Tuberculosis Officer
STS	Senior Tuberculosis Supervisor
TAI	Tuberculosis Association of India
TB	Tuberculosis
TCC	Technical Co-ordination Committee
TU	Tuberculosis Unit
WHO	World Health Organization

## FOREWORD

It gives me immense pleasure to present the Annual report for the year 2018-2019. This report highlights the major activities undertaken by the Institute during the year and has a blend of both administrative and technical activities.

The Technical Activities carried out at NTI include building the capacity of human resources for effective implementation of RNTCP, and also to undertake Operational Research to strengthen the various services under RNTCP. The laboratory at NTI has been designated as one of the National Reference Laboratories, which assess the quality of the sputum smear microscopy, culture and drug susceptibility testing services in the laboratory network under RNTCP. Additionally, the institute also provides technical support to WHO, SAARC, The Union and other Partners of Global TB Control. Being a technical arm of the Central TB Division, Director NTI is the member of most National Technical Expert Group Committees, TWG on RNTCP and WHO South-East Asia Regional Technical Working Group on Tuberculosis Care and Prevention (SEAR TWG TB).

The core activity of the Institute is to support human resources development and strengthen the capacity of programme managers through training and skill development activities relevant to RNTCP. The training courses are organized in close consultation with Central TB Division, New Delhi. The Institute shoulders the responsibility of training medical and paramedical personnel from various states in several facets of Tuberculosis control. Induction training in RNTCP for programme managers, Training on PMDT Guidelines, Training on procurement & drug logistics management, and several Laboratory based training programmes were some of the important courses held at NTI during the year. The ICELT at NTI imparts trainings on WHO endorsed Newer Diagnostic Techniques for TB. In order to establish a National Database on Tuberculosis an Open Access Repository of abstracts of published scientific papers from all major national institutes is functional under the TB Net project. The Institute also provides one-day sensitization on TB Control Programme to medical and para-medical students pursuing life sciences and nursing courses. Operational research is one of the prime functions of the institute. The studies undertaken/initiated during the period under report were, *“Implementation of*

*the New Integrated Algorithm for diagnosis of Drug Resistant Tuberculosis in Karnataka State, India: how well are we doing?"; "Expenditure incurred for diagnosis among new TB patient notified by RNTCP in Bangalore City"; "Diagnosis and treatment practices among the treating physicians for the management of Extra Pulmonary TB(EP-TB) in selected tertiary care health facilities in Bangalore city—an evaluation based on mixed method"; "Systematic screening for pulmonary Tuberculosis among women attending public maternity Hospitals for Antenatal and Post-Natal Care in Bangalore"; "Prevalence of Pulmonary TB among workers employed in mines, other high silica and organic textile dust exposure settings (Multi-centric study)-India TB consortium"; "A phase III randomized, double blind, placebo controlled trial to evaluate the efficacy and safety of VPM1002 and Immuvac (Mw) vaccines in preventing tuberculosis in healthy household contacts of newly diagnosed sputum positive pulmonary TB patients".*

Several CMEs were organized during the period for sensitization of private care providers (PPs) & RNTCP officials in Standards for TB Care in India (STCI).

The functions of NRL comprises of training laboratory personnel and accreditation of state level Intermediate Reference Laboratories ( IRLs), Medical college and other private laboratories for the culture and Drug Sensitivity testing to detect Multi – Drug Resistant Tuberculosis (MDR-TB) apart from supporting Drug Resistant Surveillance (DRS) and PMDT at the state level. NTI supervises and monitors the quality sputum smear microscopy network across nine states. The NRL is also responsible for Human Resource Development and capacity building of IRLs for the management of MDR-TB.

Participation of faculty and Technical staff in various meetings, training programmes, seminars, internal evaluation visits, conferences, workshops and continuing medical education have been highlighted in this report.

A fleeting reference has been made on the organizational set up of the institute and the staff position of the institute. The role of Administrative division in ensuring the efficient execution of technical activities cannot be overemphasized and their contribution finds a mention in the report. The five units under this Division are - Establishment, Accounts, Hostel, Stores and Transport.

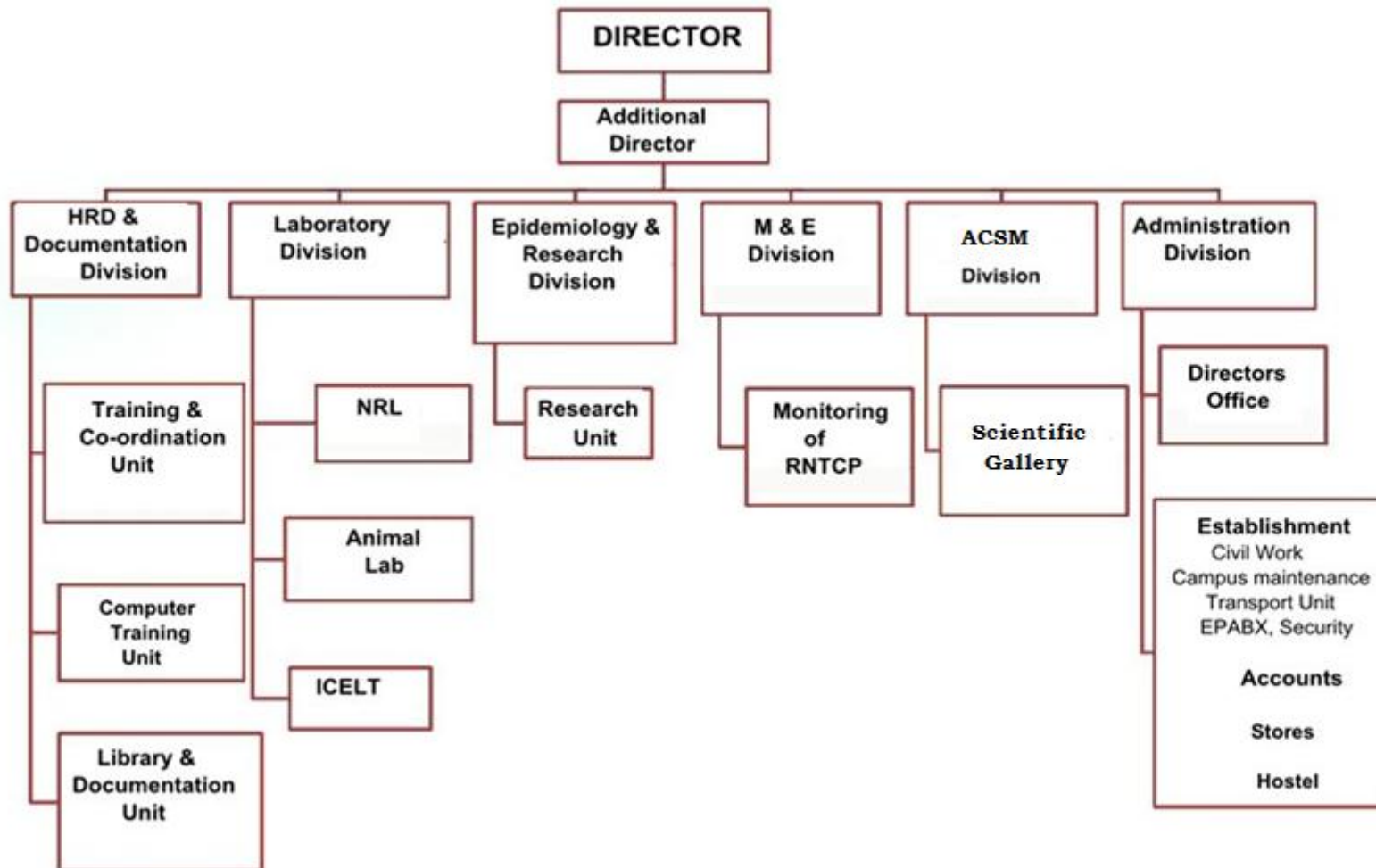
Amongst the visitors to the Institute were luminaries from the Government of India; State Governments; CDC, Atlanta; WHO, Bill & Millinda Gates; PATH and FIND.

I acknowledge the co-operation, hard work and diligence 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**

---

The core activity of the Institute is to support human resources development and strengthen the capacity of programme managers through training & skill development activities relevant to RNTCP. The three units under this Division are Training and Coordination Unit, Computer Training unit and Library & Documentation Unit.

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

The aim of RNTCP training programmes is to ensure that programme managers, professors of medical colleges, medical officers and paramedical staff are equipped with the necessary skills and knowledge required to implement and sustain TB control activities including quality assured diagnosis of TB, management of TB-HIV co-infection, management of drug resistant TB, data management and forging partnerships with all sectors involved in TB control activities.

All RNTCP training activities at NTI are organized in coordination with the HRD unit at Central Tuberculosis Division (CTD). The proposed annual plan for training activities to be held at NTI is prepared for the ensuing year and sent to CTD. The CTD communicates the annual training plan to all State TB Officers. Prior intimation of the annual training plan ensures advance nomination of candidates in appropriate batch sizes and also provides adequate time to secure release of participants from their offices for attending the training programmes. Also, the Training Unit works in tandem with the computer training unit, hostel, stores and transport units of the institute to facilitate smooth organization of training activities. Several training courses and workshops on all facets of TB control were conducted during the period of reporting to cater to the ever-increasing demand of trained manpower, the details of which are briefly appended below.

## **I. Training activities**

### **1. National level modular training in RNTCP for piloting & field testing**

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>
1.	District TB Officers and Medical Consultants	4th – 16th Feb 19	8

### **2. Training of Trainers (ToT) on Guidelines for PMDT in India-2017**

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>
1.	District TB Officer, Nodal Officer DRTB Center, Sr. Medical Officer, Medical Officer	17 <sup>th</sup> – 19 <sup>th</sup> April 2018	65

### **3. RNTCP PMDT guidelines training**

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>
1.	Medical Officers from Bangalore - Urban & Rural districts	4 <sup>th</sup> – 6 <sup>th</sup> Sept 2018	39
2.		3 <sup>rd</sup> – 5 <sup>th</sup> Oct 2018	43
3.		9 <sup>th</sup> – 11 <sup>th</sup> Oct 2018	23
4.		19 <sup>th</sup> , 20 <sup>th</sup> & 22 <sup>nd</sup> Nov 2018	29
5.		11 <sup>th</sup> – 13 <sup>th</sup> Dec 2018	17

### **4. RNTCP Zonal Task Force Operational Research (OR) Workshop, South Zone-II**

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>
1.	Faculty from Medical colleges from Kerala, Puducherry and Tamil Nadu	2 <sup>nd</sup> – 4 <sup>th</sup> April 2018	18

### **5. RNTCP Operational Research (OR) Workshop, Karnataka**

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>
1.	Participants from various	6 <sup>th</sup> – 8 <sup>th</sup> June 2018	23
2.	Medical Colleges of Karnataka	25 <sup>th</sup> – 28 <sup>th</sup> March 2019	32

## 6. Training on RNTCP Technical and Operational Guidelines for TB Control in India

Sl. No.	Category of personnel	Period	No. of Participants
1.	TB Programme Coordinator & TB Medical Officer	21 <sup>st</sup> – 25 <sup>th</sup> Jan 2019	11

## 7. Collaborative training activities with 4th SAARC regional meeting of Heads/Chief of National TB and HIV/AIDS laboratories

Sl No	Category of personnel	Duration	No. of Participants
1.	Officials from STAC, Nepal, India, Sri Lanka, Afghanistan and Bhutan	28 <sup>th</sup> – 30 <sup>th</sup> Nov 2018	16

## 8. National Training on Procurement and Supply Chain Management and Nikshay Aushadhi

Sl. No.	Category of personnel	Period	No. of Participants
1.	CMO, Medical Officer, WHO-RNTCP Medical Consultant, Sr. Treatment Supervisor, District P.P.M. coordinator, PMDT, TB-HIV Coordinator, Data Entry Operator, State Pharmacist, Store Keeper, District Programme Co-Coordinator, District TB Officer from south zone	10 <sup>th</sup> – 12 <sup>th</sup> Oct 2018	28
2.		24 <sup>th</sup> – 26 <sup>th</sup> Oct 2018	41
3.		29 <sup>th</sup> – 31 <sup>st</sup> Oct 2018	26
4.		18 <sup>th</sup> – 19 <sup>th</sup> Dec 2018	33
5.		20 <sup>th</sup> – 21 <sup>st</sup> Dec 2018	31
6.		17 <sup>th</sup> Jan 2019	12
7.		18 <sup>th</sup> Jan 2019	22

## 9. Delamanid introduction under PMDT in India: Refresher Training

Sl. No.	Category of personnel	Period	No. of Participants
1.	Assistant Professor, WHO-RNTCP Consultant, State TB Officer, Sr. Specialist, Associate Professor, Nodal Officer DRTB, Microbiologist, Sr. Medical Officer, Professor & HOD, DRTB Coordinator, District TB Officer, Jr. Consultant, Sr. MO, Lecturer, CMO (NFSG)	1 <sup>st</sup> & 2 <sup>nd</sup> August 2018	26

**10. National ToT of using Delamanid in age group 6-17 years**

Sl. No.	Category of personnel	Period	No. of Participants
1.	District TB Control Officer, WHO RNTCP Consultant, Sr. Medical Officer, Nodal DR-TB Center, State DR-TB Coordinator, Sr. Medical Officer, Medical Officer, WHO-RNTCP Consultant, Professor and Head of the Department, Associate Professor, State TB Officer, Epidemiologist/APO, Nodal Officer DRTB, Pediatric Consultant, Sr. Specialist, Associate Professor and Sr. Medical	6 <sup>th</sup> – 8 <sup>th</sup> March 2019	52

**11. TOT on Programme for Financial Management Services (PFMS)**

Sl. No.	Category of personnel	Period	No. of Participants
1.	State level Accountants and Procurement and logistics officers from Karnataka	24 <sup>th</sup> - 26 <sup>th</sup> Oct 2018	43

**12. Comprehensive Training Course for Laboratory Personnel (Solid Culture, Liquid Culture, LED-FM, LPA, CBNAAT)**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Senior Lab Technicians, Microbiologists & Medical college Professors	7 <sup>th</sup> – 19 <sup>th</sup> May 2018	7
2.		22 <sup>nd</sup> Oct – 3 <sup>rd</sup> Nov2018	9
3.		11 <sup>th</sup> – 23 <sup>rd</sup> Feb 2019	7

**13. Training in External Quality Assessment (EQA)**

Sl. No.	Category of personnel	Period	No. of Participants
1.	DTOs, Medical Officers, Microbiologists, STLs & LTs	11 <sup>th</sup> – 15 <sup>th</sup> June 2018.	8
2.		24 <sup>th</sup> – 28 <sup>th</sup> Sep 2018	7
3.		21 <sup>st</sup> – 25 <sup>th</sup> Jan 2019	7

**14. Training in Liquid Culture MGIT 960 (First line and Second line DST)**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Laboratory Technician, Microbiologist & Technical Officer Microbiologist	23 <sup>rd</sup> – 27 <sup>th</sup> July 2018	9
2.	Depot Superintendent & Pharmacist from Karnataka	7 <sup>th</sup> – 11 <sup>th</sup> Jan 2019	8

**15. Training in Molecular based detection of first line and second Line drug resistance in TB by Line Probe Assay**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Jr. Bacteriologist, Microbiologists, Sr. Laboratory Technicians & Laboratory Technician	23 <sup>rd</sup> – 27 <sup>th</sup> July 2018	03
2.		27 <sup>th</sup> – 31 <sup>st</sup> Aug 2018	12
3.		21 <sup>st</sup> – 25 <sup>th</sup> Jan 2019	09
4.		4 <sup>th</sup> –8 <sup>th</sup> Mar 2019	10

**16. Training on Preventive Maintenance & Minor Repairs of Binocular Microscope**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Sr. TB Lab Supervisor, Lab Technician, STLS, Sr. Lab Technician, Fitter & Jr. Lab Technologist	2 <sup>nd</sup> – 5 <sup>th</sup> Apr 2018	18
2.		23 <sup>rd</sup> –25 <sup>th</sup> Apr 2018	19

**17. Modular Training for STLS**

Sl. No.	Category of personnel	Period	No. of Participants
1.	STLS from Andhra Pradesh	9 <sup>th</sup> –13 <sup>th</sup> Apr2018	44

**18. Making STRIDES Against MDR-TB - BD-USAID Partnership**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Microbiologist, Sr. Specialist, Medical Consultant, Technical Officer, Bacteriologist	12 <sup>th</sup> &13 <sup>th</sup> Dec2018	25

**19. Way Forward: TB Diagnostic Network Assessment 2017 (Workshop to develop Roadmap in lines with the recommendations of the Report of Joint Assessment of the Tuberculosis Diagnostic Network of India)**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Bacteriologist, Consultant Microbiologist, WHO Consultants, Technical Consultant, Consultant Microbiologist, Deputy Director, Country Director, The Union, Microbiologist, Project Assistant, Assistant Professor, Medical Officer, State TB Officer and National Consultant from Tamil Nadu, Delhi, Karnataka and Uttar Pradesh	6 <sup>th</sup> –8 <sup>th</sup> March 2019	31

**20. Training for Lab Technicians in sample collection, packaging, transportation & NIKSHAY entry**

Sl. No.	Category of personnel	Period	No. of Participants
1.	Lab Technicians of	3 <sup>rd</sup> & 4 <sup>th</sup> Oct 2018	20
2.	Bangalore Urban district	9 <sup>th</sup> & 10 <sup>th</sup> Oct 2018	18

**21. Refresher training programme for STLS on NIKSHAY**

Sl. No.	Category of personnel	Period	No. of Participants
1.	STLS from Bangalore Urban and rural district	11 <sup>th</sup> Oct 2018	07

**22. Modular Training for STS**

Sl. No.	Category of personnel	Period	No. of Participants
1.	STS from Andhra Pradesh	9 <sup>th</sup> –13 <sup>th</sup> Apr 2018	08

**23. Other Trainings**

S N.	Particulars	Date	No. of Participants	Participants
1	One day sensitization on current guidelines and updates regarding TB for PG Resident Doctors training	25 <sup>th</sup> Apr 2018	8	Stanley Medical College, Chennai, Tamil Nadu

2.	Sensitization training for PG Resident Doctors Training	18 <sup>th</sup> Sept 2018	12	Armed forced Medical College (AFMC), Pune, Maharashtra and Hassan Institute of Medical Sciences (HIMS), Hassan, Karnataka
----	---	----------------------------	----	---

## 24. International Center of Excellence for Laboratory Training (ICELT)

International Center of Excellence for Laboratory Training, supported by FIND, RNTCP and Global Fund, was started in NTI Bangalore with the mission “to support the scaling up of laboratory capacity building in India by providing hands-on training courses in the diagnosis and monitoring of major infectious diseases such as TB. Presently, ICELT is imparting trainings on WHO -RNTCP endorsed Newer Diagnostic Techniques for TB and its drug resistance in close collaboration with Central TB Division. The activities held in ICELT during the period of 1st April 2018 – 31 May 2019 are given below:

1. CBNAAT Xpert EQA panel production and verification for Phase 2 and Phase 3 May 2018- Dec 2018
2. Data Analysis of Genetic sequencing- Oct2018
3. E-Training Video Shoot- March 2019
4. Development of E-Training modules- Jan-April 2019
5. CBNAAT Xpert EQA panels dispatched to the sites and results collected, analyzed - March 2019
6. NABL Document Preparation

Training activities held in ICELT during the period of 1st April, 2018 – 31 March 2019 are given below:

Sl. No	Name of training	Participating laboratories	Date	No. of participants
1	National TOT Training on Line probe assay-Testing	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	27th -31st Aug, 2018	12
2	National TOT Training on Liquid Culture & Drug susceptibility testing of M.TB	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	29th Oct-3rd Nov, 2018	6
3	National TOT Training on Liquid Culture & Drug susceptibility testing of M.TB	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	12th -17th Nov, 2018	8

4	National TOT Training on Liquid Culture & Drug susceptibility testing of M.TB	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	3rd -8th Dec, 2018	8
5	CBNAAT MTB/RIF Assay Proficiency Testing Program (EQA) Under RNTCP, India	Privates lab from Pune, Nagpur, Raichur, Mumbai, Ajmer, Bangalore, Mumbai, Hubli	4th -5th Feb, 2019	36
6	CBNAAT MTB/RIF Assay Proficiency Testing Program (EQA) Under RNTCP, India	Privates' lab from Assam, Odisha, Mizoram, Sikkim, Manipur, Meghalaya, Nagaland, Arunachal Pradesh, Tripura.	6th -7th Feb, 2019	45
7	CBNAAT MTB/RIF Assay Proficiency Testing Program (EQA) Under RNTCP, India	Privates lab from Punjab, New Delhi, Bhagalpur, Patna, Himachal Pradesh, Jammu & Kashmir, Haryana	8th -9th Feb,2019	28
8	NABL- IA & QMS Training	NTI Bangalore, NTI Bangalore(ICELT), IRL Bangalore, RIMS Raichur, IRL Ahmadabad, IRL Visakhapatnam, STDC GTB Sewari Hospital, IRL Delhi	25th - 28th March, 2019	39
9	1st TBSLMTA Mentoring Workshop	NTI Bangalore, NTI Bangalore(ICELT), IRL Bangalore, RIMS Raichur, IRL Ahmadabad, IRL Visakhapatnam, STDC GTB Sewari Hospital	24th - 27th April, 2019	22

## **25. Other technical activities conducted by the officers of the Training and co-ordination unit**

- Dr. C. Ravichandran participated in the Central Internal Evaluation of Bahriach district of Uttar Pradesh from 13th – 19th of January 2019
- Dr. Parvathi Anil conducted Central Internal Evaluation at Fathehabad district of Haryana state from 24th – 28th September 2018
- Preparation for all the training activities scheduled during the year 2018-19
- Preparation of the technical reports of the training activities held during the year 2017-18.
- Dr. Poornima A. was deputed as facilitator for the DTO's TOG training held at STDC Agra from 17th – 21st December, 2018

## **26. Administrative activities**

a) Dr. Ravi Chandra. C, CMO-NFSG was involved in the following administrative activities:

- Discharged the duties as Division Head, HRD & Documentation Division, I/c Hostel, Chairman of Condemnation committee and Purchase Committee
- Preparation of WHO CC report of NTI for the year 2017-18.
- Member Secretary for the Hindi Rajbhasa Samiti
- Discharged duties as a Stock Verification Officer whenever nominated by the Director for physical verification of items held by various Divisions/Units of the Institute
- Other administrative duties entrusted by the Director from time to time.

b) Dr. Poornima A, MO was involved in the following administrative activities:

- Serving as a Liaison officer.
- Discharged the duties as Unit Head, Training & Member, Purchase Committee
- Discharged duties as a Stock Verification Officer whenever nominated by the Director for physical verification of items held by various Divisions/Units of the Institute.
- Involved in framing New Guidelines on allotment of NTI Quarters.
- Other administrative duties entrusted by the Director from time to time.

## **Computer Training Unit**

The Computer Training Unit supports the following major areas:

- Facilitates organizing need based training with relevance to programme and customized application related trainings
- To support Information and Communication Technology (ICT) Initiatives in the context of the Programme.
- To support Data Management and Statistical Analysis of research studies and other MIS.
- To cater to the maintenance of website / upkeep / up-gradation of IT infrastructure of the Institute.

The following NDRS activities that were under taken in the year:

1. I/c CTU was deputed to visit CTD, New Delhi between 16th – 18th July 2018 as a member of the interview panel to select IT consultants to support CTD on the IT requirements
2. I/c CTU was deputed to visit Central Leprosy Training and Research Institute, Chengalpattu between 16th – 18th August 2018 to provide consultation on implementation of IT policies. Also discussions on the consolidated DPS paper on pooled prevalence were held and follow up actions initiated
3. Presentation was made on NDRS finding in the office of the director, NTI on 7th Sept 2018. As directed the NDRS data was shared with the Director by email
4. Prepared a collage presentation on NTI achievements for the foundation day celebrations held on 17 September 2018
5. Attended a Nikshay Ver 2.0 training programme at Dasappa TB Unit on 28th September 2018
6. The process of renewal of SPSS and Anti Virus licenses has been initiated from CTU.
7. Upon procurement of Kaspersky AV, the server was configured and deployed. All the computers at NTI were installed with the client software and configured to receive periodic updates.
8. Participated and presented the activities and role of CTU in the Review of activities at National Tuberculosis Institute, Bangalore by Central Team 29th-30th November 2018.
9. Facilitated in conducting Training on Epicentre software – TB Exist for MGIT 960 supported by USAID and BD at NTI CTU lab on 28th Jan – 1st Feb 2019.
10. I/c CTU assisted in conducting of onsite demonstration training for setting up LIMS for the NTI lab in coordination with FIND and KPMG on 26-27 Feb 2019 at the CTU lab.

- 11.Subsequent Refresher training on the utilization of LIMS software for laboratory activities was conducted at CTU lab on 28th Feb &1st March 2019.
- 12.Upkeep and configuration of the Video Conference Unit to support all VC interactions like ECHO Clinic etc.
- 13.The MFS 100 biometric devices were registered under RD (Registered Devices) services. Interacted with NIC and vendor to procure RD ready Tablets. Periodical maintenance undertaken to ensure sustenance.
- 14.The internal stock verification of CTU was done and needful assistance to the stock verification team was provided.

### **TB-Net Project**

- Regular maintenance of the portal by uploading new content and creation of new user ids and passwords etc as per requirement.
- Providing access to the full text of documents as and when required from end user.

### **IT Support Services:**

- Periodic licensing server configuration & maintenance like SPSS, STATA, McAfee Licensing etc.
- Application server configuration and maintenance for the following websites:[www.ntiindia.org.in](http://www.ntiindia.org.in),[www.ntiresearch.ntiindia.org.in](http://www.ntiresearch.ntiindia.org.in),[www.ntiindia.org.in/ndrs](http://www.ntiindia.org.in/ndrs),[www.drs.ntiindia.org.in](http://www.drs.ntiindia.org.in),[www.tbresearch.ntiindia.org.in](http://www.tbresearch.ntiindia.org.in)
- Maintenance of access to subscribed Journals.
- Periodic uploading of contents onto NTI website is undertaken as per requirement.
- Periodic maintenance of Adhaar Enabled Biometric Attendance System (AEBAS) undertaken.
- Maintaining Email Services at NTI.
- Handling matters pertaining to AMC of computers / UPS and issues pertaining to server configuration / Internet services / mailing services.

## **Library and Documentation Unit**

### **Activities undertaken by the library are:**

- Collection and Maintenance of Core periodicals on TB & respiratory diseases, documents on TB research, reports, proceedings, souvenirs, WHO unpublished documents, selected papers, and non-print media viz. slides, cassettes, transparencies, CD ROMS etc.
- Coordinating with CTU in digitization of important research studies and hosting the same on the internet/intranet.
- Library provides the requisite information for the faculty members, staff of the Institute besides Medical and Para-medical trainees and delegates/visitors from medical fraternity.
- Coordinated in periodic updating of the NTI website, both internet and intranet.

### **Additional Activities:**

The copies of the following documents were archived and database updated:

- Research Protocol including work instructions endorsed by the Director.
- Final analysis undertaken in terms of tables, figures etc.
- Published article with Bibliography.

Subscription of over 11 journals/periodicals (inclusive of nine online) was renewed for the year 2018-19. The following four Periodicals were renewed for the year 2017-18:

- SWAMY'S News & SWAMY'S Handbook.
- PC Quest
- PC Digit

The following 8 journals have been subscribed online for the year 2018-19.

- Lancet
- Tuberculosis
- International Journal of Epidemiology.
- International Journal of TB & Lung Diseases.
- Indian Journal of Medical Microbiology.
- Journal of Clinical Microbiology.
- Clinics in Chest Medicine.
- Medical Clinics of North America.

I/c Library was involved in the following activities:

- Coordinated in participation of 14 officer/officials in the 73<sup>rd</sup> NATCON held at Nagpur, Maharashtra from January 4<sup>th</sup> to 6<sup>th</sup> 2019.
- Extended technical advice as i/c X-ray pertaining to X-ray Units & equipment to needy DTCs.
- Additionally discharging duty as Transport unit i/c by allotting drivers and vehicles from Transport section for field duties, headquarters duties & various other state/central government programmes.
- The fleet of 5 transport vehicles available at NTI are more than 15 years old and nearing its life. As several field studies are proposed to be taken up by NTI a proposal to purchase 5 new vehicles in lieu of 7 condemned vehicles correspondence with DDG (TB) vide letter F.No.TPT/Vehicles Pur/2018-2019 dated 22.06.2018 & 26.09.2018 for according administrative approval and financial sanction. In addition follow up letters dated 03.12.2018 & 29.01.2019 were also dispatched.
- NTI Annual Report for the year 2017-18 was published and distributed amongst faculty as per advice of the Director.
- Co-ordinated in Publication of The NTI Bulletin Vol 53/1-4, Jan – Dec 2017.

The printing section took up printing of various research forms/schedules and forms required for HRD, Establishment, laboratory division, Hostel and Accounts, Transport.

## **2. LABORATORY DIVISION**

---

The laboratory at NTI has been designated as one of the National Reference Laboratories, which assess the quality of the sputum smear microscopy, Culture and drug susceptibility testing services by phenotypic and genotypic methods in the laboratory network under RNTCP. As an NRL, NTI supervises and monitors the quality of sputum smear Microscopy of laboratories in the nine states allocated viz. Bihar, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and West Bengal. The NRL trains laboratory personnel and is responsible for certifying 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). Besides these activities it also supports State level Drug Resistance Surveillance (DRS) and DOTS Plus activities.

The NRL is also monitoring two new NRLs:

1. Bhopal Memorial hospital & Research Centre, Bhopal
2. Regional Medical Research Centre, Bhubaneswar

The National Reference Laboratory is quality tested by WHO Supra National Reference Laboratory (SNRL) Prince Leopold Institute of Tropical Medicine Antwerp, Belgium.

### **A. Quality Assurance System (QAS):**

The Quality Assurance (QA) system for sputum smears microscopy in RNTCP consists of Internal Quality Control (IQC), External Quality Assessment (EQA) and subsequently Quality Improvement (QI) of the laboratory services.

### **B. External Quality assessment (EQA):**

External Quality Assessment is performed by an On-Site Evaluation (OSE) visit. The components of EQA are infrastructure assessment, panel testing (smear microscopy) of the laboratory staff and analyzing data from the Random Blinded Re-Checking (RBRC) at the district level.

The OSE visit facilitates the STDC and STC in reviewing the implementation of EQA especially on the problems of non-availability of LTs/DTOs, staff structure in STDC, training, Reagents Quality, disposal of infectious materials and RBRC activities.

### C. NRL SUPERVISORY ACTIVITY:

State	Dates	Number of districts visited by IRL
Karnataka	29 <sup>th</sup> October- 2 <sup>nd</sup> November, 2018	<b>Pre assessment visit:</b> Manipal hospital, Manipal
Pune	26 <sup>th</sup> - 27 <sup>th</sup> February, 2019	IRL assessment visit
Maharashtra	12 <sup>th</sup> – 16 <sup>th</sup> March, 2019	01: IRL Nagpur 01: IRL Pune

### D. Accreditation of Laboratories

Accredited Mycobacteriology laboratories are a pre-requisite for the efficient Diagnosis and follow-up of MDR-TB patients. Towards this objective, efforts are being made to establish IRLs to cater to the diagnostic and follow-up needs of DR-TB patients, in each state. Provision also has been made for inclusion of Laboratories of Medical Colleges and the Private Sector, interested in Participating in the diagnosis and follow-up of such cases.

The Microbiologists and Laboratory Technicians from such laboratories are trained by the NRL. Subsequently, a pre-assessment visit is undertaken by a Central team, the objective of which is to assess the suitability of the laboratory Infrastructure and installation of equipments.

Panel cultures are then exchanged between the NRL and the IRL for proficiency testing and retesting. A satisfactory performance is determined in terms of concordance of more than 90% for Isoniazid (H) and Rifampicin (R); more than 80% for Streptomycin(S) and Ethambutol (E). The laboratory carries out investigation of errors if any in case of an unsatisfactory performance in the Proficiency testing and informs the NRL regarding any corrective action taken.

A pre-accreditation visit is then undertaken by a central team to assess the Laboratory's technical performance, prior to formal accreditation. Accreditation is initially for a period of two years. During this phase, the accredited Laboratory is required to regularly and satisfactorily participate in proficiency testing exercises conducted by the NRL. The minimum number of participations in the proficiency testing is once prior to and twice within the first year of accreditation. Following this the laboratory is required to undergo Proficiency testing at least once in every two years.

An onsite – evaluation of the laboratory, is undertaken within the first year of grant of accreditation. A re-assessment is performed before the lapse of two years of accreditation, for which the laboratory applies six months in advance. Thereafter, re-assessment of the accredited culture and DST facility is

conducted every two years. The details of the accreditation visits made are as under:

**i) Status of Certification of Labs (Lab doing PT for Certification – 2018)**

<b>Sl. No.</b>	<b>State</b>	<b>Lab</b>	<b>Proficiency (Completed/ Ongoing/ Not done)</b>
1.	Rajasthan	1. IRL, Ajmer 2. SMS, Jaipur 3. SNMC, Jodhpur	Completed Completed Completed
2.	Karnataka	1. IRL, Bangalore 2. KIMS, Hubli 3. RIMS, Raichur	Completed Completed Completed
3.	Maharashtra	1. IRL, Pune 2. IRL, Nagpur 3. GMC, Aurangabad 4. GTB, Sewree 5. JJ Hospital 6. PD. Hinduja	Completed Completed Completed Completed Completed Completed
4.	Madhya Pradesh	1. BMHRC, Bhopal 2. MRTB, Indore 3. NIRTH, Jabalpur	Completed Completed Completed
5.	Chhattisgarh	IRL, Raipur	Completed
6.	Jharkhand	IRL, Ranchi	Completed
7.	Orissa	RMRC, Bhubaneswar IRL, Cuttack	Completed Completed
8.	West Bengal	IRL, Kolkata NBMC, Siliguri	Completed Completed
9.	Assam	IRL, Guwahati	Completed
10.	Tamil Nadu	NIRT, Chennai	Completed

**ii) Specimens processed at NTI during April 2018- March 2019**

<b>S. No.</b>	<b>Particulars</b>	<b>Total No.</b>
1.	Total Specimens (Sputum + XDR Culture +PMDT+NTM and OP) registered	6953
2.	XDR suspect culture samples registered	262
3.	Total number of Specimens registered for OP (1 for NTM)	90
4.	Total number of Specimens from Karnataka registered for LPA (PMDT)	5095
5.	Total No. of specimens put up for primary culture OP + 3 Dist of Karnataka –PMDT	5745

6.	Total no. of Line Probe Assay performed ( 1 <sup>st</sup> line)	6919
7.	Total no. of Line Probe Assay performed ( 2 <sup>nd</sup> line)	1113
8.	Total number of specimens subjected to Gene-Xpert	608
9.	Total no. of drug Susceptibility tests performed by using MGIT	1172
10.	No. of Specimens subjected for identification test (Immuno- Chromatographic Test)	830
11.	Total number of samples subjected for HPLC	31
12.	Total Number of Belgium cultures received for Quality control	20
13.	Total Number of drug susceptibility test by solid culture (LJ)	20

#### **E. Training Activities**

- i. RNTCP Modular Training for Sr. Tuberculosis Laboratory Supervisor was held from 9th to 13th April 2018**

<b>S No.</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	Andhra Pradesh	9

- ii. Preventive Maintenance & Minor Repairs of Binocular Microscope” Training was held from 23rd – 26th April 2018**

<b>S No.</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	Andhra Pradesh	4
2.	Goa	2
3.	Karnataka	3
4.	Jammu and Kashmir	2
5.	Kerala	2
6.	Maharashtra	4
7.	Odisha	2

**iii. Comprehensive training on Culture & DST**

<b>S No.</b>	<b>Period</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	7 <sup>th</sup> - 9 <sup>th</sup> May 2018	Haryana	01
2.		Uttar Pradesh	02
3.		Pune	01
4.		Punjab	02
5.		Assam	01
6.	October 2018	Karnataka	02
7.		Bihar	02
8.		Kerala	01
9.		Tripura	01
10.		Assam	01
11.		Telangana	02
12.	October 2018	Karnataka	05
13.		Andhra Pradesh	01
14.		Kerala	01
15.		Maharashtra	04
16.		Puducherry	01
17.		Telangana	01
18.		Tamil Nadu	03
19.		West Bengal	01
20.	11 <sup>th</sup> - 23 <sup>rd</sup> Feb 2019	Telengana	01
21.		Andaman	01
22.		Chennai	01
23.		Tripura	01
24.		Maharashtra	03

**iv. Liquid culture training**

<b>S No.</b>	<b>Period</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	23 <sup>rd</sup> to 27 <sup>th</sup> July 2018	Maharashtra	03
2.		Andaman & Nicobar	01

3.		Bihar	01
4.		Karnataka	03
5.		Madhya Pradesh	01
6.		Assam	01
7.		Sikkim	01
8.	7 <sup>th</sup> to 11 <sup>th</sup> Jan 2019	Karnataka	08

**v. LPA 1st Line training**

<b>Sl. No.</b>	<b>Period</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	23 <sup>rd</sup> to 27 <sup>th</sup> July 2018	Karnataka	03
2.	27 <sup>th</sup> to 31 <sup>st</sup> Aug 2018	Maharashtra	5
3.		Tamil Nadu	4
4.		Chhattisgarh	3
5.	4 <sup>th</sup> to 8 <sup>th</sup> Mar 2019	Chennai	02
6.		Uttar Pradesh	04
7.		Gujarat	01
8.		Jammu and Kashmir	01
9.		Maharashtra	01

**vi. Liquid culture DST training for laboratory personnel, Institute of Medical Science, Raichur was held from 7<sup>th</sup> to 11<sup>th</sup> Jan 2019**

<b>Sl. No.</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	Karnataka	08

**vii. EQA training for laboratory personnel was conducted at NTI**

<b>Sl. No.</b>	<b>Period</b>	<b>Place / State</b>	<b>No. of Participants</b>
1.	24 <sup>th</sup> to 28 <sup>th</sup> Sep 2018	Maharashtra	02
2.		Uttar Pradesh	01
3.		Sikkim	01
4.		Daman Diu	01
5.		Andaman and Nicobar	01

6.		Karnataka	01
7.	21 <sup>st</sup> to 25 <sup>th</sup> Jan 2019	Karnataka	04
8.		Orissa	01
9.		Himachal Pradesh	01
10.		Chhattisgarh	01

**viii. First and Second line LPA DST for laboratory personnel was held at NTI from 21<sup>st</sup> to 25<sup>th</sup> January 2019**

Sl. No.	Place / State	No. of Participants
1.	Karnataka	1
2.	Punjab	1
3.	Jharkhand	1
4.	West Bengal	2
5.	Tamil Nadu	1
6.	Uttar Pradesh	1
7.	Maharashtra	2
8.	Jammu and Kashmir	1

**ix. On-site training conducted by EQA DRS team**

Type of Training	Venue (NRL/ On-site)	Number of Batches	Total number of participants trained
LPA and LC-DST	IRL Goa 20 <sup>th</sup> -24 <sup>th</sup> May, 2018	1	5
LPA and LC-DST	IRL Pune 17 <sup>th</sup> – 21 <sup>st</sup> June, 2018	1	14
LC & DST	23 <sup>rd</sup> - 27 <sup>th</sup> July, 2018	1	12
LPA	23 <sup>rd</sup> – 27 <sup>th</sup> July, 2018 27 <sup>th</sup> -31 <sup>st</sup> August, 2018	2	3-Manipal 13
Refresher training for Lab technicians from Bangalore City, Urban and Rural Districts at NTI	3 <sup>rd</sup> -4 <sup>th</sup> October 2018 9 <sup>th</sup> -10 <sup>th</sup> October 2018	2	15 15

Refresher training for STLS from Bangalore City, Urban and Rural Districts at NTI	11 <sup>th</sup> October 2018	1	6
LPA	Gwalior : 30 <sup>th</sup> July-3 <sup>rd</sup> August, 2018	1	
LCDST & LPA	SNMC Jodhpur: Jodhpur: 7 <sup>th</sup> -11 <sup>th</sup> January, 2019	1	6
Training in LPA and LC-DST	SNMC, Jodhpur, 7 <sup>th</sup> – 11 <sup>th</sup> Jan, 2019	1	6

**x. Laboratory related meetings conducted at NRL NTI**

<b>Name of the meeting</b>	<b>Duration</b>	<b>Total number of participants trained</b>
NRL Microbiologist meeting at NTI	31 <sup>st</sup> Jan and 1 <sup>st</sup> Feb, 2019	12
Three day Roadmap Workshop in line with recommendations of TB Diagnosis Network Assessment Report	6 <sup>th</sup> to 8 <sup>th</sup> March, 2019	33

### **3. EPIDEMIOLOGY AND RESEARCH DIVISION**

---

Research in TB control and related areas is one of the primary functions of the Institute. The Institute has put in place the mechanism of Technical Coordination Committee (TCC) for thorough technical discussion and exchange of information before finalization of the research protocols. The projects are also screened by the Institutional Ethics Committee for addressing the ethical issues. The progress of the projects is monitored by the TCC at periodic intervals. The findings of the research studies are also discussed in the TCC before they are either presented in technical conferences or published in leading journals. The key findings are also shared with the stakeholders and the programme managers either for strengthening the programme or for policy changes.

Major functions of Epidemiology & Research Division are as under:

- To conduct community as well as facility based epidemiological, operational and implementation research in TB including preparing generic protocols, planning, organizing, implementing, monitoring & supervising, data collection, data management, analysis and report writing.
- Provide Technical and Operational support to other Organizations/Institutions in the country in conducting TB Epidemiology and operational research studies.
- Provide mentorship and training in operational research, epidemiology and different aspects of TB control. This is either CTD sponsored, Union sponsored or the State sponsored activity.
- Mathematical modeling for assessing the burden of TB and also to forecast the requirement of ongoing and newer RNTCP services required to achieve the targets set Globally as well as in India to End TB.
- Engage in other RNTCP related activities including development of training modules & guidelines; provide technical inputs towards policy development, monitoring & supervision and providing support for the modular trainings and sensitization held by HR division of NTI.
- Research dissemination.

The activities carried out by ERD during 2018-19 are as under:

## **A. Research Studies – Ongoing**

### **i) Implementation of the New Integrated Algorithm for diagnosis of Drug Resistant Tuberculosis in Karnataka State, India: how well are we doing?**

#### **Objectives:**

1. Among all TB patients diagnosed using Xpert® MTB/RIF assay in Karnataka state between July and September 2018, to determine the:
  - Number and proportion of eligible patients completing FL-LPA and its results
  - Number and proportion of eligible patients completing SL-LPA and its results
  - Number and proportion of eligible patients completing liquid culture and DST and its results
  - Number and proportion of patients completing the integrated DR-TB diagnostic algorithm
2. Among the above, to determine the median time duration between
  - Date of specimen collection and date of specimen receipt at the laboratory
  - Date of specimen receipt and date of reporting of results
3. To assess the health system resources (human resource, equipment, consumables, sample collection site and specimen transport mechanisms) against the prescribed norms at Xpert® laboratories and the reference laboratories performing LPA and culture-based DST.
4. To understand the facilitators and barriers in the implementation of DR-TB diagnostic algorithm and possible solutions from the perspective of healthcare providers.

#### **Methodology:**

##### **For Quantitative Phase:**

For objective 1 and 2, all the TB patients diagnosed using Xpert® MTB/RIF assay in Karnataka state between July and September 2018 will constitute the study population. Approximately 10,000 patients are estimated to be diagnosed with TB and all will be included in the study period. For objective 3, all the laboratories where Xpert® MTB/RIF assays are performed and the reference laboratories will constitute study population.

The data collection will be done between January 2019 and February 2019

##### **For Qualitative Phase:**

Healthcare providers involved in implementation and supervision of the DR-TB diagnostic algorithm constitutes the study population. A purposive

sampling method will be used so that all the cadres of staff (laboratory technicians of the Xpert® and the reference laboratories, microbiologists at the reference laboratories, district and state programme managers and RNTCP consultants) are represented. Two of the authors, the state programme manager and the consultant microbiologist of National TB Institute will also be key informants as we believe they are likely to provide key insights into the implementation challenges.

The key informants at district level will be selected from one good performing and one poor performing district (identified after analysis of quantitative data based on the proportion of the TB patients completing the diagnostic algorithm) covered by each of the four reference laboratories. The qualitative component will be implemented after analysis of the quantitative component. The data collection will be done between March 2019 and April 2019.

**Current Status:**

Field data collection from 36 CBNAAT sites across Karnataka is completed and double data entry is complete for 15 sites and data validation is in progress

**ii) Expenditure incurred for diagnosis among new TB patient notified by RNTCP in Bangalore City.**

**Objectives:**

1. To compare mean delay from onset of symptoms till initiation of anti-TB treatment among TB patients notified by public sector in 2017 with the mean delay among TB patients notified by public sector in 2005.
2. To estimate expenditure incurred by TB patients towards diagnosis of TB.

**Methodology:**

Study was carried out among new adult TB patients initiated on ATT by public providers in BBMP, RNTCP reporting Unit, Bangalore. An estimated 228 new adult TB patients initiated on ATT by public sector were recruited into the study, using systematic sampling. TU wise, list of PHIs were obtained from STO's Office. The data collection was carried out from September 2017 – February 2018.

PHIs to be visited for enrolment of study participants were purposively selected each month while ensuring:

- Total number of patients enrolled during the course of the study from hospitals and PHIs are in the ratio of total number notified by these two groups of PHIs.
- Enrolled patients were uniformly spread all over the BBMP limits, depending on the number initiated on ATT in the month in a given selected PHIs, either all patients were enrolled or a systematic sampling was performed.

Data was collected by personally interviewing each patient at a place and time convenient to them using a semi-structured pre-tested interview schedule.

**Expected outcome:** The study will provide information on :

- Change in diagnostic delay and treatment initiation among patients in public sector from the previous study conducted in 2005.
- Difference in total diagnostic delay and treatment initiation among patients in public sector.
- The findings will be useful to identify the extent of avoidable out of pocket expenditures towards diagnosis and design appropriate interventions for the same.
- In addition, experience gained during the study will be useful for field investigators in exploring a state level study on expenditure incurred by TB patients during the course of TB treatment, at a later point of time.

**Current Status:**

Data Collection completed and analysis and report writing is under progress.

**iii) Diagnosis and treatment practices among the treating physicians for the management of Extra Pulmonary TB (EP-TB) in selected tertiary care health facilities in Bangalore city—an evaluation based on mixed method**

**Objectives:**

1. To find out proportions of EPTB patients diagnosed and / or treated in selected tertiary health facilities in Bangalore City as per current RNTCP guidelines during 2017.
2. To find out provider constraints in adherence to these guidelines.

**Methodology:**

Record review of all EPTB patients diagnosed / treated in selected hospitals during January - December 2017 will be undertaken to find out adherence to RNTCP guidelines. The following records as per availability will be examined and data collated and compiled for each patient into a pre-designed data extraction form:

- Out patient records (If available in the health facility)
- In-patient records (paper-based/MRD/HMIS records)
- Hospital based/external Lab records & reports
- Referral for treatment register
- DOTS register
- TB Notification registers
- RNTCP treatment cards
- DMC/CBNAAT lab or C & DST registers
- Record of Anti-TB drug sales based of Schedule H1 registers
- NIKSHAY Database of Notified TB patients

**Expected Outcome:**

Based on study results, appropriate recommendations wherever needed will be given to the Health care providers of the tertiary health facilities towards effective implementation of EPTB Guidelines and the findings will help in

strengthening Linkages and appropriate utilization of RNTCP services for early and accurate diagnosis of EPTB.

Findings will be useful for formulating appropriate targeted interventions in the form of training, skill development of Practitioners and advocacy for additional resource mobilization.

**Current Status:** preliminary analysis based paper was presented at NATCON 2018.

#### **iv) Systematic screening for pulmonary Tuberculosis among women attending public maternity Hospitals for Antenatal and Post-Natal Care in Bangalore**

##### **Objectives:**

1. To find out the feasibility of systematic TB screening among women attending public maternity hospitals for antenatal and post-natal care in Bangalore city.
2. To find out the proportion of women having microbiologically confirmed pulmonary TB but not diagnosed through routine health care services

##### **Current Status:**

IEC approval obtained. Preliminary visit made to the health centers and had discussion with DTO, BBMP for seeking co-operation. Desk planning was done in consultation with DTO, BBMP Bangalore; preliminary data was collected visiting ANC center at Yellamma Dasappa TU. Accordingly, sample size has to be recalculated as per the finding of the visits. SOPs and research formats are prepared.

Study was deferred in lieu of large sample size required and the increased timeline required to implement the project which raised a question on the feasibility of the project.

#### **B. Study to be undertaken by NTI under India TB Research Consortium**

##### **i) Prevalence of Pulmonary TB among workers employed in mines, other high silica and organic textile dust exposure settings (Multi-centric study)-India TB consortium.**

##### **Objectives:**

1. To find out the prevalence of microbiologically confirmed pulmonary TB among workers currently employed in mines and in factories with exposure to silica and organic (non- synthetic) textile dust.
2. To formulate appropriate diagnostic algorithm for active case finding and to demonstrate feasibility in these settings.
3. To find out the proportion of cases attributable to recent transmission within the facility.

4. To find out existence and implementation of existing policies with respect to screening of TB, treatment aspects and infection control measures, in the selected facilities.

### **Methodology:**

Under the mines group, workers employed in hazardous tasks and locations in coal mines, iron ore, tin, copper, Manganese, Bauxite and gold mines may be included.

For the other silica exposed group, workers employed in stone/quartz crushing and grinding, rock drilling, stone quarries, tunneling, glass (and fiberglass) factories, sand mines/quarries, sand blasting, ceramic (tiles, brick), slate/pencil workers, foundry and cement industries can be included.

For textile organic dust exposed group, workers employed in cotton (ginning, spinning and weaving, power loom factories), jute (processing, spinning and weaving such as rope factories), wool (shearing and processing mills) and silk (spinning, scouring, weaving) mills may be included. The dying, printing, finishing and garment stitching units will be excluded.

For the above, workers both in the organized and unorganized sector may be included.

<b>S. N o.</b>	<b>Implementing Institutes</b>	<b>Miners</b>	<b>Workers exposed to Silica dust(other than miners)</b>	<b>Workers exposed to organic textile dust</b>
1.	NTI, Bangalore	7500 Distributed over 3 southern states	4000 Distributed over 3 southern states	500 wool workers in Karnataka
2.	RCOH, Bangalore			

The sample size will be allocated amongst the selected industries in the ratio of the number of workers employed. Within a given industrial unit, systematic sampling will be employed to cover the allocated sample size. The list of industrial units/mills/factories where this activity will be carried out by each implementing institute will be finalized on approval from the overall study coordinator, before initiating field work.

### **Current Status:**

This study is part of ICMR consortium and NTI is one of the selected sites to conduct study in collaboration with RCOH, Bangalore (Regional Centre for Occupational Hazard). Approved by IEC, SOPs & Research formats are prepared. Further modalities and budget requirement will be finalized in due course of time in consultation with ICMR.

**ii) A phase III randomized, double blind, placebo controlled trial to evaluate the efficacy and safety of VPM1002 and Immuvac (Mw) vaccines in preventing tuberculosis in healthy household contacts of newly diagnosed sputum positive pulmonary TB patients**

**Objectives:**

**a. Primary:**

1. 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

**b. Secondary**

1. To evaluate the efficacy of VPM1002 and Immuvac in 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].
2. To evaluate the safety of VPM1002 and Immuvac in Indian healthy household contacts.
3. 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 has been approved by DCGI vide their letter File No: BIO/Form44/FF/2018/9536 dated 20-Dec-2018. The trial will be cleared by the Institutional Ethics Committee of the respective trial sites. For NTI the clearance will be sought from the NTI- Institutional Ethics Committee (IEC). The clearance of the NTI- Institutional Ethics Committee (IEC) is awaited.

The details of the sputum positive PTB cases presenting to the DOTS centre/clinic/OPD of the implementing institute in the last 4 weeks will be obtained. The index case will be contacted and visited to explain about the study and required to provide details of healthy household contacts. 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 household contacts will be obtained from the index case by the health staff. Household contacts who will be willing to be screened will be registered. The study procedures will include three phases: screening phase, enrollment phase and follow-up phase.

**Expected Outcome:**

- To compare the percentage of confirmed TB cases (PTB and EPTB) as per RNTCP guidelines in the vaccinated and placebo groups from two months after first dose of vaccine 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 Secondary study period.
- Efficacy of vaccine in prevention of PTB/EPTB, in the different age groups of (6 to 18 years, 19-35 years, 36 to 60 years and above 60 years).
- To determine the protective effect for both forms of TB (PTB and EPTB).
- Immunogenicity of VPM1002 and Immuvac will be compared with placebo as measured by IL2 $\gamma$ , IFN $\alpha$ FACS (Fluorescence activated cell sorting): CD3, CD4/CD8, TNF  $\gamma$  [Time Frame: screening, month 2, month 6, and those who have developed PTB/EPTB will be followed up during the course of study]. , IL 10, IL12, 1L17 [Time Frame: screening, month 2, $\alpha$ , TNF $\gamma$ LUMINEX: IL2, IFN  $\gamma$  Protocol Number - ICMR/ITRC/VAC/001/2018, Version 1.3 Page 14 of 114 Confidential month 6 and those who have developed PTB/EPTB will be followed up during the course of study].
- Efficacy against other infectious diseases.
- Exploratory Efficacy against all-cause mortality.
- Endpoints Efficacy against all-cause hospitalizations.
- Efficacy in TST positive versus TST negative prior to immunization.
- Gender specific efficacy.
- Immunological correlates of protection.

**Current Status: Summary under progress**

1. Permission was sought from The Additional Chief Secretary, Karnataka for conduct of Vaccine Trial in the state. The administrative approval from the Joint Director, TB of the Karnataka State was obtained on 02nd May 2018.
2. Project Staff Recruitment: - Eight candidates were recruited in two batches for the above-mentioned project. It included two each of Medical Officers, Staff Nurse, Laboratory Technicians and Field Workers. The process remains completed as on 30/11/2018.
3. The patient information sheet, the consent and assent forms were translated into the vernacular language, Kannada and then back translated to English by using the expertise of NTI staff. The

questionnaires were pilot tested locally to identify errors and was accordingly rectified.

4. The patient information sheet, the consent and assent forms were translated into the vernacular language, Kannada and then back translated to English as per the new regulatory requirement of CDSCO.
5. Capacity building exercises of Project Staff:
  - General orientation sessions on epidemiology of TB disease, burden, diagnosis and treatment were held at NTI for the staff.
  - RNTCP Programme Sensitization – the programme objectives and components were discussed. The challenges in meeting the 2025 targets and the need for scaling up and efficient implementation of the programme to tackle the disease were explained.
  - Detailed discussions on Vaccine Trial Protocol – The project staff were briefed on the various components of clinical trial, the need for new vaccine to prevent TB disease and cut down transmission.
  - The main roles and responsibility of the vaccine trial project staff was explained.
  - Modular training on RNTCP and PMDT were conducted for the Project Medical Officers.
  - Currently Medical officers are attached with Head of Epidemiology & Research Division, NTI, assisting and learning Research methods.
6. Ethics and GCP training:
  - The Standard Operating Procedures for the Institutional Ethics Committee were framed as per the CDSCO guidelines and was ratified by the Director, NTI.
  - All the members involved in the Clinical Trial, both directly and indirectly, were sensitized on Good Clinical Practices (GCP) and ethical aspects of clinical trial.
  - A test was conducted on ICH – GCP for all members and certificates generated. The same was submitted to ICMR.

- NTI-IEC SOPs were submitted to CDSCO for approval.
7. Laboratory visit and posting of staff at NRL, NTI:
    - Project staff were taken to sub-sites and familiarized with the laboratory setup.
    - Currently the laboratory technicians and field workers are posted at National Reference Laboratory – NTI to get hands on training in laboratory methods.
  8. Field Visits:
    - The administrative approval obtained for vaccine trial was shared with the Medical Superintendents of Jayanagar and KC General Hospital.
    - Discussions were held with the Ethics Committee members of the sub-sites for obtaining the approval for the vaccine trial.
    - Sub-sites field visits were taken up to understand the working environment and the hospital setup.
    - Interactions were held with the hospital staff and they were sensitized on vaccine trial to be undertaken in their hospital.
    - Informal interaction with TB unit Health Visitors (TB-HV) and patients were also undertaken.
  9. Registration of NTI – Institutional Ethics Committee (NTI-IEC) with CDSCO. All the necessary documentation has been completed and successfully submitted to CDSCO to obtain registration for the NTI – IEC. In fulfillment of the same, workshop was conducted for NTI – IEC members on ICH – GCP and the standard operating procedures of NTI – IEC.
  10. The monthly reports submitted promptly on time to ICMR contains all the details of the activities undertaken by NTI during the respective months.
  11. Detailed Budgetary Requirements for the vaccine trial is prepared and submitted to ICMR for necessary action.

## **C. Research dissemination:**

### **Research papers published with ERD officials as lead authors:**

1. Velayutham B, Chadha VK, Singla N, et al: Recurrence of tuberculosis among newly diagnosed sputum positive pulmonary tuberculosis patients treated under the Revised National Tuberculosis Control Programme, India: A multi-centric prospective study: PLoS One. 2018 Jul 6;13(7):e0200150.doi: 10.1371/journal.pone.0200150. eCollection 2018.
2. V.K. Chadha, Bhoomika Bajaj Bhalla et al: Tuberculosis diagnostic and treatment practices in private sector: Implementation study in an Indian city: Indian Journal of Tuberculosis, Volume 65, Issue 4, October 2018, Pages 315-321
3. V.K. Chadha, S.M. Anjinappa, et al : Sensitivity and specificity of screening tools and smear microscopy in active tuberculosis case finding; Indian Journal of Tuberculosis, Volume 66, Issue 1, January 2019, Pages 99-104
4. Chadha VK, Praseeja P: Active tuberculosis case finding in India - The way forward; Indian J Tuberc. 2019 Jan;66(1):170-177. doi:10.1016/j.ijtb.2018.05.014. Epub 2018 Jun 1.
5. VK. Chadha, Sharada M. Anjinappa, Paresh Dave, et al : Sub-national TB prevalence surveys in India, 2006-2012: Results of uniformly conducted data analysis; Published: February 22, 2019: <https://doi.org/10.1371/journal.pone.0212264>

## **D. Training Activities**

- Shri Rony Jose Kokkad, Deputy Director (ISS) and Shri Ravi Kumar Jaiswal, JSO attended a “Workshop on Basic of Biostatistics & SPSS” in St. John’s medical college, Bangalore on 11th & 12th October, 2018.
- Shri Rony Jose Kokkad, Deputy Director (ISS) and Shri Ravi Kumar Jaiswal, JSO attended a “Workshop on Basic course in Biostatistics” held at ICMR-National Institute of Epidemiology, Chennai from 10th to 14th December 2018.
- Deputy Director (ISS) attended a workshop on procurement management in Kochi on 26th – 28th November 2018.
- Shri Ravi Kumar Jaiswal attended Operational Research Workshop from 6<sup>th</sup> to 8<sup>th</sup> June 2018 at NTI.
- Smt. S.L Nagarathna, UDC participated in the Training Programme No.276/2019 from 20th to 22nd February 2019 on the subject “Special Course for Personnel Staff such as Private Secretary, Personal Assistant etc., covering their Duties and various Service Rules” at Parsam Institute of Statutory Rules, Bangalore.

**E. Other Technical Activities:**

- The Divisional Head was nominated as the Chirman of “Updation of NTI Website”. The meeting was held with all the Divsional Heads and it was decided that the Divisional Heads will provide updated materials to be hosted on the NTI Website during the next meeting to be held on 14<sup>TH</sup> August 2018.

**F. Other Administrative activities:**

- Dr.V.K. Chadha was promoted as Director and transferred to CLTRI, Chingleput and Dr. S.Uma Shankar was posted as Head of ERD w.e.f 17th April 2018
- As per the Office Order No.29/2/2018/Estt/Vol.II/567 dated 29/06/2018 Dr.Uma Shankar S handed over the charge of Communication & Sociology Division to Dr. Chethana Rangaraju, Public Health Specialist Gr.II in the afternoon of 02/07/2018.
- Shri Rony Jose Kokkad reported for duty as Senior Statistical Officer in NTI on the afternoon of 28/06/2018 and he is hereby posted to ERD and he will also have the additional charge as I/c Stores vide Office Order No.29/2/97-2018/Estt dated 09/07/2018.
- Divisional Head has extended his services as the chairperson of local purchase committee, NTI website updation committee, Hostel Committee and Quarters Committee. The Divisional Head was involved in the framing of the new guidelines for allotment of Quarters to NTI employees, 2019 and was involved in clearing the files related to completion of the International Guest House as a member of the Estate Committee.

#### 4. MONITORING AND EVALUATION DIVISION

---

The Monitoring & Evaluation Division (erstwhile Statistical Section) of the Institute plays an essential role and forms a supportive unit for the research activities. The erstwhile Statistics Section provided the statistical needs of all the research activities i.e. from the planning stage of studies or surveys, protocol development, designing study schedules/forms, sample size estimation, collection and validation of data, collation, analysis of data, generating tables, results and interpretation of the results of various research studies. At present, the monitoring activity for RNTCP is being carried out by the Central TB Division under Ministry of Health and Family welfare. The Monitoring and Evaluation Division of NTI provides support to CTD in conduct of Central Internal Evaluation of different states by providing trained manpower. It also provides support for statistical needs of all the research activities carried out by the Institution.

Now, the Division has Statistical Subordinate Service (SSS) Officers (Junior Statistical Officers) to maintain the standards of the statistical support for the research activities supervised by officers belonging to Indian Statistical Service (ISS) Cadre. However, presently, all the work related to M & E with regards to various research studies and monitoring related work under taken by ERD, Laboratory Division, and HRD respectively is being carried out by the JSO's functioning under M&E Division.

##### **Technical activities:**

Divisional Head, M&E attended TCC meetings, Central Internal Evaluations, Appraisal visits and also facilitated the trainings. Under M&E, the following officers have undertaken the Central Internal Evaluations of the following states during the year 2018-2019:

Sl.No	State	Officers	Date
1.	Odisha	Dr. A. Krishnamurthy Dr. George Sebastian	21 <sup>st</sup> -25 <sup>th</sup> May 2018
2.	Telangana	Dr. Umashankar S. Dr. George Sebastian	28 <sup>th</sup> – 30 <sup>th</sup> May 2018
3.	Karnataka	Dr. Somashekar N. Dr. Reena K. Mr. Somashekharayya	30 <sup>th</sup> May-1 <sup>st</sup> June 2018
4.	Maharashtra	Dr. Rohini Sharma	30 <sup>th</sup> May-1 <sup>st</sup> June 2018
5.	Chhattisgarh	Dr. George Sebastian	5 <sup>th</sup> – 8 <sup>th</sup> June, 2018
6.	Tamilnadu	Dr. Umashankar S.	16 <sup>th</sup> – 22 <sup>nd</sup> June 2018
7.	Jharkhand	Dr. A. Krishnamurthy Mr. Somashekharayya	26 <sup>th</sup> -28 <sup>th</sup> June 2018
8.	Rajasthan	Dr. Rohini Sharma	3 <sup>rd</sup> - 5 <sup>th</sup> July 2018
9.	Bihar	Dr. Umashankar S.	19 <sup>th</sup> – 24 <sup>th</sup> August 2018
10.	Haryana	Dr. Krishnamurthy Dr. Parvathi Anil	24 <sup>th</sup> - 28 <sup>th</sup> Sept 2018

11.	Punjab	Dr. Prahlad Kumar Dr. Chethana Rangaraju	10 <sup>th</sup> -14 <sup>th</sup> Dec 2018
12	Uttar Pradesh	Dr. Ravichandra C. Dr. Umashankar S.	14 <sup>th</sup> -18 <sup>th</sup> Feb 2019
13	Rajasthan	Dr. Krishnamurthy Dr. Laxmi	25 <sup>th</sup> -29 <sup>th</sup> March,2019

## 5. ADVOCACY, COMMUNICATION AND SOCIAL MOBILIZATION DIVISION

### 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 Officials/staff of health and other departments, doctors, Para-medical personnel from government and private sector including the various categories of health-sector trainees. We have two modes for dissemination of information viz., display units (Photo Displays & health education panels) and Interactive Information Kiosk, in addition to the regular sensitization programmes that are undertaken by the division.

### Visit of students

Para-medical personnel and Para-medical students undergo regular sensitization programme conducted by the ACSM division of NTI. The total number of such students are as follows:

Sl. No.	Category of students	No. of Participants
1.	B. Sc. (Nursing)	732
2.	MSc (Nursing)	77
3.	DGNM	25
4.	BSc(MIT)	25
5.	Diploma Health Inspector	26
6.	Medical Asst. Trainees	30
<b>Total number of students</b>		<b>915</b>

- Total no. of students – 915, Total no. of batches - 27

### Other activities

1. Divisional head has extended her services in the capacity as observer for Integrated Health Information Platform training organized by State Surveillance, Bangalore in conjunction with NCDC Delhi on 11<sup>th</sup> July to 12<sup>th</sup> July 2018. Further support was provided for the roll out of the trainings:
  - Bangalore Rural District on 30<sup>th</sup> July to 31<sup>st</sup> July 2018, 4<sup>th</sup> August to 6<sup>th</sup> August and Bangalore Urban District on 3<sup>rd</sup> August 2018.
  - Divisional Head participated one day CME for Post Graduate at Bangalore Medical College on 28<sup>th</sup> August 2018.

2. Divisional Head Participated in Delaminid training by CTD and WHO on 1<sup>st</sup> and 2<sup>nd</sup> August 2018.
3. Divisional Head participated in the Hindi Week programme as Judge during Hindi Week observation on 11<sup>th</sup> September 2018.
4. Divisional Head and ACSM staff facilitated, coordinated and organized 60<sup>th</sup> NTI Foundation Day on 17<sup>th</sup> September 2018
5. Divisional Head facilitated technical session of Epidemiology for post Graduate students of AFMC and Hassan Institute of Medical Sciences on 18<sup>th</sup> September 2018.
6. Divisional Head facilitated PMDT training for Medical Officers on 9<sup>th</sup> October 2018.
7. Divisional Head and ACSM team visited BSF Yelahanka for Sensitization Programme on 10<sup>th</sup> October 2018.
8. Divisional Head and ACSM team visited CRPF Yelahanka for Sensitization Programme on 31<sup>st</sup> October 2018
9. Divisional Head facilitated PMDT training for MOs on 19<sup>th</sup> & 20<sup>th</sup> November 2018.
10. Divisional Head presented the Technical Presentation on ACSM activities to Deputy Director General and Central TB Division Delhi team on 29<sup>th</sup> November 2018.
11. Divisional Head participated in Central Internal Evaluation in Patiala District Punjab State on 10<sup>th</sup> December to 14<sup>th</sup> December 2018.
12. Divisional Head visited Health and Family Welfare, Egmore, Chennai state as facilitator for the training of MO's and DTO's RNTCP on 11<sup>th</sup> March to 15<sup>th</sup> March 2019.
13. ACSM division facilitated World TB Day Sensitization programme for all the NTI staffs on 24<sup>th</sup> March 2019 (A.N)
14. ACSM division facilitated in the conduction of CME programme for CGHS Medical Officers as part of World TB Day on 25<sup>th</sup> March 2019.
15. Divisional Head and Sister Tutor visited Lion's Club International in JP Nagar for Sensitization programme on 19<sup>th</sup> March 2019, for Shree Shakthi Group women from Urban Slums
16. Support to State TB Cell:
  - Divisional Head and Sister Tutor attended meeting at Joint Director Office, Bangalore regards World TB Day on 1<sup>st</sup> March and 11<sup>th</sup> March 2019
  - Divisional Head and ACSM staff participated in the World TB Day

Rally organized by State TB office and World TB Day programme in Bangalore Medical College Auditorium on 24<sup>th</sup> March 2019 (F.N).

17. Divisional Head participated in the Operational Research Workshop on 25<sup>th</sup> March, 2019.
18. Sri. Hemanth Kumar N. K. -Sister Tutor was involved in the sensitization on the Nursing and Para-medical students.
19. Sri. Hemanth Kumar. N. K. -Sister Tutor attended Computer Training at Chennai in the month August 2018.

**Glimpses from the ACSM division regards the activities conducted during the period April 2018 to March 2019:**



**World TB Day Observation at NTI Bangalore on 24<sup>th</sup> March 2019, wherein the NTI Staffs were sensitized regards the RNTCP and the ex-employee from NTI were felicitated:**



**CME on TB Updates for CGHS Doctors and release of NTI Bulletin on 25<sup>th</sup> March 2019 as part of the World TB Day Observation 2019:**



**Sensitisation of the Stree Shakti Group from the ACSM division**

## 6. ADMINISTRATION DIVISION

The Administration Division of NTI caters to all the administrative requirements of the Institute. The five units under this Division are Establishment, Accounts, Hostel, Stores and Transport Units. The major activities of the units for the financial year April 2018 to March 2019 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 staff position are as under:

Sl.No.	Category	Sanctioned	In Position	Vacant
1.	Group 'A'	14	12	02
2.	Group 'B' - Gazetted - Non-Gazetted	02 28	01 22	01 04
3.	Group 'C'	82	77	05
Total:		124	112	12

### Retirements on attaining the age of superannuation

Sl. No.	Name	Designation	Date
1.	Sri. H.S. Mallikarjunaiah	Social Worker	31.05.2018
2.	Smt. B. Vijayalakshmi	Stenographer Gr-II	30.06.2018
3.	Smt. Pavanammal	Safaiwala	31.10.2018
4.	Sri. Gopalakrishna	MTS	31.01.2019

**Transfers from NTI**

S No.	Name	Designation	Date
1.	Dr. V. K. Chadha	Public Health Specialist (SAG)	06.04.2018
2.	Smt. Praseeja P	SSO	16.05.2018
3.	Dr. Sarika Jain Agrawal	Specialist Gr.III - Microbiology	04.09.2018
4.	Dr. H.G. Brahmane	Consultant	25.09.2018
5.	Sri. Sandeep Kumar	Upper Division Clerk	30.11.2018

**Transferred to NTI**

S No.	Name	Designation	Date
1.	Dr. Chethana Rangaraju	Public Health Specialist Gr-II	01.06.2018
2.	Sri. Rony Jose Kokkad	SSO (Deputy Director, ISS)	28.06.2018
3.	Dr. H.G. Brahmane	Consultant	03.08.2018
4.	Dr. Sarika Jain Agrawal	Specialist Gr. III - Microbiology	25.09.2018

**Other Technical Activities:**

S No.	Total no.	Particulars
1.	16	MACP cases processed
2.	72	Permissions for CGHS Granted
3.	02	<b>Court Cases :</b> 1. Honorable High Court of Karnataka (One Case) 2. Supreme Court (One Case)
4.	10	Pay Fixation

**Interview Conducted:**

S No.	Name of the Project	Date of Interview	Total Posts
1.	Phase III POD Vaccine Trial	25-10-2018	08

**Other Activities during the year:**

1. NTI Foundation Day observed on 17.09.2018

2. Hindi Saptaah observed from 07.09.2018 to 14.09.2018 and Hindi Divas Observed on 14.09.2018
3. International Yoga Day observed on 21.06.2018
4. Vigilance awareness week observed in the Institute from 29.10.2018 to 03.11.2018

## **CIVIL, HORTICULTURAL & ELECTRICAL WORKS AND MAINTENCE**

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

A budget of Rs.80,00,000/- Under the head of account PLAN CAPITAL – MAJOR WORKS and Rs.10,00,000/- Under Machinery & Equipment was allocated to the Institute during the financial year 2018-19 for carrying out maintains and new works. The following Civil, Horticultural and Electrical works were executed during the period under report.

- Civil, Horticultural and Electrical maintenance work for Campus and Quarters.
- Running and Maintenance 2nos of 125 KVA DG Set and 1No of Passenger Lift at NTI Campus.
- Construction of Guest House work at NTI Campus.
- Accessible India Campaign work.
  - Providing direction tiles for Visually Challenged Individuals from Main Gate to various blocks in the Institute.
  - Providing Ramp with Stainless Steel railing for Specially Abled Individuals in Avalon, Laboratory, Training Block and Hostel Unit.
  - Providing toilets for Specially Abled Individuals in Avalon and Training Block.
  - Sign Board for Toilets, Ramps, Directions and Parking.

## **Transport Unit**

The Institute has fleet of 7 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, insurance and condemnation of vehicles.

1. Total number of kilometers run by each vehicle:

- Mahindra Armada	KA. 04 Z 2427	-	099331 Kms
- Mahindra Bolero	KA.04 Z 6872	-	155043 Kms
- Mahindra Bolero	KA. 04 MA 1360	-	162074 Kms
- Mahindra Bolero	KA. 04 MA 1361	-	187714 Kms

2. The Number of vehicles available in running condition is presently as mentioned under 1

3. Number vehicle for condemnation:

- Eicher - KA. 04 P 1714

- Eicher - KA. 04 P 1720

Documents of both the above vehicles under i) & ii) have been surrendered to regional RTO Bangalore.

4. Vehicle Number KA 04 P 474 Mahindra Armada has been stationed in the Workshop as it needs major engine overhauling work.

### **Stores**

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

- i. Maintenance of stores /stock ledger.
- ii. Arrangement for Annual Maintenance of equipments held by different Units/Divisions.
- iii. Arrangement for Annual Stock verification.
- iv. Arrangement for condemnation and disposal of unserviceable items as per Government laid down procedure.
- v. All major procurements are made through GEM

### **Details of purchases and other activities performed during 2018-19:**

1. Registration of GeM process initiated and completed as per GeM terms and conditions. Primary User, Buyer, Consignee and DDO is Registered.
2. Items purchased against Annual Indent 2018-19 as decided and approved by the director and issued to various Units.
3. Stationery Items and General Stores Items purchased Through GeM& issued to various Units.
4. Reimbursement of Executive/officer's bags for eligible officers & Officials.
5. Purchased Laptops, Desktops, Smartboard, Photo Copier machine and Laboratory instruments taken to stock and issued.
6. Laboratory chemicals, consumables etc., purchased and issued to Laboratory Unit.
7. Hostel items like steel utensils, teakwood cot etc., purchased and issued to Hostel Unit.

8. Stationery & General stores items purchased for Training unit and issued for their various Training activities.
9. Annual Maintenance Contract for computers, printers etc., renewed
10. Annual Maintenance Contract for UPSs renewed.
11. Annual Maintenance Contract for laboratory instruments/Equipment's were renewed.
12. Servicing and refilling of Fire extinguishers held by this institute is initiated.
13. Repair and servicing of Air Conditioners held by this Institute.
14. Binocular Microscopes & LED Fluorescence Microscopes issued to STO Kerala & Tamilnadu and Monthly statements are prepared and dispatched to DGHS.
15. Issued Wall Calendars, Diary (CCS-8 & CCS-10) 2018 to all the Units.
16. Towels & Glass Tumblers purchased and issued to all the staff.
17. Vehicle Spares purchased and issued to Transport Unit.
18. Physical Annual Stock verification for the year 2017-18 completed.

### **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.

### **Accounts Unit**

The unit caters to the financial matters of the Institute. This includes:

- a. Preparation of annual budget and performance budget proposals.
- b. Drawing and disbursement of salaries, traveling allowances, medical reimbursement & other claims and advances related to the staff & officers.
- c. Calculation and disbursement of MACP arrears, Pay re-fixation, and payment of arrears.
- d. Processing of payments pertaining to procurements made through stores and annual maintenance contracts services.

- e. Details of Budget received under Plan revenue and Capital Expenditure for financial year 2018-19 is as follows:

Plan	Budget received (Rs.)	Expenditure (Rs.)
<b>Revenue (2210)</b>	13,62,00,000	13,36,61,000
<b>Capital (4210)</b>	90,00,000	90,00,000
<b>Total</b>	<b>13,52,00,000</b>	<b>13,26,61,000</b>

- f. The revenue generated by the Institute for the year 2018-19 through various sources was credited to the consolidated fund of Government of India as given in the table below:

Year	Amount (Rs.)
2018-19	Rs.2,71,451.00

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

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>S No.</b>	<b>Particulars</b>	<b>Date</b>	<b>Participant(s)</b>
1	Assumed the charge as Director, NTI.		
2	Chaired the Meeting with all the Division Heads and CHS Officers in TCC Room to discuss Technical & Administrative issues.	9 <sup>th</sup> April 2018	Dr N. Somashekar
3	Inaugurated and facilitated the Training of Trainers on Guidelines for PMDT in India	17 <sup>th</sup> – 19 <sup>th</sup> April 2018	
4	Facilitated PMDT ToT for Medical College Faculty at Karnataka Health Promotion Trust	20 <sup>th</sup> & 21 <sup>st</sup> April 2018	Dr. C. Ravichandra Dr. S. Umashankar
5	Facilitated the workshop and delivered lecture on PMDT for Private Practitioners at IMA Hall, Tumkur.	27 <sup>th</sup> April 2018	Dr. S. Umashankar
6	Participated in Regional Technical Review Meeting on PMDT/TB-HIV/PPM for Western Region at Pune.	9 <sup>th</sup> - 11 <sup>th</sup> May 2018	
7	Chaired the Technical coordination Committee meeting at NTI to discuss the protocol & study formats for the study titled “Adherence to guidelines on Diagnosis & Management of Extra Pulmonary TB in tertiary health Care Facilities – An Evaluation”	16 <sup>th</sup> May 2018	Dr N. Somashekar
8	Participated in the NRL Coordination Committee Meeting held at NIRT Chennai.	21 <sup>st</sup> & 22 <sup>nd</sup> May 2018	

9	Took part and lead the Monitoring & supervision team to visit Shimoga & Kodagu district and discussed the observations with the State health Authorities. Recommendations were made and the report was submitted to CTD.	30 <sup>th</sup> may - 1 <sup>st</sup> June 2018	Dr N. Somashekar
10	Took part in the Institutional Ethics Committee meeting. Two protocols were discussed and then approved by the Ethics Committee.	2 <sup>nd</sup> June 2018	
11	Inaugurated & chaired the Operations Research workshop held at NTI. Facilitated as team leader and mentored the Investigators for development of protocols.	6 <sup>th</sup> – 8 <sup>th</sup> June 2018	
12	Pre-assessment visit (LC-DST) to KMC, Manipal, Karnataka	14 <sup>th</sup> June 2018	Dr. K. Reena
13	Inaugurated & participated as facilitators in the CME workshop for Private Practitioners on case notification and sensitization on updates of RNTCP at NTI	23 <sup>rd</sup> June 2018	Dr N. Somashekar
14	Conducted interview, as chairman, for selection of Contractual Staff for the proposed POD Vaccine Trial.	26 <sup>th</sup> June 2018	
15	CME on continued Medical Education on “Immunization: old Conquests and New frontiers” held at Mysore Medical College and Research Institute, Mysuru	28 <sup>th</sup> June 2018	Dr Ravichandra C Dr Parvathi Anil
16	Participated as resource person in the TB Symposium held at Fortis Hospital, Banerghatta Road, Bengaluru and delivered a lecture on The Role of Private Practitioners in elimination of TB by 2025	4 <sup>th</sup> July 2018	Dr S.Umashankar
17	Participated & delivered a talk on treatment of TB Guidelines – Challenges and Future during the Tuberculosis symposium on TB Free India Campaign – 2025 at Fortis Hospital, Bannerghatta Road, Bangalore organized by Fortis Hospital in collaboration with RNTCP.	5 <sup>th</sup> July 2018	Dr N. Somashekar Dr Ravichandra C Dr Poornima Dr Parvathi Anil

18	Pre- assessment visit ( LC- DST) to GMC, Aurangabad	13 <sup>th</sup> July 2018	Dr. Reena . K Mr. Somashekharayya H
19	Chaired the inaugural session of the Sensitization programme on RNTCP at Scientific Gallery, NTI and addressed the participants.	16 <sup>th</sup> July 2018	Dr N. Somashekar
20	Inaugurated the consultative meeting for discussion on programmatic use of Whole Genome Sequencing at NTI and gave introductory talk.	18 <sup>th</sup> July 2018	
21	Chaired the inaugural session of the Consultative Workshop to develop E-training curriculum for Laboratory Diagnostic with support of NRLs, WHO and FIND under the USAID supported challenge TB project held at NTI.	19 <sup>th</sup> - 20 <sup>th</sup> July 2018.	
22	Chaired the inaugural session of the Liquid Culture Training in 1 <sup>st</sup> and 2 <sup>nd</sup> line DST held at NTI.	23 <sup>rd</sup> - 27 <sup>th</sup> July 2018	
23	Pre- assessment visit ( New lab under NFM) to Akola, Maharastra	26 <sup>th</sup> -27 <sup>th</sup> July 2018	Dr. Reena . K
24	Meeting for finalization of Lab contents for E-training curriculum at NITRD, Delhi	29 <sup>th</sup> July 2018	Dr. R. Lakshmi
25	On- site FL-LPA training at Gajra Raja Medical College, Gwalior (in conjunction with BMHRC, Bhopal	30 <sup>th</sup> July - 3 <sup>rd</sup> August 2018	Mr. Somashekharayya H Mr. K. Jayaganesh
26	Participated in the training on Delamanid Introduction under PMDT India refresher training.	1 <sup>st</sup> - 2 <sup>nd</sup> August 2018	Dr N. Somashekar
27	Participated in the DBT Assisted Nikshay Poshan Yojana under EGSA and visited Dhubri District, Assam to enhance DBT.	6 <sup>th</sup> – 8 <sup>th</sup> August 2018	
28	Participated in Programme for Emotional Intelligence at workplace for scientists/technologists at COD, Madhapur, Hyderabad	6 <sup>th</sup> - 10 <sup>th</sup> August 2018	Dr S.Umashankar
29	PMDT training for District Health Officials of Bengaluru urban district Organized by Karnataka Health Promotion Trust (KHPT), Bengaluru Karnataka At Crescent Hotel, Bengaluru	10 <sup>th</sup> August 2018	Dr C. Ravichandra Dr. Poornima A. Dr. Parvathi Anil

30	CME on updates in TB at Subbaiah Institute of Medical sciences, Shimoga	17 <sup>th</sup> August 2018	Dr C. Ravichandra Dr S.Umashankar
31	Participated as Expert member in the Epidemiology & Implementation Research Expert group meeting at NIMS, New Delhi to review the progress of the ongoing and new research proposals on Information and Communication Technology.	21 <sup>st</sup> August 2018	Dr N. Somashekar
32	Participated in the CME on updates in DRTB and delivered a talk on principles of DRTB Treatment and regimens under the programme.	28 <sup>th</sup> August 2018	Dr N. Somashekar Dr C. Ravichandra Dr A. Poornima
33	Chaired the inaugural session and facilitated the PMDT guidelines training for Medical Officers from Bangalore Urban and Bangalore rural districts at NTI.	4 <sup>th</sup> – 6 <sup>th</sup> September 2018	Dr N. Somashekar
34	State Level training on Implementation of Delaminid at Bhubaneswar	04 <sup>th</sup> -5 <sup>th</sup> September 2018	Dr. R. Lakshmi
35	<ul style="list-style-type: none"> <li>• Pre- assessment visit to Chotram Medical College and Hospital</li> <li>• Pre- assessment visit to Ujjain Medical College, MP</li> <li>• Lab visit to IRL – Indore, MP</li> </ul>	09 <sup>th</sup> -11 <sup>th</sup> September 2018	Dr. Reena. K
36	Participated in the NTEG Treatment meeting at NITRD under the chairmanship of Dr. Rohit Sarin, Director, NITRD.	12 <sup>th</sup> Sep 2018	Dr N. Somashekar
37	Participated in NTI foundation day celebration. As part of the celebration, technical presentations on the achievements of NTI since its inception were shown and various aspects of RNTCP were made by the faculty.	17 <sup>th</sup> Sep 2018	
38	Two day Stake Holder meeting on the Programmatic implementation of WGS in India at Delhi	17 <sup>th</sup> -18 <sup>th</sup> September 2018	Dr. K. Reena Dr. R. Lakshmi
39	Meeting on Streamlining Specimen collection, packaging & transporation from the districts of Bangalore city, rural and urban with Officials from Karantaka state, KHPT and JEET	20 <sup>th</sup> September 2018	Dr. K. Reena Mr. Raghunandan

40	Meeting with Officials from FIND, CDC and PATH regarding Implementation of 2nd Phase of CBNAAT EQA in the Country at NTI	20 <sup>th</sup> Septemebr 2018	Dr. George Sebastian Dr. K. Reena,
41	Mumbai Capacity building workshop and Hands on training on Whole genome sequencer at J.J Hospital, P.D. Hinduja and FMR ( Foundation for Medical Reserch) at Mumbai	24 <sup>th</sup> -28 <sup>th</sup> September 2018	Dr. K. Reena, Dr. R. Lakshmi Mrs HG Mamatha Mrs. V. Mamatha
42	Participated in the workshop on RNTCP India – World Bank Project : Moving towards Elimination of Tuberculosis at Oberoi Hotel, New Delhi.	3 <sup>rd</sup> & 4 <sup>th</sup> October 2018	Dr N. Somashekar
43	Participated and made presentation in the National Tuberculosis Conference towards TB elimination: Vision of the nation organized by Department of Microbiology, Kasturba medical College, Manipal, Karnataka in association with District TB Centre, Udupi and delivered a talk on Universal Access to TB Care.	6 <sup>th</sup> October 2018	
44	Underwent 3 days residential Leadership Training programme at NIFM Faridabad.	10 <sup>th</sup> – 12 <sup>th</sup> October 2018	
45	Attended workshop on basics of Biostatistics and SPSS at St. Jhon's Medical college and Research Institute, Bengaluru	11 <sup>th</sup> - 12 <sup>th</sup> October 2018	Dr. A. Poornima Dr. Parvathi Anil
46	Participated as a guest speaker for CME on “Tuberculosis Update” for Doctors of Nelamangala on	16 <sup>th</sup> October 2018	Dr C. Ravichandra
47	Participated in the meeting of Karnataka State TB Association presided by the Commissioner of Health & Family Welfare, Government of Karnataka.	22 <sup>nd</sup> October 2018	Dr N. Somashekar
48	Participated as a special invitee in the NTEG meeting on Diagnosis of TB under RNTCP at Hotel, The Lalit, New Delhi.	23 <sup>rd</sup> October 2018	Dr N. Somashekar Dr. Reena K.
49	Participated in Training of Trainers on Programme for Financial Management Services.	24 <sup>th</sup> – 26 <sup>th</sup> October 2018	Dr N. Somashekar

50	Participated as chairman of the Interview for selection of Senior Laboratory Technicians and Microbiologists on contract basis for the NRL held.	25 <sup>th</sup> October 2018	Dr N. Somashekar
51	Participated in the strengthening of STDC and development of Training modules under the chairmanship of Dr. Chaman Prakash , ADDG-TB, CTD.	5 <sup>th</sup> & 6 <sup>th</sup> November 2018	
52	Participated in the Meeting of the Technical Expert Group on pediatric TB at Nirman Bhavan.	9 <sup>th</sup> November 2018	
53	Attended UNION SORT IT Operational Research course at Yenepoya Medical University, Mangalore.	11 <sup>th</sup> – 25 <sup>th</sup> November 2018	Dr S.Umashankar
54	First meeting for the constitution of working group for potential endorsement of the TrueNat MTB and RIF test for their introduction and use in programmatic conditions at ICMR HQ, Delhi	16 <sup>th</sup> November 2018	Dr. R. Lakshmi
55	Participated as a guest speaker for a scientific session on “Re-thinking nutrition in cancer and Tuberculosis”	12 <sup>th</sup> November 2018	Dr C. Ravichandra
56	Participated in the South Zone Regional Review meeting of RNTCP at Taj, Yeshwanthpur.	19 <sup>th</sup> & 20 <sup>th</sup> November 2018	Dr N. Somashekar Dr. George Sebastian Dr. Reena K Dr. R Lakshmi
57	Facilitator support for CME on “ Update on Tuberculosis ” for MICROCON 2018 at NTI, Bangalore	29 <sup>th</sup> November 2018	Dr. Sarika Jain Dr.George Sebastian Mrs. HG Mamatha Mr. Surendra Mr. Manjunatha
58	42nd Annual Conference of IAMM-MICROCON 2018- NIMHANS, Bangalore	30 <sup>th</sup> November -2 <sup>nd</sup> December 2018	Dr. Sarika Jain Dr.George Sebastian Mrs. HG Mamatha Mr. Surendra Mr. Manjunatha
59	Participated in the 4 <sup>th</sup> SAARC Regional Meeting of Heads / Chief of National TB and HIV AIDS laboratories.	28 <sup>th</sup> – 30 <sup>th</sup> November 2018	Dr. N. Somashekar
60	NTEG ( Diagnosis ) meeting at Delhi	11 <sup>th</sup> December 2018	Dr. Reena K

61	Inaugurated and facilitated the PMDT guidelines training of MOs of Bangalore urban and Bangalore Rural districts.	11 <sup>th</sup> – 13 <sup>th</sup> December 2018	Dr. N. Somashekar
62	First National level ToT on LC & DST organized by CTD, conducted by BD, India & supported by USAID	12 <sup>th</sup> – 13 <sup>th</sup> December 2018	Dr. A Krishnamurthy Dr. Sarika Jain Dr. George Sebastian Dr. Reena K Dr. R. Lakshmi Smt. H G Mamatha Sri. Raghunandan
63	Lab assessment visit for C & DST & EQA activities at NRL Kolkata	18 <sup>th</sup> – 20 <sup>th</sup> December 2018	Smt. HG Mamatha Sri. Somashekharayya H
64	Second meeting for the constitution of working group for potential endorsement of the TrueNat MTB and RIF test for their introduction & use in programmatic conditions at ICMR HQ, Delhi	19 <sup>th</sup> November 2018	Smt. R. Lakshmi
65	Participated as Guest Speaker for the Annual National Conference of Indian Clinical Epidemiology Network India Clen – 2018 at Apollo Institute of Medical Sciences and Research, Chittor.	08 <sup>th</sup> - 09 <sup>th</sup> December 2018.	Dr S.Umashankar
66	Facilitated training for Institutional Ethics Committee at CLTRI, Chengalpattu.	12 <sup>th</sup> December 2018	
67	TOG training for the DTOs of STDC, Agra Uttar Pradesh	17 <sup>th</sup> - 21 <sup>st</sup> December 2018	Dr S.Umashankar Dr. A. Poornima
68	Actively participated & interacted with the delegates and chaired the Scientific Session during the 73 <sup>rd</sup> NATCON held at Nagpur.	4 <sup>th</sup> – 6 <sup>th</sup> January 2019	Dr. N. Somashekar
69	Training in LPA and LC-DST for Lab personnel from C & ; DST labs of Rajasthan State at SNMC, Jodhpur	07 <sup>th</sup> – 11 <sup>th</sup> Jan 2019	Mr. Somshekerayya H
70	Attended workshop and meeting for training of PI and Co-PI for the POD Vaccine Trial at ICMR, Headquarters, New Delhi.	09 <sup>th</sup> January 2019	Dr. S. Umashankar
71	Participated in the NRL CC meeting held at NITRD, New Delhi.	10 <sup>th</sup> & 11 <sup>th</sup> Jan 2019	Dr. N. Somashekar Dr. K. Reena Dr. R. Lakshmi Smt. HG Mamatha

72	Participated as a special invitee in the meeting of NTEG – Treatment in Chandralok Building, New Delhi.	15 <sup>th</sup> January 2019	Dr. N. Somashekar
73	Participation in West Zone PMDT review meeting	23 <sup>rd</sup> – 25 <sup>th</sup> Jan 2019	Dr. R. Lakshmi
74	Training on Epicentre software – TB Exist for MGIT 960 supported by USAID and BD at NTI	28 <sup>th</sup> Jan – 1 <sup>st</sup> Feb 2019	Dr. Reena. K, Mrs. Mamatha, Mr. Somshekerayya H Mr. K. Jayaganesh
75	Participated as observer in the National level workshop on pediatric guidelines held at Mumbai.	4 <sup>th</sup> February 2019	Dr. N. Somashekar
76	Participated in the seminar on Role of New Drug for the treatment of Drug Resistant TB at Bangalore organized by Aident Social Welfare Organization, Delhi.	20 <sup>th</sup> Feb 2019	
77	Supportive supervisory visit to IRL Pune	26 <sup>th</sup> - 27 <sup>th</sup> Feb 2019	Dr. K. Reena Mrs. HG Mamatha
78	Chaired the meeting for preparation of guidelines for condemnation of Laboratory equipment in RNTCP lab at Delhi.	27 <sup>th</sup> February 2019	Dr N. Somashekar
79	RNTCP State Task Force OR committee meeting held at STDC/IRL Rajiv Gandhi Chest Diseases Campus, Bengaluru	28 <sup>th</sup> January 2019	Dr. C. Ravichandra
80	Delivered a talk on “TB updates” at KIMS, Bengaluru as a part of PG meet 2019	9 <sup>th</sup> February 2019	
81	Participated in the First- and Second-Line LPA training course at NTI.	4 <sup>th</sup> – 8 <sup>th</sup> March 2019	Dr. S. Umashankar
82	Attended Operations Research workshop – Karnataka	25 <sup>th</sup> - 28 <sup>th</sup> March 2019	
83	Attended the workshop to develop road map – TB DNA Report at NTI	6 <sup>th</sup> - 8 <sup>th</sup> March 2019	
84	Participated in National ToT of using Delamanid in age group of 6-17 years at NTI.	6 <sup>th</sup> -8 <sup>th</sup> March 2019	

85	Internal Audit and Quality Management training workshop for staff in Labs proceeding for NABL Accreditation (Phase II)	25 <sup>th</sup> - 28 <sup>th</sup> March 2019	Dr. K. Reena Mrs. H.G. Mamatha
86	Assessment of LAMP technology developed by Sree Chitra Thirunal Institute of Medical Sciences, Trivandrum	26 <sup>th</sup> March 2019	Dr. K. Reena
87	Committee meeting at CTD, Delhi to revise and finalize specifications for lab consumables for procurement under RNTCP	28 <sup>th</sup> March 2019	
88	Represented NTI in Zonal Task Force (ZTF) Workshop for Medical Colleges held on at Rishikesh, Uttarakhand .	28 <sup>th</sup> - 29 <sup>th</sup> March 2019	Dr. C. Ravichandra
89	Participated in the national Training of Trainers for using Delaminid in the age group of 6 – 7 years.	6 <sup>th</sup> – 8 <sup>th</sup> March 2019	Dr N. Somashekar
90	Participated in the workshop to develop road map in lines with the recommendations of Joint Assessment of TB diagnostic network of India.	6 <sup>th</sup> – 8 <sup>th</sup> March 2019	
91	Participated as resource person and delivered a lecture on community participation for elimination of TB, during the observance of World TB Day 2019 at BMRC, organized by Jt. Director (TB), Government of Karnataka.		
92	Participated in the RNTCP Operational Research workshop, Karnataka	25 <sup>th</sup> – 28 <sup>th</sup> March 2019	

## **INSTITUTIONAL ETHICS COMMITTEE MEETINGS**

During the period under report, two IEC meetings were held:

1. The 21<sup>st</sup> Institutional Ethics Committee Meeting was held in the Institute on 2<sup>nd</sup> June 2018 under the Chairmanship of Shri S. Vijay Shankar, Senior Advocate, Ex. Advocate General for Karnataka.
  - The meeting was attended by Director, NTI; Brief presentation on the two protocols submitted for ethical clearance was made by the Principal Investigators / Presenters and ethical issues pertaining to each protocol was discussed.

- Both the protocols were approved by the Chairman and committee members.
  - While concluding the meeting, Director expressed appreciation to the Chairman and the members for their contribution in this meeting. The suggestions given by the Chairman/Members were incorporated in the minutes and communicated to the concerned Principal/Co-Investigators.
2. The 22<sup>nd</sup> Institutional Ethics Committee Meeting was held in the Institute on 12<sup>th</sup> January 2019 under the Chairmanship of Shri S. Vijay Shankar, Senior Advocate, Ex. Advocate General for Karnataka.
- The meeting was attended by Director, NTI; the IEC members and the Principal Investigator / Presenters of the protocol. Brief presentation on the three protocols submitted for ethical clearance was made and ethical issues pertaining to each protocol was discussed.
  - All the three protocols were approved by the Chairman and committee members.
  - While concluding the meeting, Director expressed gratitude to the Chairman, Member Secretary and the members for their valuable presence in this meeting. Minute of the meeting was prepared as per the suggestions given by the Chairman/Members and circulated to the Chairman and members for their approval. On receipt of approved minutes, copy of the same was provided to the concerned Principals /co-investigators.

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

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 portal includes the published TB research from the following institutions/organization:

- Indian Institute of Science (IISC), Bangalore
- Institute of Bioinformatics, Bangalore
- Mahatma Gandhi Institute of Medical Sciences (MGIMS), Wardha
- National Institute for Research in Tribal Health (ICMR), Jabalpur
- National Institute for Research in Tuberculosis (NIRT), Chennai
- National Institute of Tuberculosis and Respiratory Diseases (NITRD), New Delhi
- National JALMA Institute of Leprosy and other Mycobacterial Diseases, Agra
- National Operations Research Committee, Central TB Division, Govt. of India
- National Task Force, Zonal Task Force & State Task Force of Medical Colleges
- National Tuberculosis Institute (NTI), Bangalore
- New Delhi TB Centre (NDTBC), New Delhi
- State Tuberculosis Centres.
- Tuberculosis Association of India (TAI)

The following activities were undertaken by Mr. Sanjay Singh I/C RDC during April 2018 to March 2019 at Research Documentation Cell:

**(A) Research Documentation Cell:**

- Discharged the duties and responsibilities as in-charge RDC.
- 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 and uploading of Indian TB research articles (72 Nos.) received from collaborating centres and published in various publications viz. Int J Tuberc & LD, IJMM, IJMR, IJTB, PHA etc.

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

- Assisted Member Secretary in organization of **21<sup>st</sup> & 22<sup>nd</sup> NTI IEC** meetings held during the year 2018-2019.
- Registration of NTI - IEC with Central Drug Standard Control Organization (CDSCO): RDC played an important role for the registration of NTI IEC with CDSCO and contributed in preparation of following requisite mandatory documents and completed the registration process:
  - 19 sets of Documents for the registration process.
  - Standard Operating Procedures (SOPs) of NTI-IEC: Version 1.0, Version 1.1 & Version 1.2.

**(C) NTI Bulletin**

- Prepared draft document on NTI Bulletin's "Policy and Procedures" Version 1.0.
- Assisted Publication Unit in compilation of NTI Bulletin 2017, 53/1&4.

**(D) Technical Assistance to Director's Office**

- Assisted publication section in compilation of annual report (2017-2018) of the Institute
- Co-ordinated with divisional heads in compilation of Annual Report (2017-2018) of NTI as WHO Collaborating Centre.
- Completed the National Survey on resources devoted to Science and Technology activities 2018-19 of Ministry of Science and Technology, DST, New Delhi.
- Printing of Annual Report of the Department of Health and Family Welfare, MOHFW, 2018-2019: Compiled the Annual Report in consultation with the all the Division/Unit Heads of NTI and submitted to the Ministry.

**(E) Miscellaneous**

- Support to NTI Website Committee as member.

# ACKNOWLEDGEMENTS

*The Director acknowledges the efforts of  
Mr. Krishan Murari Singh, Mr. Sanjay  
Singh, Dr. Parvathi Anil & Dr.  
Poornima A in editing & organizing the  
publication of this report.*