

NATIONAL TUBERCULOSIS INSTITUTE BENGALURU



Government of India
NATIONAL TUBERCULOSIS INSTITUTE
(Directorate General of Health Services)
'Avalon', No.8, Bellary Road, Bengaluru-560 003
INDIA

ANNUAL REPORT
2017-18

**NATIONAL TB INSTITUTE
WHO Collaborating Centre
For
TB Research and Training**

**ANNUAL REPORT
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(Directorate General of Health Services)
'Avalon', No.8, Bellary Road, Bengaluru-560 003
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LIST OF ABBREVIATIONS

AIIMS	All India Institute of Medical Sciences
ARTI	Annual Risk of Tuberculosis Infection
BCG	Bacillus Calmette Guerin
BBMP	Bruhat Bengaluru Mahanagara Palika
CDC	Centre for Disease Control
CMO	Chief Medical Officer
CPWD	Central Public Works Department
CTD	Central Tuberculosis Division
Dte.GHS	Directorate General of Health Services
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
HIV	Human Immuno deficiency Virus
HRD	Human Resource Development
IRL	Intermediate Reference Laboratory
JALMA	Japanese Leprosy Mission for Asia
LIMS	Laboratory Information Management System
LPA	Line Probe Assay
MDR	Multi Drug Resistance
M.TB	Mycobacterium Tuberculosis
NDRS	National Drug Resistance Survey

NIRT	National Institute of Research in Tuberculosis
NPS	National Prevalence Survey
NRL	National Reference Laboratory
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
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
TUs	Tuberculosis Units
WHO	World Health Organization

FOREWORD

It gives me immense pleasure to present the Annual report for the year 2017-2018. This report highlights the major activities undertaken by the Institute during the year under report 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 roll out of 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 National Advisory Committees, TWG on RNTCP and WHO South-East Asia Regional Technical Working Group on TB 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 skill development activities relevant to RNTCP. Training courses are organized in 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 TB control programme. Induction training in RNTCP for programme managers, Training in TB/HIV, Training of Master trainers in Epi-Centre, 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 TB, 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.

The first National Anti-TB Drug Resistance Survey (NDRS) in a representative sample of both newly diagnosed sputum smear-positive pulmonary TB cases and previously treated sputum smear-positive pulmonary TB cases was concluded and the report was published. This survey has highlighted in-depth information on the prevalence of anti-TB drug resistance among new and previously treated patients in the country.

Operational research is one of the prime functions of the institute. The studies undertaken/initiated during the period under report were :

1. Expenditure incurred for diagnosis among new TB patient notified by RNTCP in Bengaluru City
2. Diagnosis and treatment practices among the treating physicians for the management of Extra Pulmonary TB (EP-TB) in selected tertiary care health facilities in Bengaluru city—an evaluation based on mixed method
3. Systematic screening for pulmonary TB among women attending public maternity Hospitals for Antenatal and Post-Natal Care in Bengaluru
4. Predictors of unfavorable TB treatment outcome in TB – HIV co-infected patients in Karnataka.

Studies in pipeline under India TB Research Consortium are :

1. Prevalence of Pulmonary TB among workers employed in mines, other high silica and organic textile dust exposure settings (Multi-centric study)
2. A phase III randomized, double blind, placebo controlled trial to evaluate the efficacy and safety of VPM1002 and Mw vaccines in preventing TB in healthy household contacts of pulmonary TB patients.

Several CMEs were organized during the period for sensitizing the private care providers (PPs) & RNTCP officials in Indian Standards for TB Care.

The functions of NRL comprises of training laboratory personnel and accreditation of state level IRLs, Medical college and other private laboratories in culture and Drug Sensitivity testing to detect MDR-TB apart from supporting 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 HRD and capacity building of IRLs for 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 has been highlighted in this report.

A fleeting reference has been made on the organizational set up and 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.

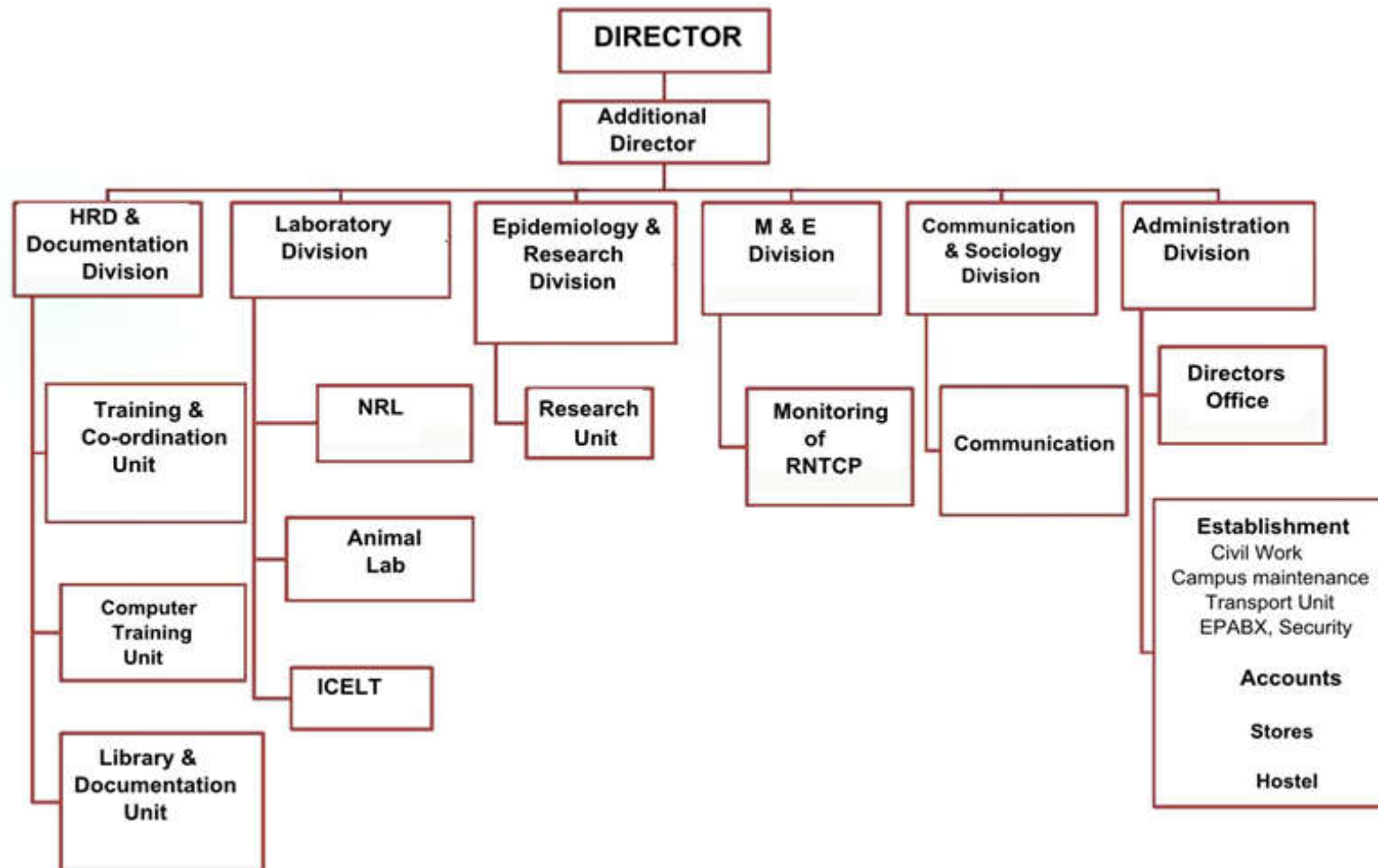
I acknowledge the co-operation, hard work and diligence of all the members of NTI family and solicit the same degree of motivation and dedication from all in times to come.

I also express my gratitude to the Director General Health Services and central TB Division for their continued guidance, support and encouragement.

Dr. N. Somashekar
Director

Dated: 01 November, 2018
Place: Bengaluru

ORGANOGRAM



1. HUMAN RESOURCE DEVELOPMENT & DOCUMENTATION DIVISION

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

Training and Coordination Unit

The aim of RNTCP training programme is to ensure that the programme managers, teachers of medical colleges, medical officers and paramedical staff are equipped with the necessary skills and knowledge required to implement and sustain the 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 and Central TB Division (CTD). The proposed annual plan for training activities to be held at NTI is prepared for the ensuing year and sent to CTD. CTD communicates the annual training plan to all State TB Officers. Prior intimation of the annual training plan ensures staggered nomination of candidates in appropriate batch sizes and also provides adequate time to ensure release of participants from their offices for attending the training programmes. Also, the Training Unit works in tandem with the 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 programme were conducted during the year to cater to the ever-increasing demand of trained manpower, the details of which are briefly furnished below.

I. Training activities

(A). At NTI

1. Revised National TB Control Programme (RNTCP) Modular Training

Sl. No.	Category of personnel	Period	No. of Participants
1.	Sr. Treatment Supervisor / District Programme Coordinator and STLS from Andhra Pradesh	20-11-2017 to 24-11-2017	33
2.		27-11-2017 to 01-12-2017	36
3.		27-11-2017 to 01-12-2017	07

2. Training of Trainers (ToT) on RNTCP Technical and Operational Guidelines for TB Control in India – 2017

Sl. No.	Category of personnel	Period	No. of Participants
1.	District TB Officers, Sr. Regional Directors, Regional Director, Chest Physician, Associate Professors, Deputy civil Surgeon (TB), Regional Directors, Assistant Professors, Medical Officers, Regional Directors, Specialist, Professor & Superintendents, HOD (TB & RD), Sr. Residents, Deputy Director of Medical Services	04-09-2017 to 08-09-2017	29

3. RNTCP Zonal Task Force Operational Research (OR) Workshop, South Zone-I

Sl. No.	Category of personnel	Period	No. of Participants
1.	Faculty from Medical colleges from Karnataka, Andhra Pradesh and Telangana	01-03-2018 to 03-03-2018	25

4. RNTCP National Training on Cartridge Management and refresher training on Procurement and Supply Chain Management

Sl. No.	Category of personnel	Period	No. of Participants
1.	STDC Director , WHO RNTCP Consultant, PMDT Consultant, Epidemiologist, State TB Officer, District TB Officer, Sr. Medical Officer, Medical Officer, Professor & HOD	11-12-2017 to 13-12-2017	64

5. Training on PMDT (Programmatic Management of Drug Resistant TB) – Karnataka State

Sl. No.	Category of personnel	Period	No. of Participants
1.	District TB Officer, Nodal Officer DRTB Center, Sr. Medical Officer, Medical Officer	17-12-2017 to 29-12-2017	24
2.		22-01-2018 to 24-01-2018	29
3.		31-01-2018 to 02-02-2018	29

6. TOT on Programme for Financial Management Services (PFMS)

Sl. No.	Category of personnel	Period	No. of Participants
1.	State level Accountants and Procurement & logistics officers	21-06-2017 & 22-06-2017	26

7. Review and Update on Public Private Partnership

Sl. No.	Category of personnel	Period	No. of Participants
1.	IEC (ACSM) Officers	03-07-2017	32

Sl. No.	Category of personnel	Period	No. of Participants
2.	Programme Officer, State IEC Officer, State TB-HIV Coordinator, State PPM Coordinator, Asst. Programme Officer, Medical Officer, District PPM Coordinator, ACSM Officer	04-07-2017 to 05-07 2017	35

8. Training for IEC (ACSM) Officers

Sl. No.	Category of personnel	Period	No. of Participants
1.	IEC (ACSM) Officers	03-07-2017	32

9. National Level Training on Drug and Vaccines Distribution Management System (DVDMS) for use under RNTCP

Sl. No.	Category of personnel	Period	No. of Participants
1.	Programme officers, Data Entry Operators, Store keepers, Pharmacists, Procurement & Logistics Officers	12-07-2017 to 14-07-2017	35
2.		19-07-2017 to 21-07-2017	32
3.		26-07-2017 to 28-07-2017	12
4.		02-08-2017 to 04-08-2017	36
5.		16-08-2017 to 18-08-2017	47

10. State Level Training on Drug and Vaccines Distribution Management System (DVDMS) under RNTCP

Sl. No.	Category of personnel	Duration	No. of Participants
1.	Pharmacist, Sr. Treatment Supervisor, District Programme Coordinator, Data Entry Operator, Pharmacist, DR-TB/TB-HIV Supervisor, Sr. Specialist, District DOTS Plus Supervisor, PPM coordinator, District TB Officer and Sr. Health Assistant	26-12-2017 to 27-12-2017	40
2.		28-12-2017 to 29-12-2017	35

11. Bedaquiline DST Training

Sl. No	Category of personnel	Duration	No. of Participants
1.	Joint DHS (TB), Professor, STF Chairperson, WHO Medical Consultant , District TB Officer, Medical Officer, Microbiologist , TB/HIV Coordinator, Director, National Consultant TB, HOD, CMO, Sr. Medical Officer, Research Officer, State DRTB Coordinator, Assistant Director, Nodal Officer, Officials from WHO, India and Country Technical Advisor from the states of Assam, Delhi, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Uttar Pradesh	07-08-2017 to 11-08-2017	15

12. Orientation of RNTCP recent updates

Sl. No	Category of personnel	Duration	No. of Participants
1.	Post Graduate students	17-08-2017	26
2.		18-08-2017	24
3.		21-09-2017	09

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

Sl. No	Category of personnel	Duration	No. of Participants
1.	Sr. Lab technicians, Microbiologists, Medical college Professors	24-04-2017 to 06-05-2017	04
2.		03-07-2017 to 15-07-2017	11
3.		23-10-2017 to 04-11-2017	11
4.		08-01-2018 to 18-01-2018	01
5.		05-02-2018 to 17-02-2018	06

14. Training in External Quality Assurance (EQA)

Sl. No	Category of personnel	Duration	No. of Participants
1.	DTOs, Medical Officers, Microbiologists, STLSs and LTs	19-06-2017 to 23-06-2017	12
2.		18-09-2017 to 22-09-2017	11
3.		11-12-2017 to 15-12-2017	06
4.		19-02-2018 to 23-02-2018	13

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

Sl. No	Category of personnel	Duration	No. of Participants
1.	LTs, Microbiologist, Technical Officer Microbiologist	12-06-2017 to 15-06-2017	08

16. Second Line LPA training course for Laboratory Personnel

Sl. No	Category of personnel	Duration	No. of Participants
1.	Jr. Bacteriologist, Microbiologists, Sr. Laboratory Technicians, and Laboratory Technician	24-05-2017 to 25-05-2017	11

17. EQA- CBNAAT Training in Preparation of Dried Tube Specimen for Xpert MTB/RIF for proficiency Testing Training

Sl. No	Category of personnel	Duration	No. of Participants
1.	Consultant Microbiologists and Laboratory Technicians	01-05-2017 to 05-05-2017	11

18. Training in Molecular detection of MDR- TB by PCR based LPA

Sl. No	Category of personnel	Duration	No. of Participants
1.	Associate Professors, Laboratory Technician, Microbiologist and Consultant Microbiologist	04-09-2017 to 08-09-2017	05
2.		11-09-2017 to 15-09-2017	10
3.		09-10-2017 to 13-10-2017	09
4.		04-12-2017 to 08-12-2017	05

19. Training Activities held in ICELT

Sl. No.	Name of Training	Participating Laboratories	Duration	No. of participants
1.	Xpert EQA Sensitization workshop – for public & private labs	Private labs from Mumbai, Bengaluru and Delhi. Public lab from Mumbai city	14-02-2018	85
2.	National TOT Training on II-LPA Testing-MTBDRSL. V.2	IRL, C&DST Laboratories & Medical colleges	08-05-2017 to 09-05-2017	10
3.	National TOT Training on II-LPA Testing-MTBDRSL. V.2	IRL, C&DST Laboratories & Medical colleges	11-05-2017 to 12-05-2017	10
4.			15-05-2017 to 16-05-2017	10
5.			18-05-2017 to 19-05-2017	10
6.			22-05-2017 to 23-05-2017	10

20. Comprehensive Training for laboratory personnel was held from 24th March to 6th April 2017.

Sl. No.	Place / State	No. of Participants
1.	Bengaluru, Karnataka	02
2.	Ranchi, Jharkhand	01
3.	Bhopal, Madhya Pradesh	01
4.	Ajmer, Rajasthan	01

21. Ms. Kyle DuGrey from CDC, Atlanta and Dr. Kishore from ICTL facilitated CBNAAT training

Sl. No.	Date	Place / State	No. of Participants
1.	01-05-2017 to 05-05-2017	Bengaluru, Karnataka	08
2.	08-05-2017 & 09-05-2017	Bengaluru, Karnataka	05

22. Second Line LPA Training for C&DST Labs was conducted at ICELT-NTI Campus supported by CTD & FIND-India

Sl. No.	Date	Place / State	No. of Participants
1.	24-05-2017 & 25-05-2017	NTI, Bengaluru, Karnataka	All staff of NTI Laboratory

23. Liquid culture DST training for laboratory personnel was held at NTI

Sl. No.	Date	Place / State	No. of Participants
1.	12-06-2017 & 16-06-2017	Rajasthan	08

24. EQA training was conducted

Sl. No.	Date	Place / State	No. of Participants
1.	19-06-2017 to 23-06-2017	Rajasthan	01
2.		Karnataka	04
3.		Sikkim	02
4.		Tamil Nadu	02
5.		Telangana	03
6.	18-09-2017 to 22-09-2017	Karnataka	03
7.		Manipur	02
8.		Madhya Pradesh	02
9.		Odisha	01
10.		Tamil Nadu	01
11.		Uttar Pradesh	02
12.	22-11-2017 to 01-12-2017	Telangana	08
13.	11-12 2017 to 15-12-2017	Karnataka	02
14.		Madhya Pradesh	01
15.		Maharashtra	01
16.		Sikkim	02
17.	19-02-2018 to 23-02-2018	Jammu & Kashmir	01
18.		Karnataka	04
19.		Kerala	01
20.		Madhya Pradesh	01
21.		Maharashtra	03
22.		Manipur	02
23.		Uttar Pradesh	01

25. Comprehensive Training for Laboratory Personnel

Sl. No.	Date	Place / State	No. of Participants
1.	03-07 2017 to 05-07-2017	Assam	02
2.		Bhopal	02
3.		Tamil Nadu	02
4.		Tripura	02
5.		Uttar Pradesh	03
6.	05-02-2018 to 17-02-2018	Karnataka	02
7.		Kerala	01
8.		Odisha	02
9.		Tamil Nadu	01

26. LPA training was conducted at NTI

Sl. No.	Date	Place / State	No. of Participants
1.	04-09-2017 to 08-09-2017	Karnataka	02
2.		Maharashtra	02
3.		Punjab	01
4.	11-09-2017 to 15-09-2017	Karnataka	01
5.		Kerala	01
6.		Maharashtra	04
7.		Puducherry	01
8.		Tamil Nadu	01
9.	04-12-2017 to 05-12-2017	Kashmir	02
10.		Maharashtra	02
11.		West Bengal	01

27. Second Line DST Training for Laboratory Personnel was held at NTI

Sl. No.	Date	Place / State	No. of Participants
1.	09-10-2017 to 13-10-2017	Andhra Pradesh	01
2.		Bihar	01
3.		Chhattisgarh	02
4.		Karnataka	02
5.		Maharashtra	01
6.		Tripura	02

28. Modular Training for STLS was held at NTI

Sl. No.	Date	Place / State	No. of Participants
1.	27-11-2017 to 01-12-2017	Andhra Pradesh	06

(B) Outside NTI

Sl. No.	Duration	Training Details	Name of participant
1.	27-03-2017 to 14-04-2017	Induction Training Program – Module ‘A’ conducted by Subordinate Statistical Service (SSS) under Ministry of Statistics and Programme Implementation (MOSPI) held at National Statistical System Training Academy, Greater Noida.	Mr Soumik Ghosh, Mr. Bipin Kumar Verma & Mr. Krishan Murari Singh
2.	03-07-2017 to 28-07-2017	Induction Training Program – Module ‘B’ conducted by Subordinate Statistical Service (SSS) under Ministry of Statistics and Programme Implementation (MOSPI) held at South Zone Training Centre, National Sample Survey Office, Koramangla, Bengaluru.	

II. Collaborative training activities

a) CTD & The Union Operations Research Capacity Building workshop and project mentorship for professionals working with the RNTCP

Sl. No	Category of personnel	Duration	No. of Participants
1.	Director STDC, WHO RNTCP Consultants, STO, DTO, Medical Officers and IRL Microbiologists	17-05-2017 to 26-05-2017	06

b) SAARC / NTP Nepal - TB Management Training

Sl. No	Category of personnel	Duration	No. of Participants
1.	SAARC Regional Training on Management Information for Action (MIFA) for TB & HIV / AIDS Control Programmes	01-09-2017 to 05-09-2017	12

III. Other Trainings/workshops / Meetings/ CME

a. At NTI

Sl. No.	Particulars	Date	No. of Participant	Participants
1.	Sensitization cum Training Workshop for ICMR-RNTCP TrueNAT Demonstration Study	24-04-2017	27	Programme Managers and Lab Personnel from different states of India
2.		26-04-2017	46	
3.		28-04-2017	26	
4.		01-05-2017	42	
5.	CBHI review meeting	11-01-2018 & 12-01-2018	34	Participants from all over India
6.	Workshop on recent advances in Microbiological diagnosis of TB under RNTCP & Air Borne Infection Control in health care settings for Microbiology faculty	22-03-2018	25	Participants from Karnataka
7.	Workshop on Adverse drug reactions of TB Drugs and Implementation of	23-03-2018	30	

Pharmacovigilance program under RNTCP for Pharmacology faculty			Participants from Karnataka
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b. Outside NTI

Sl. No.	Particulars	Date	Participants
1.	ToT in Guidelines for PMDT in India 2017 held at RCH Campus, Namkum, Ranchi	20-02-2018 to 22-02-2018	Dr. C. Ravichandra CMO-NFSG, NTI
2.	TOG training held at St. Johns Medical College, Bengaluru	13-03-2018 15-03-2018 16-03-2018	
3.	TOG training held at ESI Medical College, Gulbarga	06-03-2018 & 07-03-2018	

IV. International Center of Excellence for Laboratory Training (ICELT)

International Center of Excellence for Laboratory Training, supported by FIND, RNTCP and UNITAID, was started in NTI Bengaluru 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 has been imparting trainings on WHO endorsed Newer Diagnostic Techniques for TB and its drug resistance and Bio-safety measures till December 2015 in close collaboration with Central TB Division.

The activities held in ICELT during the period of 1st April 2017 – 31 May 2018 are given below:

1. National level multisite second line LPA validation study samples umpire testing using liquid culture DST is carried out successfully and completed testing in the mid of April, 2017.
2. Xpert EQA Dried tube specimens were prepared and validated in the month April – June-2017.
3. Had expert review of DTS panel from CDC team in the mid of May, 2017.
4. Discussions were held with CDC India Team on the progress and future action plans regarding implementation of X-Pert EQA Programme during end of June 2017.
5. Fresh panel production for CBNAAT EQA and its validation was in progress from July 2017
6. Genetic sequencing consumable and other supplies were received for umpire testing of isolates in national level multisite second line LPA validation study.
7. Standardization of laboratory methods for Genetic sequencing.
8. CBNAAT Xpert EQA panel production and its verification.

9. Conducted one day sensitization workshop for public and private labs on Xpert EQA testing Feb 2018.
10. CBNAAT Xpert EQA panels dispatched to the sites and results collected, analyzed and reports submitted to Central TB Division during March 2018.

V. Other technical activities

Dr. C. Ravi Chandra, DH-HRD undertook Central Internal Evaluation of the following districts:

- Andhra Pradesh from 17th – 22nd September 2017
 - Uttar Pradesh from 15th – 20th January 2018
- Besides , he also participated in the following :
- Assessment for preparedness of Daily Regimen appraisal at Hyderabad district of Telangana from Hyderabad from 21st– 23rd August 2017.
 - Attended the 11th Common Review Mission under National Health Mission held at Andhra Pradesh (Khamam and Hyderabad) from 3rd – 10th November 2017.
- 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 2017-2018.

Computer Training Unit

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

The Computer Training Unit supports the following major areas:

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

The following were the NDRS activities under taken during the year:

Sl. No.	Date	Particulars
1.	10-04-2017	Meeting with WHO & CTD Officials; Dr. Raghuram Rao, Mr. Avijith Chowdhary and Dr. Kiran to discuss & help in drafting the specification for the proposed NPS
2.	13-04-2017	Meeting With I/C NRL regarding information to be sent tot DDG (TB) about finalizing the NDRS report about Nikshay IDs.
3.	30-04-2017	NDRS review meeting (along with Director) with team of Experts of CTD & WHO at DGHS, Nirman Bhawan, Delhi
4.	22-05-2017 & 23-05-2017	Meeting with Dr. Kiran Rade, Dr. Raghuram Rao (ADDG-TB), Dr. Srinivas (NPO, WHO) at CTD, New Delhi regarding needful follow up furnishing of Nikshay IDs of enrolled patients
5.	30-05-2017 & 31-05-2017	Meeting with Avijith Chowdhary from WHO, India for the Software Requirement Specification for the proposed NPS.
6.	21-06-2017	Meeting (Chaired by Dr. Jagdish Prasad, DGHS) with Dr. Sunil Khaparde, DDG-TB, Dr. Salhotra, ADDG_TB, Dr. Ranjini, LPO-Labs, Dr. Sarin, Director NITRD, Dr. Behra, Director NTI & NDRS Team, NTI to review the treatment outcomes of patients enrolled under NDRS at NTI.

7.	22-06-2017	Meeting (Chaird by Sunil Khaparde, DDG-TB) with Dr. Salhotra, ADDG-TB, Dr. Anand, CTD Consultant Micro Biologist to discuss GHSA-CDC Surveillance project.
8.	12-07-2017	Meeting with Dr. Christine Ho, Dr. Reshu and NTI team to discuss on a) DR Surveillance as a part of CDC-GHSA project b) A Presentation was made about pilot of EQA CBNAAT to be conducted on 20 sites.
9.	12-07-2017 to 14-07-2017	Five 3-days Training Programme at various dates were conducted in Computer Training Hall on “Drug and Vaccine Distribution Management System (DVDMS)”
	19-07-2017 to 21-07-2017	
	26-07-2017 to 28-07-2017	
	02-08-2017 to 04-08-2017	
	16-08-2017 to 18-08-2017	
10.	17-07-2017	Meeting along with Dr. R. Lakshmi, Dr. Reena, Dr. Rohini on drafting of NDRS report.
11.	17-07-2017	Meeting with Director, NTI and Dr. Kishore Reddy, ICELT on the requirements of Data Management for EQA.
12.	24-07-2017	A study about communications received from CDC, India on the GHSA grant solution software was undertaken and briefed to the Director, NTI
13.	29-07-2017	Preventative Maintenance of all Servers and replacement of spares under warranty was undertaken with Technical Team HP.
14.	31-07-2017	Meeting with Director, NTI, Dr. R. Lakshmi, Dr. Rohini Sharma about the NDRS progress report

15.	01-09-2017 to 05-09-2017	MIFA Training about SPSS software was held and attended by participants from Maldives, Afghanistan, Sri Lanka, Bhutan, Nepal and India
16.	06-09-2017	Pilot testing of recording of session on Monitoring and Evaluation under Nikshay for creation of the E-Module
17.	19-01-2018 & 20-08-2018	The Draft Version of LIMS Software was installed and configured on server for upcoming Trainings.
18.	23-01-2018 to 25-01-2018	An In-House Sensitization Training Program (facilitated by Mr. Aranyak Das, IT consultant FIND, Delhi) was held at Computer Training Hall for Lab Personnel on LIMS. Inputs were provided for required feature upgrades on IT and Laboratory front.
19.	21-02-2018 & 22-02-2018	A Sensitization Programme for Microbiologists was conducted at NTI on Updates made to LIMS

- Assisted stores in compiling the feedback on the services rendered towards AMC of computers and IT peripherals at NTI. Feedback was collected, compiled and forwarded to stores.
- Treatment outcomes of patients enrolled in NDRS were received from CTD and In depth analysis of the same based on DST classification of NDRS was undertaken.
- A detailed discussion was held and concerned documents shared at ICELT for requirement gathering of EQA.
- Classifications of NDRS data required by CTD were submitted to DDG-TB.
- A report of CCD section on CTU activities from April to August 2017 was furnished to Establishment.
- Internal shifting, configuration and stock updating of computers to Division I/C M&E from CTU
- Participated in Hindi Week 2017 Celebrations.
- Participated in discussion with Dr. Kiran Rade and Mr. Avijith Chowdhary for Data Management aspects of upcoming NDPS during their NTI visit in December 2017.
- Handled classes on NIKSHAY for STS/STLS, Andhra Pradesh in December 2017.
- Coordinated with FIND, AKSHARA and KPMG to facilitate the roll out of Pilot LIMS.
- Coordinated with the suppliers of received IT hardware for Pilot LIMS for configuration of server and desktop installed at NTI.
- Interaction with developer team to update the features of LIMS as per feedbacks of various pilot sites.
- Upkeep and configuration of Video Conference Unit to support all VC interactions like ECHO clinic.

- The MFS 100 Biometric devices were registered under Registered Devices Services. Interacted with NIC and vendor to produce RD ready tablets. Periodically maintenance undertaken to ensure sustenance.

TB-Net Project

- Regular maintenance of the portal by uploading new content and creation of new user ids etc. as per requirement.
- Providing access of 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,www.ntiresearch.ntiindia.org.in,www.ntiindia.org.in/ndrs,www.drs.ntiindia.org.in,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 Aadhaar 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.

Reports

Compilation & Consolidation of Monthly/Quarterly/Half yearly/Annual Reports/outcome Budget/NTI Bulletin from all the division/unit of the Institutes is being undertaken by the unit.

Mr. R Jitendra discharged the duties as

- I/C CTU HRD & Document Division
- Publication Secretary of NTI Bulletin & Annual Report
- Anti-Sexual Harassment Committee member.
- Website Committee member

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 provided the information needs of the faculty, staff of the Institute besides Medical and Para-medical trainees and delegates/visitors from medical fraternity.
- Coordinated in periodicals 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 cleansed data base in the format recommended by the documentation division.
- Final analysis undertaken in terms of tables, figures etc.
- Published article with Bibliography.

Subscription of over 13 journals/periodicals (inclusive of nine online) was renewed for the year 2017-18. The following four Periodicals were renewed for the year 2017-18:

- SWAMY'S News & SWAMY'S Handbook.
- LYNDA.COM online premium software.
- PC Quest
- PC Digit

The following nine journals have been subscribed online for the year 2017-18.

- Lancet
- TB
- 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.
- Harvard Health Online.

I/C Library was involved in the following activities:

- Coordinated/participated in the two training program held in Kala Niketan by extending services in operations of the audio/visual equipment in Kala Niketan.
- Coordinated in participation of eight officer/officials in the NATCON 2017 held in Amalapuram/Rajamundry from December 15th to 17th December, 2017.
- Extended technical advice as I/C X-ray pertaining to X-ray Units & equipment to needy DTCs.
- Participated in the Preventive maintenance of Laboratory Microscopes for Laboratory Technicians by taking Physics theory and practical class for Laboratory Technician Trainees.
- 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.
- Issued library tickets to Mr. R. Jitendra, JSO.
- As Fitness Certificate was due for vehicle Bolero KA O4 Z 6872 correspondence with India Garage and private garages for servicing of transport vehicle was taken up and the vehicle was serviced. The vehicle was later presented at the Regional Transport Officer, Yeshwantpur and fitness certificate for 5 years was successfully obtained.

Publications:

- NTI Annual Report for the year 2016-17 was published and distributed amongst faculty & as per advice of the Director.
- 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 in the network 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 TB (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. NRL at Bhopal Memorial hospital & Research Centre, Bhopal
2. NRL at Regional Medical Research Centre, Bhubaneswar

The NRL is quality tested by WHO Supra NRL 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. EQA – OSE Visit 2017:

Sl. No.	State	STDC	Date Visited	Team
1.	Karnataka	IRL Bengaluru	20 th - 23 rd Sept 2017 Reassessment : 30 th -31 st Oct 2017 18 th Dec 2017	Dr. Reena, Dr. Lakshmi, Dr. Rohini, Mrs. Mamatha, Mr. Somshekar

Sl. No.	State	STDC	Date Visited	Team
2.	Rajasthan	STDC Ajmer	30 th Oct- 4 th Nov 2017	Dr. Rohini, Mr. Somshekar, Mr. Jaya Ganesh
3.	Maharashtra	STDC Nagpur	13 th -17 th Nov 2017	Dr. Rohini, Mr. Prathap, Mr. Jaya Ganesh
4.	Maharashtra	STDC Pune	30th Jan – 2nd February 2018	Dr. Rohini, Mrs. Mamatha, Mr.Prathap, Mr. Jaya Ganesh

D. NRL SUPERVISORY ACTIVITY:

State	No. of OSE visited by NRL	No. of CBNAT sites visited by NRL	No. of IRL/C&DST visited by NRL
Karnataka (20-09-2017 to 23-09-2017)	- 1 NRL EQA OSE visit to IRL Bengaluru (additional 3 visits to rectify laboratory issues) - 1 pre assessment visit to RIMS Raichur & KIMS Hubli - 26 visits to Districts EQA & CBNAAT	26/34	3 -IRL Bengaluru -RIMS Raichur -KIMS Hubli
Rajasthan (30-09-2017 to 04-11-2017)	- NRL EQA OSE visit to IRL Ajmer	3	3 - IRL Ajmer SMS - Jaipur SLLPA training - SNMC Jodhpur SLLPA training
Maharashtra Nagpur (07-11-2017 to 11-11-2017)	1 - NRL EQA OSE visit to IRL Nagpur	4	1 - IRL Nagpur
Pune (30-01-2018 to 01-02-2018)	1 - NRL EQA OSE visit to IRL Pune 1 - Pre assessment visit to BJMC & Military hospital, Pune	8	-IRL Pune -BJ Medical College -GTB Sewree SLLPA training -Infexn Labs -GMC -Aurangabad SLLPA training

E. 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 equipment.

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 the 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 – 2017)

Sl. No.	State	Lab	Proficiency(Completed / Ongoing / Not done)
1.	Maharashtra	Metropolis	Ongoing
2.	Karnataka	RIMS, Raichur	Ongoing
3.	Jharkhand	Ranchi	Ongoing
4.		IRL, Ranchi	Completed
5.	Madhya Pradesh	BMHRC, Bhopal	Completed
6.		MRTB, Indore	Completed
7.		NIRTH, Jabalpur	Completed
8.	Chhattisgarh	IRL, Raipur	Completed
9.	Orissa	RMRC, Bhubaneswar	Completed

Sl. No.	State	Lab	Proficiency(Completed / Ongoing / Not done)
10.		IRL, Cuttack	Completed
11.	West Bengal	IRL, Kolkatta	Completed
12.		NBMC, Siliguri	Completed
13.	Assam	IRL, Guwahati	Completed
14.	Tamil Nadu	NIRT, Chennai	Completed

ii) Second Line LPA Proficiency Testing Status

Sl. No.	State	Lab
1.	Rajasthan	IRL, Ajmer
		SMS, Jaipur
		SNMC, Jodhpur
2.	Karnataka	IRL, Bengaluru
		KIMS, Hubli
		RIMS, Raichur
3.	Maharashtra	IRL, Pune
		IRL, Nagpur
		GMC, Aurangabad
		GTB, Sewree
		JJ Hospital
		PD. Hinduja

iii) K-External Quality Assurance for Mycobacterium Culture and DST

Proficiency Tested for	Reporting month	Testing Agency	Methods / Media Used	Proficiency Result
14 th Round: Sputum smear microscopy	April 2017-18	STAC, Kathmandu Nepal	ZN Staining	Result awaited

ONSITE LPA TRAINING

SNo.	Particulars	Period	Resource Person
1	Onsite Training for LPA at NIRTH, Jabalpur	12-06-2017 to 15-06-2017	Mr. Prataph
2	Conducted on site visit at RIMS Raichur to give onsite second line LPA training	28-06-2017 & 29-06-2017	Mr. Somashekar
3.	Visited to KIMS, Hubli to give onsite second line LPA Training		Mr. Jaya Ganesh Mr. Prathap

SNo.	Particulars	Period	Resource Person
4	Conducted visit to military Hospital, Pune and IRL Pune for precertification	30-06-2017 & 01-07-2017	Dr. Krishnmurthy Mr. George Sebastian Mrs. Reena, Dr. Lakshmi
5.	Conducted on site 2 nd Line LPA training in IRL, Karnataka	03-07-2017 & 04-07-2017	Mrs. Reena Mrs. Bhagirathi
6.	Conducted onsite training on 2 nd Line LPA at IRL, Aurangabad	04-07-2017 & 05-07-2017	Mr. Jaya Ganesh
7.	Conducted onsite training on 2 nd line LPA at IRL, Pune STDC	04-07-2017 & 05-07-2017	Mr. Prathap
8..	Conducted onsite training on 2 nd line LPA at IRL, Ajmer		Mr. Shomashekar
9.	Conducted onsite training on 2 nd line LPA at IRL Jodhpur	11-07-2017 & 12-07-2017	Mr. Jaya Ganesh
10.	Conducted onsite training on 2 nd line LPA at SMS Jaipur Medical college		Mr. Prathap
11.	Conducted onsite training on 2 nd line LPA at IRL BMHRC Bhopal	26-07-2017 & 27-07-2017	Mr. Shomashekar
12.	Conducted onsite training on 2 nd line LPA at GTB Mumbai	28-06-2017 & 29-06-2017	Mr. Jaya Ganesh
13.	Visited the Laboratory at NTI and discussed the implementation of EQA of CBNAAT on a pilot basis in a phased manner in India, also discussed regarding the CDC GHSA sub contract award by NTI to NIRT		Dr. Christine Ho (TB Branch Chief) and Dr. Reshu Agrawal from CDC India.
14.	conducted onsite visit to IRL Bengaluru, to give Training in MGIT Liquid culture and DST	28-08-2017 & 30-08-2017	Mr. Prathap

SNo.	Particulars	Period	Resource Person
15.	Attended North Zonal Task Force meeting at Leh Ladakh	11-08-2017 & 13-08-2017	Dr. Krishnamurthy
16.	Attended E- Procurement and GEM training at Institute of Govt. Finance and Accounts, Chennai	11-09-2017 & 13-09-2017	Dr. A Krishnamurthy, Mr. George, Mr. Saravanan & Mr. Nagarajappa
17.	Conducted OSE in IRL Bengaluru	20-09-2017 & 23-09-2017	Dr. K Reena, Dr. R.Lakshmi, Dr. Rohini Sharma & Mr. Somashekarayya
18.	Hand holding IRL Karnataka for smooth functioning of PMDT services	09-10-2017 & 21-10-2017	Dr. Reena, Dr. Lakshmi & Mr. Somshekerayya
19.	Pre assessment visit to KIMS Hubli for certification in Liquid culture	12-10-2017	Dr. Reena & Mr. T. Pratap
20.	Re assessment visit to IRL Karnataka	27-10-2017	Dr. Reena & Dr. Lakshmi
21.	EQA OSE visit to Rajasthan	30-10-2017 to 04-10-2017	Dr. Rohini Sharma, Mr. Prathap & Mr. Somshekerayya
22.	Joint Assessment of TB Diagnostic Network of India- Debriefing meeting at New Delhi	30-10-2017 & 31-10-2017	Dr. R.Lakshmi
23.	Joint assessment of TB Diagnostic Network – site visit Bengaluru	01-11-2017 to 04-11-2017	Dr. P. Kumar, Dr. K. Reena & Dr. R. Lakshmi
24.	EQA OSE to IRL Ajmer	01-11-2017 to 04-11-2017	Dr. Rohini Sharma, Mr. T. Pratap & Mr. Somashekarayya
25.	Delivered guest lecture in Telangana State TB conference	04-11-2017	Dr. K. Reena
26.	CBNAAT site visit & EQA to Mysore and Chamrajnagara	07-11-2017	Dr. K. Reena, Dr. R. Lakshmi & Mr. Somashekarayya
27.	Pre Assessment visit to C & DST labs, RIMS, Raichur (FL- LC- DST) CBNAAT site visit & EQA to Raichur	09-11-2017	Dr. R. Lakshmi & Mr. Somashekarayya
28.	EQA OSE to IRL Nagpur	07-11-2017 to 14-11-2017	Dr. Rohini Sharma, Mr. T. Pratap & Mr. K. Jayaganesh

SNo.	Particulars	Period	Resource Person
29.	CBNAAT site visit & EQA to Tumkur	10-11-2017	Dr. K. Reena & Ms. H. G. Mamatha
30.	CBNAAT site visit & EQA to Mandya	14-11-2017	Dr. K.Reena & Mr. Somashekarayya
31.	CBNAAT site visit & EQA to Pavagada	15-11-2017	Dr. K.Reena & Mr. Somashekarayya
32.	Stake Holder meeting on developing LIMS under RNTCP at Delhi	16-11-2017 & 17-11-2017	Dr. R. Lakshmi
33.	CBNAAT site visit & EQA to Chikballapura & Kolar	18-11-2017	Dr. R. Lakshmi & Mr. Somashekarayya
34.	CBNAAT site visit & EQA to Bijapur, Gulbarga, Bidar, Yadgir	21-11-2017 to 24-11-2017	Mr. Somashekarayya & Mr. T. Prathap
35.	NRL Mentoring visit along with CTD - BMHRC, Bhopal	29-11-2017 & 30-11-2017	Dr. K. Reena & Mr. Somashekarayya
36.	Electron Microscopy training department of anatomy New Delhi	20-11-2017 to 02-12-2017	Dr. Rohini
37.	South Zone-2 Zonal visit at Chennai	29-11-2017 & 30-11-2017	Dr. A. Krishnamurthy
38.	Attended South Zone-2 Zonal task force meeting at Chennai	28-11-2017 to 01-12-2017	Dr. A. Krishnamurthy
39.	Participated in the National Tot on Revised PMDT algorithm at NTI	11-12-2017 To 13-12-2017	Consultant Microbiologists (NRL), Dr. K. Reena, Dr. R. Lakshmi, Dr. Rohini Sharma
40.	Attended NATCON workshop at Rajahmundry, Andhra Pradesh	15-12-2017 To 18-12-2017	Dr. A. Krishnamurthy
41.	Attended NATCON workshop at Rajahmundry, Andhra Pradesh	15-12-2017	Mr. George Sebastian
42.	Re-Assessment of C& DST activities of IRL-Bengaluru	18-12-2017	Mr. Somashekhar
43.	Visit to CBNAAT & EQA sites for Hassan, Chikmangalur & Shimoga districts	04-01-2018 & 05-01-2018	Dr. Lakshmi & Mr. Somshekerayya

SNo.	Particulars	Period	Resource Person
44.	Participated in Central Internal Evaluation team of West Bengal	04-01-2018 to 08-01-2018	Dr. Krishnamurthy & Dr. Umashankar
45.	Hand holding of BMHRC, Bhopal for Liquid culture	08-01-2018 to 12-01-2018	Mr. Somshekerayya & Mr. Jaya Ganesh
46.	Visit to CBNAAT sites and EQA for the districts in Karnataka - Bellary, Koppal, Bagalkot & Belgaum	22-01-2018 to 25-01-2018	Mr. Somshekerayya & Mr. T. Pratap
47.	Visit to CBNAAT sites and EQA for the districts in Karnataka - Udupi and Mangalore	31-01-2018 to 02-02-2018	Dr. Lakshmi & Mr. Somshekerayya
48.	EQA visit to PUNE	31-01-2018 to 01-02-2018	Dr. Rohini, Mrs. Mamatha H.G, Mr. T. Pratap & Mr. K. Jayaganesh
49.	Pre- Assessment visit to Military Hospital & BJ Medical College, Pune	30-01-2018	Dr. Rohini & Mrs. Mamatha H.G
50.	Delaminid introduction in PMDT under RNTCP-Capacity Building workshop at New Delhi	31-01-2018 to 01-02-2018	Dr. P. Kumar & Dr. K. Reena
51.	Participated in Central Internal Evaluation team of west Bengal	04-01-2018 to 08-01-2018	Dr. Krishnamurthy & Dr. Umashankar
52.	Stake Holders meeting on EQA for CBNAAT held at Mumbai	14-01-2018	Director, Mr. George, Dr. K. Reena & Dr. Kishore
53.	Visit to CBNAAT sites and EQA for the districts in Karnataka Udupi & Mangalore	31-01-2018 To 02-02-2018	Dr. Lakshmi & Mr. Somshekerayya
54.	Visit to CBNAAT sites and EQA for the districts in Karnataka - Gadag	06-02-2018	Dr. Lakshmi & Mr. Somshekerayya
55.	Pre- assessment visit to Private C & DST labs in Mumbai	15-02-2018 & 16-02-2018	Dr. K Reena
56.	Visit to CBNAAT sites and EQA for Haveri, Sirsi & Karwar districts	21-02-2018 & 23-02-2018	Dr. Rohini Sharma & Mr. Somshekerayya

SNo.	Particulars	Period	Resource Person
57.	Visit to CBNAAT sites and EQA for the districts in Karnataka – Davengere	27-02-2018	Dr. Reena & Mr.Somshekerayya
58.	Visit to CBNAAT sites and EQA for the districts in Karnataka - Chitradurga	08-03-2018	Mr. Somshekerayya & Mr. T. Pratap
59.	On- Site LC- DST training at IRL Jodhpur	12-03-2018 to 17-03-2018	Mr. K. Jayaganesh & Mr. Somshekerayya

- As part of assessment of laboratories, accompanied the team to IRL Bengaluru and one of the DMCs on 2nd November 2017. STO Karnataka made a presentation, followed by visit to IRL Bengaluru and one of the DMCs. The team reviewed functioning of IRL and DMCs
- As a member of Internal expert team Dr. P. Kumar, visited Hyderabad on 3rd& 4th November 2017 and a presentation was made by the STO, Telengana, followed by visit to IRL Hyderabad and some of the PHIs.
- Dr. P. Kumar visited Bhubaneshwar 7th& 8th November . 2017 and had interaction with NRL and RNTCP experts of Orissa
- Dr. P. Kumar participated in the final discussion on the comprehensive assessment of laboratories held at New Delhi on 9th& 10th November 2017 besides chairing the scientific sessions, guided the discussion and addressed the participants.

iv) L- Specimens processed at NTI during April 2017- March 2018

Particulars	Total No.
Total Specimens (Sputum + XDR Culture +PMDT+NTM and OP) registered	2647
XDR suspect culture samples registered	290
Total number of Specimens registered for OP(1 for NTM)	33
Total number of Specimens from Karnataka registered for LPA (PMDT)	2345
Total No. of specimens put up for primary culture OP + 3 Dist. of Karnataka –PMDT	1882
Total no. of LPA performed (1st line)	1021
Total no. of LPA performed (11nd line)	278
Total number of specimens subjected to Gene-Xpert	708
Total no. of drug Susceptibility tests performed by using MGIT	135
No. of Specimens subjected for identification test (Immuno-Chromatographic Test)	135
Total number of samples subjected for HPLC	35
Total Number of Belgium cultures received for Quality control	20
Total Number of drug susceptibility test by solid culture (LJ)	20

Total number of Patients registered for NDRS Survey	02
Total number of Specimens registered for NDRS Survey	04
Total number of Specimens put for primary culture for NDRS Survey	04
Total number of NDRS Survey samples put up for DST by (MGIT)	332
Total number of Specimens registered for relapse study	106
Total number of Relapse study Specimens put for primary culture	104
Total number of Relapse study samples put up for DST by Solid culture (LJ)	33

E. M- Animal Model Research Unit (AMRU)

The main objective of the unit AMRU is to experiment in Laboratory Animal and their utility in TB Control. In 1979, breeding wing became operational and breeding of laboratory animals, mainly albino guinea pigs, was started and maintained thereafter, ensuring homogeneity of the successive generation of the stock animals. In 1981, preliminary in-vivo tests started on a modest scale not only to be familiarized with the procedures, but also to standardize various techniques.

Animal Model Research Unit (AMRU) is registered under Breeding of & Experiments with the Committee for the Purpose of Control & Supervision of Experiments on Animals (CPCSEA), Ministry of Social Justice & Empowerment. Studies involving animal experimentation are subject to approval by the Institutional Animal Ethics Committee (IAEC) constituted as per the prescribed guidelines, which includes a nominee from CPCSEA. In this regard, all the guidelines of Government of India are complied with. In view of advancement in TB research, modernization and 'facility safeguards' a Bio-Safety Laboratory (negative pressure) facility & an open shelter for retired breeders have been established at NTI.

F. Status of Laboratory Animals

Breeding and maintenance of homogenous stock laboratory animals Guinea Pigs

- During the period of reporting under reference a total of 177 albino guinea pigs were raised in healthy condition. Appropriate preventative measures were taken to check outbreak of diseases among breeding stock. Outdoor shelter for Retired Breeders was maintained in good condition.
- Monthly and Quarterly reports on monitoring the experiment on animals in organizations / institutions under Dte. GHS were prepared in the prescribed format for timely submission to ADG (EPI) with a copy to DDG TB.

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 in TB.
- Engage in other RNTCP related activities including development of training modules & guidelines; provide technical inputs towards policy development and monitoring & supervision.
- Research dissemination.

The activities carried out by ERD during 2017-18 are as under:

I. Research Studies – Ongoing

i. Expenditure incurred for diagnosis among new TB patient notified by RNTCP in Bengaluru City

Objectives:

- 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.
- 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, Bengaluru. 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:

- i) 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.
- ii) 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:

These Studies 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 OOP 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.

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

Objectives:

- To find out proportions of EPTB patients diagnosed and / or treated in selected tertiary health facilities in Bengaluru City as per current RNTCP guidelines during 2017.
- 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 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:

Approved by IEC Pilot study has been completed in P.D. Hinduja Hospital. Protocol, SOPs, Questionnaires were revised accordingly. Visit has been undertaken to look into the feasibility of the study and had discussion with the stakeholders at St. Marthas Hospital. Several rounds of meeting conducted along with Dr. Sharath from ESI hospital in finalizing the title of the study protocol and study formats.

Revised protocol and questionnaires were presented to the TCC and suggestion and modifications were incorporated accordingly. The revised protocol was presented for IEC approval on 2nd June 2018 and got approved.

iii) Systematic screening for pulmonary TB among women attending public maternity Hospitals for Antenatal and Post-Natal Care in Bengaluru

Objectives:

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

Methodology:

Women attending public maternity hospitals for anti-natal / post-natal care in Bengaluru city. 4000 participants from selected public maternity hospitals in Bengaluru will be included in the study.

The study is planned to be conducted at purposively selected 4-8 public sector maternity hospitals in Bengaluru city. Estimates sample size will be allocated equally to these facilities.

All consecutive women attending maternity hospitals for ante-natal/ post-natal care (up to 6 weeks after child birth) as out-patient will be enrolled into the study after obtaining their informed written consent, till the allocated sample size is achieved. Each participant will be screened at each visit during our study period, but will be counted as one for the purpose of sample size. They will be subjected to screening for the symptoms of pulmonary TB i.e. Cough or fever of any duration, Hemoptysis in last 3 months, significant weight loss, night sweats.

Screening will be done by NTI Field investigators. Those found screened positive (presence of any of the above symptoms) will be eligible for sputum examination. HIV status, presence of previously diagnosed/gestational diabetes if any and personal habits (tobacco/alcohol use) will be recorded. Symptomatic HIV reactive women will be eligible for sputum examination irrespective of the duration of symptoms.

Among those eligible for sputum examination, 1 spot sputum specimen will be collected under sterile conditions. Specimen will be transported to NTI Laboratory for examination by Xpert MTB/RIF, used to identify Mycobacterium TB (MTB) DNA and resistance to rifampicin (RIF). Those found positive by molecular test will be labelled as microbiologically confirmed pulmonary TB cases. Those found negative will be advised to consult the attending clinician for further advice and management.

Non-symptomatic participants will be advised to report development of such symptoms in future to the hospital and they will be cared for under routine RNTCP guidelines.

Expected Outcome:

Evidence based Recommendation for incorporating systematic screening for TB in maternal 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 Bengaluru; 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. Field work is set to begin at the earliest.

iv) Predictors of unfavorable TB treatment outcome in TB – HIV co-infected patients in Karnataka.

It is a retrospective cohort study to be undertaken in collaboration with Karnataka State TB Cell and Karnataka State AIDS Prevention Society (KSAPS)

Objectives:

- To find out the proportions of HIV co-infected new TB patients registered for treatment with first line anti-TB drugs under RNTCP in Karnataka during July – December 2017 treated successfully.
- To determine the association between socio-demographic and clinical factors with unfavorable TB treatment outcome.
- To develop a model for prediction of the risk of unfavorable TB treatment outcome among HIV infected new pulmonary TB patients at the time of registration under RNTCP.

Methodology:

The study will be carried out in a state wide representative cohort of HIV co-infected new TB patients registered in the state during July to December 2017.

Dependent variable:

TB treatment outcome – Successfully treated (cured /treatment completed) / unfavorable treatment outcome (failed/ LTFU/ died/ switched to cat IV) / not evaluated

Data collection:

Administrative approval from the State TB Cell and KSAPS will be obtained. Their officials shall be apprised of the study and requested to advise selected district health authorities to extend support for data collection.

On visiting the respective district, the Field Health Officials shall meet the District TB and HIV Programme Officers for their co-operation in data collection.

Data for the variables as listed above will be collected in individual data collection sheets for each HIV co-infected TB patient registered. For data pertaining to ATT, the preferred source will be case based digitized data obtained from respective DTOs or downloaded from Nikshay. Four visits of 10 days each will be made to each district during 3rd quarter of 2018 for data collection.

Upon completion of the study, results will be shared with Karnataka State TB Cell, Karnataka State AIDS Prevention Society (KSAPS) and International Union against TB and Lung Disease and to other stakeholders through published papers.

Expected Outcome:

Knowledge gained on variables associated with unfavorable outcome will be useful to design appropriate strategies to improve the treatment success rate.

Predictive risk model will help the programme workers to identify patients likely to have unfavorable outcome of ATT.

Current Status:

Approved by IEC Field work has to be started.

II. Study to be undertaken by NTI under India TB Research Consortium

a. 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:

- 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.
- To formulate appropriate diagnostic algorithm for active case finding and to demonstrate feasibility in these settings.
- To find out the proportion of cases attributable to recent transmission within the facility.
- 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.

Sl. No.	Implementing Institutes	Miners	Workers exposed to Silica dust(other than miners)	Workers exposed to organic textile dust
1.	NTI, Bengaluru RCOH, Bengaluru	7500 Distributed over 3 southern states	4000 Distributed over 3 southern states	500 wool workers in Karnataka

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, Bengaluru (Regional Centre for Occupational Hazard). Research formats are prepared approved by IEC & SOPs. Further modalities and budget requirement will be finalized in due course of time in consultation with ICMR.

b. A phase III randomized, double blind, placebo controlled trial to evaluate the efficacy and safety of VPM1002 and Mw vaccines in preventing TB in healthy household contacts of pulmonary TB patients. (India TB consortium)

Objectives:

- 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.

- 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 Secondary placebo [in a sub-set of population at Sites – Delhi (NCR), Hyderabad and Chennai].
- To evaluate the safety and Immunogenicity of VPM1002 and Immuvac in Indian healthy household contacts.

Methodology:

The study will be initiated only after the approval from the DCGI and the Institutional Ethics Committee (IEC) from the respective study sites.

The details of the sputum positive PTB cases presenting to the DOTS center/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 House HC. 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-TB 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 which 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 γ , IFN α FACS (Fluorescence activated cell sorting): CD3, CD4/CD8, TNF γ [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, α , TNF γ LUMINEX: IL2, IFN γ 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:

Nomination of Co-investigators is finalized, liaisoning with state TB officials in selection of study sites in and around Bengaluru city. Modalities completed to obtain budget for capacity building from ICMR. Revised protocol along with explanations for the comments received by IEC was presented during the 21st IEC meeting held on 02/06/2018.

III. Protocols under development

Evaluation of new algorithm among reported new smear negative TB patients under RNTCP.

IV. Research dissemination

i) Research Paper Published with ERD officials as Lead Authors

- Bhalla BB, Chadha VK, Gupta J, Nagendra N, Praseeja P, Anjinappa SM et al: Knowledge of Private practitioners of Bengaluru city in diagnosis, treatment of pulmonary TB and compliance with case notification. <http://doi.org/10.1016/j.ijtb.2018.01.001>

One hundred and twenty-nine qualified private practitioners (PPs) were assessed on their knowledge in diagnosis of pulmonary TB (PTB), treatment of a new drug sensitive PTB case and practices of case notification, using semi-structured questionnaire. About 20% had adequate knowledge of diagnosis, 29% of treatment regimen, 54% the need for Direct Observation Treatment and 57% about role of sputum smear examination in monitoring treatment response. Of 85 (68%) PPs who had diagnosed any TB case during last two years, 54 (64%) had practiced notification. These findings suggest the need for upgrading knowledge of PPs in TB diagnosis, treatment and notification.

- VK Chadha Chapter on Epidemiology of pulmonary TB and Trends in Disease Burden –published in the Text Book for Pulmonary and Critical Care medicine. 2nd Edition 2017pp. 423-435. Jaypee brother's Medical Publishers (P) Ltd.

ii) Research Paper Published with ERD officials as Co-Authors

- Sarin R, VohraV, Khalid UK, Sharma P P, Chadha V K, Sharada MA. Prevalence of Pulmonary TB among adults in selected slums of Delhi city. published in Ind J. Tuberc - available online 22 August 2017 . <https://doi.org/10.1016/j.ijtb.2017.08.007>.

- Co-author of “Nation within a nation: Variations in epidemiological transition across the states of India from 1990 to 2016 in the Global burden of disease study” .(www.thelancet.com,published published online: November 2017: [http://dx.doi.org/10.1016/50140-6736\(17\)32804-0](http://dx.doi.org/10.1016/50140-6736(17)32804-0)
- Co-author of ‘India: Health of the Nations states, The India State Level Disease Burden Initiative. ICMR, Public Health Foundation of India, IHME

iii) Research Paper under Publication

- TB diagnostic and treatment practices in private sector: implementation study in an Indian city - In IJTB.
- Sensitivity and specificity of screening tools and smear microscopy in active TB case finding - Paper submitted for publication in IJTB.
- Active TB case finding in India – the way forward-Paper submitted for publication in IJTB
- Recurrence of TB among newly diagnosed sputum positive pulmonary TB patients treated under the RNTCP, India : a multi centric prospective study-Paper submitted for publication in PLOS ONE
- Final manuscript on sub-national TB Prevalence Surveys in India, 2006-2012: Results of uniformly conducted data analysis was prepared and submitted to Director on 16th January 2017 seeking permission of Dte.GHS for its submission for publication.

V. Other Technical Activities

- Gave inputs as Co- author for “TB infection: next era of TB Disease in India”. Author consent form submitted for the paper: “Nation within a nation: Variations in epidemiological transition across the states of India from 1990 to 2016.
- Print proof copy of the chapter on Childhood TB co-authored with Director General, ICMR was corrected.
- Author consent form submitted for the paper titled: “A brief tobacco smoking cessation intervention during TB treatment in Rajasthan, India”, developed as part of OR union project.
- Reviewed papers for IJTLD,IJTB, BMC Infectious diseases and Journal of TB research. BMC pulmonary Medicine, BMC Public Health.
- Discussion held with I/C Monitoring and Evaluation division regarding ‘what should be the job description of and what support can be given to CTD. I/C M & E were advised to prepare draft for further discussion.
- As co-author, Dr. V.K. Chadha provided detailed inputs for the manuscript titled “Operation Research within a Global Fund supported TB project in India: Why, How and the Impact”.
- Following three presentations were prepared for the MIFA Training :
 - Descriptive Epidemiology
 - Rates and Ratios
 - Statistical tests of significance.
- Presentations on proposed Role of NTI laboratory and ERD in AMD was prepared

- Peer review of the following manuscripts received from IJTB was undertaken:
 - Place of ACF in detection of relapse
 - TB test usage and medical expenditure from outpatient insurance claims data
- In response to invitation for facilitating Operational Research workshop of North East Zone scheduled in the month of October 2017, technical note was sent to STO Tripura
- In response to invitation for facilitating Operational Research workshop of North East zone scheduled in the month of October 2017, technical note was sent to STO Tripura.
- The nine sub-national prevalence survey data was re-analyzed to find out the feasibility and cost per case detected with the aim of recommending the appropriate algorithm for community based active case finding.
- Technical inputs provided to a research scholar on study of Defaults in TB patients.
- Dr. VK. Chadha Gave inputs on manuscripts on “guidance for country level TB mortality modeling”. The contribution included under the section of acknowledgements in the manuscript.
- Provided inputs to Dr. Sowmya from Hinduja hospital for preparing abstract on PPM project (Dasappa project) undertaken in their hospital for presentation in a conference.
- Dr. V K Chadha visited the institute of trans- Disciplinary Health Sciences and Technology, Bengaluru on 13/12/2017. Had meeting with Dean, Research and Registrar of Trans-Disciplinary (TDU) to collaborate NTI-TDU for mentoring research scholars of PhD public Health.
- Provided inputs to protocol titled ‘Spirometry after successful treatment of Pulmonary TB to be taken up at a tertiary care hospital in Delhi.
- Provided inputs as co-author towards revision of the article ‘Operational Research within a Global Fund supported TB project in India: Why, how, and the contribution towards change in policy and practice.
- Inputs provided to GBD paper on ‘Latent TB infection in India’.
- Dr. VK Chadha developed the content for the e-module ‘Epidemiology of TB’ and gave inputs to Dr. S. Uma Shankar on the same
- As co-author, gave input to the manuscript ‘out of pocket expenditure by MDR-TB patient in Dakshina Kannada District’.
- Gave inputs for a presentation to be made by Hinduja Hospital faculty in New Delhi regarding the improvement in TB case finding activity in the hospital as a result of the collaborative PPM implementation project with ERD, NTI.
- Reviewed the work done by a mentee on evaluation of PMDT in four states of India undertaken as a part of GFATM funded O.R. course.

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 and results and interpretation of the results of various research studies.

Now, the Division has Statistical Subordinate Service (SSS) Officers (Junior Statistical Officers) manpower 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 w.r.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. The details are given below:

i) Dr. Somashekar N. Division Head, M&E under took Central Internal Evaluation of the following states

Sl.No.	State	Date
1	Andhra Pradesh	18th – 22nd September 2017
2	Karnataka	9th – 13th October 2017
3	Uttar Pradesh	16th – 20th January 2018
4	Uttarakhand	19th – 23rd February 2018

ii) Dr. Somashekar N. Division Head, M&E attended the following meetings

- Assessment for preparedness of Daily Regimen appraisal at Vishakapatnam district of Andhra Pradesh from 20th – 23rd August 2017.
- 11th Common Review Mission under National Health Mission held at West Bengal (Kolkata and Dakshin Dinajpur) from 3rd – 10th November 2017.

iii) Dr. Somashekar N. Division Head, M&E participated as facilitator/resource person for the following trainings/sensitization programmes:

- Sensitization on Newer TB Guidelines for faculties and P.G. students of Mysore Medical College & Research Institute, Mysore on 7th December 2017.
- National Level TOT for revised PMDT held at Kolkata from 8th – 10th March 2018.
- The sensitization programme on TOG held at Kasturba Medical College, Manipal on 21st & 22nd March 2018.

- Worked as Karnataka State OR Committee member.
- State RNTCP Operational Research Workshop (Module-2) on Scientific Paper Writing held at Yenepoya Medical College, Mangaluru from 26th – 28th March 2018.
- Training programme on “TOG (TOG-2017) RNTCP” for Doctors and General practitioners and post graduates held at St. John’s Medical College, on 13th, 15th& 16th March 2018.

Miscellaneous:

Officer and Staff of the Division attended statistics day programs, Hindi Week Competitions, Hindi day Programs and World TB day functions.

5. COMMUNICATION AND SOCIOLOGY 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 and staff of health and other departments, doctors and Para-medical personnel from government and private sector and 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.

Visit of students

Under Advocacy Communication and Social Mobilization, Communication & Sociology Division at NTI has been conducting one-day orientation / sensitization training about RNTCP. Students from different institutions of the state and neighboring states are utilizing this program. A total of 1106 students & scholars of life sciences visited NTI in 32 batches during the period as follows:

Sl. No.	Category of students	No. of Participants
1.	B. Sc. (Nursing)	584
2.	DGNM	167
3.	B. Sc.(MIT)	38
4.	B. Sc(MLT)	36
5.	BPT	45
6.	M. Sc. (Life science)	26
7.	M. Sc. (Nursing)	13
8.	BAMS Students	59
9.	B. Pharma	50
10.	M. Sc. (Micro Biology)	28
11.	M. Sc. (Bio Technology)	60
Total number of students		1106

- Total no. of students – 1106, Total no. of batches - 32

Other activities

The Division head undertook following activities

- Discharged duties as chairman of the local purchase committee and also as member of purchase committee, condemnation committee and Hostel committee.
- Participated in the programme on 'Expanding Bedaquiline Access to all States in the Country' from 7th to 9th April 2017 at Chennai.
- Facilitated the sensitization programme on TOG-2016 and participated in the TRUNAAT sensitization programme conducted at NTI.
- Facilitated the 'Operational research capacity building & mentorship' workshop for professionals working with RNTCP, held from 17th to 26th May 2017 in collaboration with WHO & Union.
- Organized and conducted practice sessions on yoga for the staffs of the Institute in connection with the observance of 'International Yoga Day'.
- Completed the Annual Stock verification process of the Division and undertook the stock verification of the ERD, M & E Divisions.
- Took part in the ACSM & PPM update and review sensitization held at NTI from 3rd to 5th July 2017; and also attended DVDMS/CDAC training during the month.
- Represented CTD and visited the state of Tamil Nadu from 17th to 20th July 2017 to assess the preparedness to rollout daily FDC.
- Divisional head has extended his services as a facilitator for the RNTCP sensitization held at the HR Division of NTI on 17th & 18th August 2017
- Facilitated the CME on Latest updates on RNTCP held at Oxford Medical College on 31st August 2017.
- Actively involved and successfully disposed of all the condemned items from Laboratory division, Motor Vehicles Division and Library of NTI.
- facilitated two trainings of HRD
 - Management for Information for Action (MIFA) for Doctors from SAARC countries from 1st to 5th September 2017.
 - RNTCP Technical and Operational Guidelines for TB Control in India (TOG)-2016 from 4th to 8th September 2017
- Facilitated one-day sensitization of Community Medicine Post Graduates from AFMC on 21st September 2017.

- Under took Central Internal Evaluation of Bijapur & Bengaluru rural Districts of Karnataka from 7th to 13th October 2017
- Facilitated the North East Zonal operational research workshop conducted at Agartala, Tripura from 23rd to 26th October 2017.
- Actively participated in the Common Review Mission(NHM) of Telangana and from 3rd to 11th November 2017 involving and undertook extensive travelling throughout the Adilabad Tribal District of Telangana and Hyderabad to evaluate the performance of Communicable and Non-communicable disease Program in Telangana state and report was submitted as per ToR.
- Facilitated the Induction Training of two batches of DPC, STS and STLS from Andhra Pradesh from 20th Nov to 1st December 2017.
- Attended a State Level Training on Drug and Vaccines Distribution Management System (DVDMS) on 26th & 27th December 2017 under RNTCP.
- Attended the national level PMDT training held at NTI from 11th to 13th December 2017.
- As a member of the team, undertook Central Internal Evaluation of the state of West Bengal from 1st to 6th January 2018.
- Facilitated the PMDT training for the DTOs and Medical College faculty of Maharashtra at Aurangabad from 10th to 12th January 2018 and subsequently for two batches DTOs and Medical College faculty of Karnataka held from 17th to 24th of January 2018 at NTI, Bengaluru.
- Divisional head participated as a member in the Central Internal Evaluation of the state of Uttarakhand from 19th to 23rd February 2018.
- Miss. C. Suman studying Class 10 at Kendriya Vidyalaya, Hebbal, Bengaluru, Visited the Institute's Scientific gallery as part of her school project to collect the Information & to prepare an Investigatory report regarding TB disease and general information regarding research activities carried out here.
- One day orientation/sensitization training on TB was conducted in 36 batches for students of life science colleges from across the country.
- The staff of the division attended the RNTCP sensitization held at NTI on 17th & 18th August 2017 respectively.
- 410 medical claims were scrutinized and 287 claims were processed for payment by the official I/C of Medical Claims.

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 2017 to March 2018 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	11	03
2.	Group 'B' - Gazetted - Non Gazetted	02 28	01 24	01 04
3.	Group 'C'	96	80	16
Total:		140	116	24

Promotions

Sl. No.	Name	Designation	Date
1.	Shri. B.V. Venkatachalappa	JSO	04.05.2017
2.	Shri. R. Jitendra	JSO	17.07.2017

Retirements on attaining the age of superannuation

Sl. No.	Name	Designation	Date
1.	Sri. Paul Raj	Lab Attendant	31.05.2017
2.	Sri. M. Ramamuthry	Lab Assistant	31.12.2017

3.	Sri. Boregowda	Cook	31.03.2108
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Transferred out from NTI

Sl. No.	Name	Designation	Date
1.	Shri. Mridul Das	JSO	04.05.2017
2.	Shri. Nandish Prasad	JSO	05.05.2017
3.	Shri. Vishweshwara Sharma	JSO	05.05.2017
4.	Shri. Bipin Kumar Verma	JSO	31.07.2017

Transferred in to NTI

Sl. No.	Name	Designation	Date
1.	Shri. T.R. Sreenivas	DDG (Stat)	21.07.2017
2.	Dr. Parvathi Anil	Medical Officer	10.07.2017
3.	Dr. Sarika Jain Agrawal	Specialist Gr.III Microbiology	28.08.2017

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.1,00,00,000/- 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 2017-18 for carrying out maintains and new works. The following Civil, Horticultural and Electrical works were executed during the period under report, in additional to other routine repair & maintenance work.

CIVIL & HORTICULTURAL WORKS

1. Construction of Guest House work at NTI Campus.
2. Urgent Repair works of Office Buildings and Residential buildings at NTI Campus.

ELECTRICAL WORKS

1. Running and Maintenance of two 125 KVA DG Set and one Passenger Lift at NTI Campus.
2. Providing one 125 KVA DG Set with AMF Panel board and associated ancillary work at NTI Campus.

In addition to this maintaining the all Civil, Electrical and Horticulture work and supervising the all the Safaiwala staffs Regular & contractual for cleaning the institute and Campus and Any other work assigned by the officers.

Transport Unit

The Institute has fleet of 7 vehicles (4 Road worthy and 3 under condemnation) 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.

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 equipment 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.

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 2017-2018 is as follows:

Plan	Budget received	Expenditure
Revenue (2210)	12,59,50,000	12,54,04,000
Capital (4210)	1,10,00,000	1,00,00,000
Total	13,69,50,000	13,54,04,000

- f. The revenue generated by the Institute for the year 2017-18 through various sources was credited to the consolidated fund of Government of India as given in the table below:

Year	Amount (Rs.)
2017-2018	Rs.3,58,830/-

7. PARTICIPATION IN MEETINGS / TRAININGS / 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 and outside NTI, the details are furnished below:

A. Workshops

At NTI

Sl. No.	Details	Date	Name of Participating person
1.	“Sensitization cum Training Workshop for ICMR-RNTCP TrueNat Demonstration Study” - a new indigenous diagnostic tool for use in peripheral settings validated by ICMR held in 4 batches on	24-04-2017 26-04-2017 28-04-2017 01-05-2017	Dr. P. Kumar Director and Facilitators from NIRT, Chennai, NTI and Mol Bio trained officials from the selected states
2	Operational Research capacity building workshop and project mentorship for professionals working for RNTCP – module 2 organized by The Union jointly with support of CTD, CDC and NTI. Facilitated plenary discussions, analysis, paper writing for 2 manuscripts -Delivered talk on (i) communication after publication (ii) review process	17-05-2017 to 26-05-2017	Dr. P. Kumar Director Dr. VK Chadha
3.	meeting with Director General of Health Services regarding drug resistance survey date and implications on treatment regimen	21-06-2017	Dr. VK Chadha
4.	meeting with Joint Secretary (TB) , apprised of recently carried out, ongoing and proposed activities of Epidemiology & Research Division	28-06-2017	
5.	Technical and operational Guidelines workshop: delivered talks on a. Disaster Management b. Various Research	08-09-2017	Dr. VK Chadha

Outside NTI

Sl. No.	Details	Date	Name of Participating person
1.	ZTF South-zone-1 workshop held in KAMSRC, Hyderabad on 23-24 Jan 2018, addressed the participants and chaired scientific sessions	22-01-2018 to 24-01-2018	Dr. VK Chadha
2.	Workshop on 'Advanced Epidemiology & Biostatistics' at PGIMER, Chandigarh	26-12-2017 to 05-01-2018	Mr. Jameel Ahmed, Field investigator
3.	West Zone Operational workshop at Panjim Goa : As chief facilitator, delivered two talks on Research methodology and Research management	10-10-2017 to 12-10-2017	
4.	Delamanid introduction under PMDT in India – capacity building workshop in New Delhi	30-01-2018 to 01-02-2018	Dr. VK Chadha
5.	Participated in “Delamanid introduction under PMDT in India – capacity building workshop” on the invitation of CTD in New Delhi, chaired scientific sessions and addressed the participants in concluding session.	01-02-2018	
6.	Chaired the scientific sessions of the ZTF South-zone-1 workshop held in KAMSRC, Hyderabad.	22-01-2018 to 24-01-2018	Dr. P Kumar
7.	Review cum Dissemination workshop of Implementation and Operational Research Projects at NIRT, Chennai: Participated as mentor for various implementation research projects undertaken under the umbrella of GFATM and provided analytical and other inputs for scientific report writing. Also provided technical inputs for ongoing Tribal TB intervention programme	24-01-2018 & 25-01-2018	Dr. VK Chadha
8.	ECHO-evaluation workshop at NITRD, New Delhi. It was desired that NTI should also develop ECHO system so that capacity building through state demonstration & training Centers can be strengthened for RNTCP workers.	06-02-2018 to 07-02-2018	

Sl. No.	Details	Date	Name of Participating person
9.	“stake holder's workshop for CBNAAT EQA in private and public sector” held in Mumbai. Chaired scientific sessions and addressed the participants in both inaugural and concluding sessions. DDG (TB); STO, Maharashtra; City TB Officer, Navi, Mumbai; and Sr. Officials of FIND Office, I/C NRL NTI and Jr. Bacteriologist, NTI, concerned officials from the identified CBNAAT public and private sector sites also participated in the workshop.	14-02-2018	
10.	Zonal OR workshop at Manali – Himachal Pradesh : Facilitated the OR workshop	31-03-2018 to 01-04-2018	

B. Meetings

AT NTI

Sl. No.	Details	Date	Name of Participating person
1	Meeting with Dr. Gomathi from NRL NIRT, Chennai, regarding support of NTI for organizing trueNat and comprehensive lab trainings.	25-04-2017	Dr. P. Kumar
2	<p>Attended the Expert Committee Meeting for alignment of DR TB treatment with NDRS on under the chairmanship of DGHS. Discussions were held to revisit the drug resistant TB treatment regimen in view of the results of the NDRS. It was decided that :</p> <ul style="list-style-type: none"> - NTI shall collect the outcome of 960 patients of drug resistance identified during NDRS in consultation with CTD and state units and to present a report on that to DGHS. - The findings of NDRS to be published in high quality journals like Lancet and New England. - CTD-NTI and WHO NPO to prepare jointly action plan on development of good quality lab across the country for early diagnosis of drug resistant TB. Director, NTI to take lead in this regard in coordination with CTD and WHO NPO and appraise DGHS periodically. 	<p>11-05-2017 12-05-2017 13-05-2017</p>	<p>Dr. P. Kumar DDG (TB), DGHS, Director, NITRD, STO, Delhi, NPOs, WHO; Prof. & HOD, Pulmonary Medicine, BJMC, Ahmedabad; KEM Hospital, Mumbai; & IGMC, Nagpur; Director, ITM, Chennai; Superintendent, GHTM, Tambaram; Prof & Head, Guwahati MC, Sr. Consultant Physician, Hinduja Hospital, Mumbai; and Prof & Head, PGI Chandigarh.</p>
3.	PMDT review meeting chaired by Padmashree Prof. Jagadish Prasad DGHS	12-05-2017	Dr. P. Kumar, and faculty of NTI.
4.	Video conference meeting on TB burden - Gave inputs for refining interim state level TB burden activity	16-05-2017	Dr. V.K. Chadha
5.	Video conference meeting with NIRT and other institutes participated in the Multi Centric study of recurrence : Gave suggestions on analysis already undertaken and further analysis required	19-06-2017	Dr. VK Chadha, Mrs. Praseeja, Mr. Shivashankara

Sl. No.	Details	Date	Name of Participating person
6.	Meeting for “alignment of DR TB treatment with NDRS” at NTI, chaired by DGHS and Chairman of National OR Committee. A detailed presentation was made and deliberations were held to re-visit the treatment regimen of drug sensitivity and drug resistant TB based on NDRS results and preparation of a report by NTI on NDRS in consultation with CTD for necessary approval from competent authorities.	21.06.2017	Dr. P. Kumar Director, NTI DDG (TB), Dte.GHS, Experts from CTD, WHO and National Institutes
7.	Faculty meeting with Director General of Health Services regarding drug resistance survey date and implications on treatment regimen	21-06-2017	Dr. V.K. Chadha
8.	Faculty meeting with Joint Secretary (TB) , apprised of recently carried out, ongoing and proposed activities of Epidemiology & Research Division	28-06-2017	
9.	Update meeting on progress of Surveillance Unit” at NTI , chaired by DDG (TB). Addl. DDG, CTD, faculty of NTI and Consultant Microbiologists. It was suggested to initiate CDC-NTI-NIRT project at the earliest besides developing disease surveillance system at NTI, Bengaluru. It was also decided that NTI shall send a proposal to CTD in this regard, for necessary action.	22.06.2017	Dr. P. Kumar, Director, faculty of NTI & Consultant Microbiologists
10.	19th Institutional Ethics Committee meeting for ethical clearance. The following protocols were discussed and approval of IEC was obtained: <ul style="list-style-type: none"> • Expenditure incurred for diagnosis among new TB patients notified by RNTCP in Bengaluru city. • Adherence to guidelines on diagnosis and management of extra pulmonary TB in tertiary care health facilities – an evaluation • Predictors of unfavorable TB treatment outcomes in TB-HIV co-infected patients in Karnataka. 	05-08-2017	Dr. P. Kumar Dr. VK Chadha & Mrs. Praseeja

Sl. No.	Details	Date	Name of Participating person
11.	Meeting with DGHS during his visit to Bengaluru and briefed about the activities being carried out at the Institute.	27th Sept. 2017	Dr P Kumar
12.	Chaired and participated in the the Inaugural session of the CDC project partner's meeting of CTD – NTI - CDC India - CDC Atlanta - SHARE India - FIND India. It was decided to prepare a detailed draft action plan jointly for this collaborative and CTD shall send the Action Plan for implementation by NTI, Bengaluru.	10.01.2018 & 11.01.2018	Dr. P. Kumar, , and project partners from CDC, Atlanta, Share, India, Find India
13.	<p>20th Institutional Ethics Committee meeting. the following protocols were discussed and obtained IEC approval :</p> <ul style="list-style-type: none"> • Prevalence of Pulmonary TB among workers employed in mines, other high silica and organic textile dust exposure settings • A Phase III randomized, double blind, placebo controlled trial to evaluate the efficacy and safety of VPM1002 and Mw vaccines in preventing TB in healthy household contacts of pulmonary TB patients • Systematic screening for pulmonary TB among women attending public maternity Hospitals for Antenatal and Post-Natal Care in Bengaluru 	17-03-2018	<p>Dr. P. Kumar</p> <p>Dr. VK Chadha & Mrs. Praseeja</p>

Outside NTI`

Sl. No.	Details	Date	Name of Participating person
1.	<p>“National Task Force Meeting for involvement of medical colleges in RNTCP” at Guwahati.</p> <ul style="list-style-type: none"> - Addressed the participants in the inaugural and concluding sessions and chaired scientific sessions. - Participated in the meeting chaired by Director General, GOI, attended by DDG (TB); and Office bearers of NTF, representatives of the states. - Participants were directed by DG to utilize task force mechanism to strengthen various components of RNTCP. NTI was directed to sensitize experts including medical colleges on strengthening management of DR-TB based on the results obtained in NDRS. Besides organizing workshops at NTI to the experts for effective management of DR-TB in the country. 	10-04-2017 to 12-04-2017	Dr. P. Kumar, Director
2	<p>Meeting with the officials of State TB Cell and the STO, Rajasthan. The STO, Rajasthan requested the support of NRL NTI to provide appropriate support for effective strengthening of their labs for early and accurate detection of DR-TB. Various observations made by the NRL NTI team were discussed at length and the STO informed that appropriate action based on these suggestions provided the NTI team will be incorporated. It was also informed that there should be proper and effective utilization of the MGIT machines so that DR-TB cases can be detected early and support from NTI NRL team will be extended in this regard. The STO sought the support of NTI for involvement of medical colleges in strengthening RNTCP and the same was agreed and informed that a meeting will be held between NTI NRL team and the medical college authorities to provide technical support as per the requirement.</p>	17-04-2017 to 21-04-2017	Dr. P Kumar

Sl. No.	Details	Date	Name of Participating person
	interaction was held with the DR-TB centre officials; DTOs and the Consultants working for RNTCP in Rajasthan.		
3.	Meeting with the officials of SMS medical college, Jaipur regarding support of medical college in strengthening early and accurate diagnosis of DR-TB and their management as well as support to other components of RNTCP. Also visited C&DST labs of SMS medical college and held discussions with Dr Bharathi Malhotra, Prof. & HOD Lab and the lab staff working in the lab. The issues raised pertaining to maintenance of equipment and capacity building were discussed. Telephonic discussions were also held with STO, RNTCP Consultants and IRL Microbiologist and it was decided that Dr Bharathi Malhotra shall visit NTI for 2 nd line LPA training. A detailed action plan will be prepared by the team of NRL NTI, IRL Rajasthan, C&DST medical college, Jaipur and RNTCP consultants, Rajasthan. Director, NTI assured support for proper management of C&DST labs, effective utilization of CBNAAT machine and EQA of the labs.	29-04-2017	Dr. P Kumar
4.	Quarterly review meeting of CDC-GHSA projects at NIMHANS, Bengaluru	29-05-2017	Dr. R. Lakshmi
5.	Participated as a member of Project Evaluation Committee (PEC) meeting held at Bengaluru and Goa, chaired by Dr. V.M. Katoch, former DG, ICMR, Secretary Health Research, Min. of H&FW, GOI..	29-05-2017 & 30-05-2017	Dr P Kumar
6.	Meeting with Sri A.K. Jha, Joint Secretary and the Economic Advisor, GOI during his visit to Bengaluru. A brief presentation on technical activities being carried out at NTI was made.	11-06-2017	Dr P Kumar
7.	Meeting with DDG (TB) in CTD, New Delhi, to discuss Agenda of "Centre-	05-07-2017	Dr P Kumar

Sl. No.	Details	Date	Name of Participating person
	State Summit for TB Elimination through Effective Partnerships” to be held in Nagpur, Maharashtra. Discussion on preparation of draft NDRS report and presentation of NDRS findings to the Hon’ble Union Minister for H&FW, GOI was also held.		Addl. DDGs, DADG and WHO Consultants
8.	Consultative Meeting on OR under Medical Colleges at Hotel Taj Mahal, New Delhi. The Chairman, NTF for Medical Colleges; Chairman, National OR committee and DDG (TB) informed that NTI will be the Nodal Centre for Operational Research and modalities are being worked out on the crucial role to be played by NTI.	06-07-2017	Dr P Kumar
9.	Meeting to screen and shortlist the Institutes for the implementation of research projects on Active Case Finding in Industrial workers and miners at ICMR Head Quarters, New Delhi (Letter of interest was received from 40 institutes)	27-07-2017	Dr VK Chadha
10.	Meeting with STO, Maharashtra and CTD officials on finalise Agenda of the “Centre-State Summit for TB Elimination through Effective Partnerships” to be held at Nagpur, Maharashtra.	27-07-2017	Dr P Kumar
11.	Meeting with BBMP RNTCP Coordinator along to discuss the active case-finding activities taken up and TruNat rapid diagnostic tool to be implemented in Karnataka. Dr. Arundathi Das, BBMP RNTCP Coordinator and IRL Microbiologist of Karnataka expressed their sincere thanks to NTI for all the support to RNTCP, Karnataka.	09-08-2017	Dr. P. Kumar Dr. Ranjani Ramachandran, NPO, WHO and Dr. Anand, CTD
12.	Meeting with DTO, CMO and other health staff. Reviewed the ongoing work related to Epidemiological Survey for TB in Kashmir Valley. Visited Srinagar, Baramulla & Kupwara districts, besides visiting households to review the ongoing state level prevalence survey	28-08-2017 & 29-08-2017	Dr VK Chadha

Sl. No.	Details	Date	Name of Participating person
	<p>and efficiency of implementation of key RNTCP activities.</p> <p>The survey is being undertaken in the backdrop of more than 60% decline in case detection in Kashmir Valley in last 7 years. The limitations of the survey were brought out to the notice of DHS and other key functionaries. It was pointed out that there is lot of missing cases even among those who approached public health services rather than real decline in TB incidence. It was suggested that all efforts should be made to review in-depth all RNTCP process and take remedial measures to find out missing cases. A detailed report was submitted to DHS, J & K State.</p>		
13.	Meeting at NIRT Chennai: As an expert and provided inputs for measuring trends in community infection ratio in Chennai as impact of TB free Chennai initiative: and proposed that ERD, NTI may replicate this study in Bengaluru as a comparator	10-09-2017	Dr VK Chadha
14.	Review meeting on Multi Centric Cohort study on TB recurrence at NIRT Chennai Participated and gave detailed expert comment for necessary revisions in the draft report. Interacted with NIRT faculty personally and with Pls and Co-Pls and other sites through skype.	10-09-2017	Dr VK Chadha
15.	“National Programme Review Meeting of RNTCP” at Chandigarh. Chaired scientific sessions and addressed the participants in the inaugural and the concluding session of the meeting. The findings of NDRS were presented in the inaugural day of the meeting. The Economic Advisor of Min. of H&FW, DDG (TB) and all STOs and participants of the meeting gave standing ovation to Director, NTI, for successful completion of landmark study. Director also	12-09-2017 to 14-09-2017	Dr. P. Kumar

Sl. No.	Details	Date	Name of Participating person
	assured appropriate support of NTI for strengthening TB control activities at all levels.		
16.	<p>Meeting of “expert committee on regulation of newer anti-TB drugs in India” to discuss the introduction of second new drug “Delamanid” under PMDT through RNTCP programme in India, under the chairpersonship of Dr. Soumya Swaminathan, Secretary Dept. of Health Research & DG-ICMR, held in New Delhi and provided inputs.</p> <ul style="list-style-type: none"> - Held discussion with DDG (TB) and Chairman NTF Medical College, regarding participation of NTI in various activities of NTF. - Discussion with Director NITRD, New Delhi on the collaborative activities between NITRD and NTI. 	21-09-2017 & 22-09-2017	Dr. P Kumar
17	<p>Meeting with DDG (TB), Addl. DDG and DADG, CTD to discuss the technical support from NTI for RNTCP supervision, monitoring and evaluation..</p> <ul style="list-style-type: none"> - Meeting with Economic Advisor of Min. of H&FW regarding technical and administrative issues of NTI and discussion with Under Secretary, CCD Section, Min. of H&FW regarding construction of Guest House in NTI. - Meeting with Dr. Devesh Gupta, Addl. DDG and Dr. Raghuram Rao, DADG, CTD to plan technical support by NTI for various components of RNTCP. 	29.09.2017	Dr. P Kumar

Sl. No.	Details	Date	Name of Participating person
18.	Meeting with the authorities during the visit to Sakara Hospital and Narayana Hrudayalaya, Bengaluru and some of the CBNAAT facilities in Bengaluru rural district. Discussion on public private cooperation under RNTCP and the role of CBNAAT in rapid detection of mycobacterium TB and Rifampicin resistant TB were discussed. the authorities of these hospitals were requested to support in strengthening the public private cooperation in the field of TB control besides notifying all the TB cases attending these facilities	12-10-2017	Dr. P Kumar
19.	Participated in the inaugural session for launching of the daily regimen by MD NHM, Karnataka, in the office of Directorate of Health Services, Government of Karnataka. The Central Internal Evaluation (CIE) team consisting of experts from WHO, CTD, NTI and Karnataka state also participated and shared their reports. Detailed discussion on the observation of CIE team was held. The STO, Karnataka requested support from NTI to the RNTCP team of Karnataka.	13-10-2017	
20.	Epidemiology and Implementation Research Group Meeting of India TB Research Consortium at ICMR Head Quarters, New Delhi : Screened 32 proposals related to private sector engagement and 13 proposals related to ICT in TB Control	13-10-2017	Dr. VK Chadha
21.	Meeting with Railway Hospital authorities, Yelahanka, Bengaluru, regarding collaboration with NTI. Request was made for support of NTI in early detection of TB cases. It was informed the railway hospital authorities to notify all the diagnosed TB cases attending their hospital and send the samples to NTI so that necessary support can be provided for early detection of TB cases.	14-10-2017	

Sl. No.	Details	Date	Name of Participating person
22.	Meeting of the expert group on Epidemiology and Implementation Research at ICMR Head Quarters, New Delhi : Interacted with Principal Investigators of four Case Finding protocols and selected PPM and ICT sub-groups	24-10-2017 & 25-10-2017	Dr VK Chadha
23.	Meeting of International Scientific Advisory Committee Group at ICMR Head Quarters, New Delhi : a) Made a presentation on four case finding protocols and PPM proposals that the consortium will like to take forward b) Actively participated during discussions on other three consortium groups	31-10-2017 to 02-11-2017	Dr VK Chadha
24.	Third party evaluation of TB laboratory diagnostic network under RNTCP: - Meeting at NTI with the team of experts for assessment of laboratories i.e., CDC Atlanta, CTD, International experts and TB control programme officials of Karnataka - presentation was made on the activities carried out at NTI and EQA & PMDT activities at NRL NTI, followed by visit to laboratory.	30-10-2017 to 10-11-2017 01-11-2017	Dr P Kumar
25.	Chaired scientific session and addressed the participants during the meeting with National and International experts for discussion on evaluation of laboratory network of the country. held at Hotel Taj Mansingh, New Delhi.,	30-10-2017 to 31-10-2017	
26.	Meeting chaired by DDG (TB) held at Hotel Lalith, New Delhi to share the results of Phase III trial of Delaminid (New drug)	01-12-2017	

Sl. No.	Details	Date	Name of Participating person
27	<ul style="list-style-type: none"> - Participated in the inaugural session of the training of SAARC experts for TB control activities held at NITRD followed by meeting with Director, NITRD, New Delhi - Meeting with Economic Advisor & Joint Secretary, Min. of H&FW to discuss various technical initiatives to be taken up at NTI during the year 2018. - Meeting with DDG, attended by WHO NPO Dr. Kiran Rade, CTD Consultant, Dr. Mannan along with other CTD Consultants. It was decided that NTI will be the Nodal Centre for development of e-modules; drug resistant surveillance and disease surveillance system. 	4 th Dec. 2017	Dr. P. Kumar
28.	Visited Rajiv Gandhi Institute of Chest Diseases IRL, Karnataka and DR TB Centre, Karnataka by the team comprising of Director, NTI Addl. DDG, Dr. Devesh Gupta and other team members from state to see the facilities available in the Centre. This was followed by meeting with the Principal Secretary, Medical Education in their office..	5 th Dec. 2017	Dr. P. Kumar
29.	Visited Narayana Hridayalaya and had interaction with the management about their collaboration with NTI for PMDT and sensitization of their faculty on new technical and operational guidelines on PMDT, recently developed by CTD.	6 th Dec. 2017	
30.	Meeting with Asha Kiran NGO, Mysore on the occasion of 20 years celebration of the NGO and discussed about their collaboration with NTI for TB-HIV co-infection.	10 th Dec. 2017	

Sl. No.	Details	Date	Name of Participating person
31.	Meeting, with Chairman, National OR Research Committee, at PGIMER, Chandigarh on strengthening of operations research in Medical Colleges and NTF for involvement of medical colleges besides being an examiner in the viva-voce to a PhD candidate at PGIMER, Chandigarh.	27-12-2017 & 28-12-2017	Dr P Kumar
32.	- Meeting with DGHS, GOI to create drug resistant surveillance system at NTI so that monitoring of drug resistant cases can be provided to the concerned authorities for further necessary action. Meeting with Dr. Devesh Gupta, Addl. DDG, CTD, DteGHS, to discuss the role of NTI in task force mechanism discuss the continuation of the ZTF meetings in future	03-01-2018	
33.	Meeting with STO, Maharashtra and the Chairman of National Task Force to finalise Agenda of the ZTF meeting of West zone to be held at Mumbai.	04-01-2018	
34.	Addressed the inaugural & valedictory session of west zone ZTF meeting and made a presentation on the achievements of RNTCP and new strategic plan besides chairing the scientific sessions.	05-01-2018 & 06-01-2018	
35.	Meeting with Dr Nishant Kumar and Dr. Anand, CTD regarding the collaborative projects with CDC, FIND, CTD and NTI. A meeting was decided to be held at NTI on to jointly prepare an action plan for the collaborative project.	10-01-2018 to 11 -01-2018	
36.	Meeting on “NDRS finding” with the Union Secretary, H&FW along with DGHS, Joint Secretary & Economic Advisor, DDG and a team of CTD & WHO officials. A presentation was made on NDRS findings and the same was approved.	15-01-2018	

Sl. No.	Details	Date	Name of Participating person
37.	<ul style="list-style-type: none"> - Meeting with Dr. Devesh Gupta, Add. DDG, CTD for preparation of report of the visit to Rajiv Gandhi Institute, Karnataka. The report was finalized, - Meeting with Under Secretary, CCD Section, Min. of H&FW regarding revised estimates and allocation of sufficient funds under the budget head salary. 	16-01-2018	Dr P Kumar
38.	GHSA Annual Review Meeting at Hotel Claridges, New Delhi and information regarding the project was presented.	17-01-2018	
39.	<ul style="list-style-type: none"> - Meeting with Chairman of NTF and ZTF South zone-1 to finalize Agenda of the ZTF meeting. - Meeting with STOs of Karnataka, Andhra Pradesh and Telengana on 	22-01-2018	
40.	National Operational Research Committee Meeting at Dte. GHS, Nirman Bhavan, New Delhi.	05-02-2018	
41.	<p>Meeting with the following laboratories during the visit along with a team of CTD and WHO officials:</p> <ul style="list-style-type: none"> - ASPIRA lab & Thyrocare, Navi, Mumbai and INFEXN lab & Vaidya Lab, Thane, Maharashtra. Status of the labs for their utility in TB control was discussed. - Sion hospital, GTB Sewree, KEM Hospital and Wadia Hospital in Mumbai It was discussed that there is an urgent need for development of STDC in GTB hospital, in order to provide proper support for all components of TB control in Mumbai. 	15-02-2018 to 16-02-2018	
42.	Meeting with STO and other officials to discuss the request received from them to support various components of RNTCP. Some of the CBNAAT sites were also visited and it was found that there is strong need for support in the field of EQA, supervision, monitoring & evaluation.	22-02-2018	

Sl. No.	Details	Date	Name of Participating person
43.	Meeting with Hon. Minister of state, Mrs. Anupriya Patel and briefed about RNTCP and the activities being carried out at NTI.	03-03-2018	Dr P Kumar
44.	High Level Delhi End TB Summit meeting at New Delhi, jointly organized by Ministry of Health and Family Welfare, Government of India; WHO-SEARO; and the Stop TB Partnership and attended by eminent personalities in the field of TB control viz. DG; WHO; Stop TB Partnership; Ministry of Finance; Heads and senior officials of various organizations of GOI; International Agencies, Health Ministries of a number of countries along with senior officials of Ministry of Health, DGHS, National Institutes and TB Programme Managers. The meeting was addressed by Hon'ble Prime Minister of India, Sri Narendra Modi.	12-03-2018 to 15-03-2018	
45.	National Task Force Meeting for engagement of medical colleges in RNTCP.	14.03.2018	
46.	- Meeting with Chairman of NTF and ZTF South zone-1 on 22.01.2018 to finalize Agenda of the ZTF meeting. - Meeting with STOs of Karnataka, Andhra Pradesh and Telengana on regarding the role of NTI in capacity building of these 3 states.	22-01-2018 to 24-01-2018	
47.	3rd meeting of the International Scientific Advisory Group at ICMR, New Delhi : Gave inputs on the protocol for vaccine trial	19-02-2018	Dr. V.K. Chadha
48.	Meeting with Hon. Minister of state, Mrs. Anupriya Patel and briefed about RNTCP and the activities being carried out at NTI.	03-03-2018	Dr. P. Kumar

Sl. No.	Details	Date	Name of Participating person
49.	<ul style="list-style-type: none"> - Meeting with DDG (TB); Addl. DDG and WHO NPO on 23.03.2018 to finalize Agenda of World TB Day function to be held on 24.03.2018. It was decided that NDRS report will be released on this occasion. - Attended World TB Day Commemoration organized in RML Hospital, New Delhi. On this occasion, the NDRS report was released. The function was attended by The Union Secretary, Health & FW; Addl. Secretary, Health & FW; Joint Secretaries; Economic Adviser; DDG; all the CTD officials; and TB control workers from different states. The role of NTI in successful completion of NDRS was appreciated by one and all. Director expressed thanks to everyone for the support for successful completion of NDRS. - Attended World TB Day function at NITRD, New Delhi, on the request of Director, NITRD and addressed the gathering. Also held meeting with new Joint Secretary and briefed him about the activities of NTI and the content of NDRS report which was released on the World TB Day. 	23-03-2018 to 24-03-2018	Dr P. Kumar

Training

At NTI

Sl. No.	Details	Date	Name of Participating person
1	SAARC regional training on Management of Information for Acton (MIFA) for TB & HIV/AIDS Control Programme As key facilitator, delivered talks on <ul style="list-style-type: none"> • Descriptive Epidemiology • TB Epidemiology • Statistical Tests of Significance Also chaired the plenary session, presentations by participants of respective country's TB-HIV scenario.	01.09.2017 to 05.09.2017	Dr. P. Kumar, Director Dr. V.K. Chadha

Outside NTI

Sl. No.	Details	Date	Name of Participating person
1.	Induction Training – Module A, held at National Statistical Systems Training Academy, Greater Noida organized by MOSPI	27-03-2017 to 14-04-2017	Mr. Ravi Kumar Jaiswal, JSO
2	Induction Training – Module B, held at National Sample Survey Office, Koramangala organized by MOSP	3 rd to 28 th July 2017	
3	In-service Refresher Training on “Advanced Sampling Techniques with practical examples from NSSO and health surveys”- held at NSSTA, Greater Noida.	4 th to 8 th December 2017	Mrs. Praseeja P, SSO

Conferences

Sl. No.	Details	Date	Name of Participating person
1.	<p>Participated in 23rd NESCON 2017 at Mumbai:</p> <ul style="list-style-type: none"> - Meeting with Dr P.S. Shankar, Dr. AgamVora, and Dr Nikhil Sarangdhar, Organizers of NESCON, regarding the conference. - Meeting with Dr V.K. Arora, Moderator of the session, about panel discussion on TB to be held in the NESCON. During the discussion, Dr Arora informed Director to share the NDRS experience and Director agreed for his request. - Participated in the panel discussion and information pertaining to new technical and operational guidelines to end TB strategy was shared besides sharing information on NDRS which was presented during the expert committee meeting,. 	07-07-2017 to 09-07-2017	Dr. P. Kumar
2.	<p>72nd National Conference of TB and Chest Diseases at Amalapuram/Rajamundry (AP)</p> <p>-Dr. VK Chadha delivered talk on ‘Active Case Finding’ besides chairing 3 scientific sessions</p>	15-12-2017 to 17-12-2017	Dr. VK Chadha, Mrs. Praseeja, Mrs. Suganthi, Mrs. Umadevi
3.	<p>Chaired the scientific sessions of the “Centre-State Summit for TB Elimination through Effective Partnerships” held at Nagpur, Maharashtra. Chaired the scientific sessions. Held.</p>	28-07-2017 & 29-07-2017	
4.	<p>Participated in the Indo-US delegation of the CDC and GOI held in conference hall of DGHS, New Delhi and made a presentation on the CDC supported activities being carried out at NTI. The support being provided by NTI for CDC-NTI collaborative projects was appreciated by CDC officials.</p>	28-09-2017	Dr. P Kumar

Sl. No.	Details	Date	Name of Participating person
5.	Participated in the “31 st Annual Update on Pulmonary and Critical Care” at the PGIMER, Chandigarh to deliver the prestigious “Dr. Dheeraj Gupta Memorial Oration” and made a presentation on “Overview of Drug Resistant TB in India”. The Director and Dean, PGIMER, Chandigarh, awarded the oration to Director, NTI. Director AIIMS, New Delhi, Senior faculty of PGIMER, Chandigarh, Senior professors of medical colleges of different states, Addl. DDG, CTD and many more experts attended the Oration.	22-10-2017	Dr. P. Kumar
6.	International Symposium on application of AMD in Public Partners in India organized by global Health Society held at NIRT Chennai. Concept note was presented during the symposium for relevant molecular epidemiological study among contacts of TB using AMD with the ultimate aim to develop guidelines for contact investigations	18-09-2017 & 19-09-2017	
7.	Medanta TB Conclave at Medicity, Gurgaon : - Delivered lecture on Epidemiology of TB, an Indian Scenario. - Gave inputs on Active case finding in Haryana TB free initiative	10-11-2017	Dr VK Chadha
8.	Participated as member of TB Expert group during the Launch of India State – Level Disease Burden initiative report at New Delhi.	14-11-2017	
9.	Video lecture at NIRT, Chennai : prepared presentation and delivered video lecture on ‘Epidemiology of TB’ for the development of online course for Doctors on management of TB entitled “Manage TB – online course for Doctors”	25-11-2017	

Sl. No.	Details	Date	Name of Participating person
10.	<p>Attended the conference “HIVe Mysore - 2018” organized by Asha Kirana Foundation, a Non-governmental organization at Mysore and made a presentation on TB-HIV Co-infection.</p> <p>- During the conference, held meeting with Dr Ishwar Gilada, President of AIDS Society of India, Mumbai, about status of TB-HIV co-infection in the country and the role of public private management strategy on 03.02.2018.</p>	04-02-2018	Dr. P. Kumar
11.	End TB Summit held at New Delhi	13-03-2018	Dr. V.K. Chadha

7. DURING THE YEAR THE INSTITUTE HAD THE PRIVILEGE OF HAVING THE FOLLOWING DIGNITARIES AS VISITORS

I. VISITORS TO THE INSTITUTE

Sl. No.	Name of visitor	Date	Details of visit
1.	Ms. DeGruy Kyle, International Laboratory Branch, Division of Global HIV and TB, Centre for Disease Control, Atlanta	01-05-2017 to 13-05-2017	To discuss the training being carried out to NTI staff to take up EQA of CBNAAT machines. Held meeting on 10.05.2017 with I/C NRL, and Ms. Kayle, CDC about CBNAAT EQA training. Ms. Kayle appreciated the efforts of NTI for the initiative taken regarding EQA of CBNAAT machines.
2.	Dr. Ranjani Ramachandran	11-05-2017 to 12-05-2017	To participate in the expert committee meeting on 12.05.2017 in the Institute.
3.	IRL Microbiologist & RNTCP Consultant of the state of Karnataka, and Smt. Chelvi from NIRT, Chennai	18-05-2017	Discussion about initiation of TruNat study being initiated in the districts of Ramanagara and Davangere in Karnataka from 22.05.2017. They requested the presence of Director for inauguration in one of the districts. Director appreciated the efforts of ICMR, CTD and the state units for initiating TruNat study and wished for successful outcome of the project.
4.	Dr Patrick Moonan, CDC Atlanta and Dr S Anand, CTD, New Delhi and NRL NTI Microbiologist	22-05-2017 to 23-05-2017	To discuss the work plan of CDC-NTI-NIRT project. It was decided to develop a work plan by NTI and submit to NIRT for fund release. The work plan was developed and it was decided that the work plan along with signed Memorandum of Understanding from NTI may be submitted to Director, NIRT at the earliest.
5.	Dr Sunil Kumar, Head of Pulmonary Medicine, CMH Hospital, Bengaluru	22-05-2017	To discuss NTI support for capacity building of the Chest Physicians working in Karnataka. Director assured full support for capacity building of all the Chest Physicians and advised them to organize a seminar and conduct CME programmes on Indian standard of

Sl. No.	Name of visitor	Date	Details of visit
			TB care, Operational & Technical guidelines of RNTCP and Programmatic Management of Drug Resistance TB guidelines developed by GOI.
6.	Dr Avijit Chaudhury, WHO, New Delhi and I/C CTU, NTI	30-05-2017 to 31-05-2017	To discuss IT component of National Disease Prevalence Survey to be carried out by Government of India.
7.	JD (TB), Karnataka, RNTCP Consultants and IRL team of Karnataka, DTOs of Bengaluru Rural & Urban and BBMP Supervisors	07-06-2017	Director along with NRL team extended warm welcome to the visitors. Various issues related to smooth collaboration between the State TB Unit and NTI were discussed. STO and the team appreciated NTI support for smooth functioning of RNTCP in the state of Karnataka.
8.	Dr Ramraje, Prof. & HOD of Chest & TB Dept. Mumbai and Dr Chandrashekar, Prof. & HOD of Chest & TB Dept. from Chennai Medical College	20-06-2017	To discuss strengthening of medical college support to RNTCP under National Task Force for Medical Colleges mechanism. Director assured both the Professors about providing appropriate support from NTI. Both the Professors appreciated NTI's support for National Task Force mechanism.
9.	Sri A.K. Jha, Joint Secretary and Economic Advisor, GOI	28-06-2017	A presentation on the activities being carried out at NTI was made by Director and a detailed interaction was held. He was taken round to various Divisions of the Institute. The Joint Secretary suggested that NTI should be acknowledged as a Centre of Excellence. He informed Director to submit the NDRS report for approval from competent authorities and to make presentation of the report to Hon. Min. of H&FW, GOI. The date for presentation to the Hon'ble HFM would be communicated to Director, NTI in due course of time. The JS also suggested that while making this presentation, a way

Sl. No.	Name of visitor	Date	Details of visit
			forward on completion of NDRS regarding utilizing the data achieved by the survey for formulating further strategy to be reflected in the presentation. Director expressed sincere thanks to the JS & EA and informed that draft minutes will be submitted to him on this visit.
10.	Shri Vijay Shankar, Chairman, IEC and Dr Omprakash, Member IEC	30-06-2017	Briefing on the activities of the Institute was made and also role of ethics committee related to research being conducted by the Institute was discussed at length. The Chairman appreciated the activities of the Institute and agreed to chair the next IEC meeting to be held in the Institute on 05.08.2017.
11.	A team from CDC Delhi Office i.e., Dr. Reshu Agarwal and Christine S, TB Branch Chief, Division of Global HIV and TB Center for Disease Control and Prevention, India. The meeting was also attended by NTI officials, i.e., DH Lab, Consultant Microbiologists of NRL, I/C CTU and I/C ICELT.	12-07-2017	To learn more about the work that is being carried out at NTI, and also to discuss how to move forward on some of the CDC supported projects. Detailed deliberations on CDC supported projects were discussed. It was decided that CBNAAT EQA, Gene-sequencing and drug resistant surveillance system are the areas of collaboration that CDC will be supporting. Director appreciated the CDC team for their visit and their support being provided for the important areas.
12.	Dr Salhotra, Addl. DDG, CTD, New Delhi	12-07-2017	To discuss at length the NTI support to CTD for accreditation and certification of C&DST labs, development of drug resistant surveillance system and CBNAAT EQA with the support of CDC.
13.	Dr Sreenivas, NPO-TB, WHO, New Delhi	04-08-2017 to 05-08-2017	To attend IEC meeting on 5 th August 2017 in the Institute. Discussed regarding protocol to be presented in the meeting.

Sl. No.	Name of visitor	Date	Details of visit
			Also discussed about NDRS report writing and publication of NDRS data. He was informed that NDRS data has already been forwarded to DDG (TB) and NTI is awaiting the draft NDRS report. Once the draft report is received, Director along with NDRS Analysis and Lab team will incorporate any additional information as required and the draft will be formally submitted to CTD for further necessary action. Once NDRS report is approved by the competent authorities, relevant publication work will be taken up to publish the findings of this important survey in reputed journals.
14.	Dr Ranjani Ramachandran, NPO, WHO and Dr Anand S, Consultant Microbiologist, CTD	08-08-2017	In connection with RNTCP activities in the state of Karnataka. They requested Director, NTI to accompany them to visit BBMP office to see the RNTCP activities of active case-finding and implementation of TruNat rapid diagnostic tool in the state of Karnataka. Director agreed for their suggestion.
15.	Dr Sunil, HOD, Pulmonary, Easter Hospital, Bengaluru	17-08- 2017	To request Director for NTI support to organize CME in their hospital. Director agreed to his suggestion and informed that necessary support will be provided in this regard.
16.	Team from FIND India office and the experts identified by CTD & FIND India	01-09-2017	For site assessment of placing the whole genome sequencing unit at NTI. The DH, Lab and Consultant Microbiologists of NRL NTI also joined the discussion. The DH was instructed to provide necessary support to the site assessment team. Director also informed the team members that NTI has a very good infrastructure and NRL NTI has recently completed National Drug Resistant Survey. The team was informed to

Sl. No.	Name of visitor	Date	Details of visit
			decide the room in which they want to place the equipment and based on this, other civil and electrical work as per the requirement will be carried out by CPWD, for smooth functioning of this equipment.
17.	Team from IRL Karnataka consisting of: Director, STDC; Sr. Microbiologist; RNTCP Consultant of Karnataka. NRL NTI Team consisting of: I/C NRL and Consultant Microbiologist also joined the discussion	05-10-2017	To discuss NRL NTI support to IRL Karnataka. STDC Director, Karnataka requested the support of NRL NTI for IRL Karnataka. Director agreed to the request and instructed I/C NRL to provide appropriate technical support and hand holding to IRL Karnataka for effective management of PMDT in the state of Karnataka.
18.	Team from IRL Karnataka consisting of: Director, STDC; RNTCP Consultant of Karnataka. NRL NTI Team also joined the discussion	09-10-2017	The IRL Karnataka requested NTI to provide technical support for preparation of implementation of universal DST, introduction of new anti-TB drug "Delamanid" and strengthening all the districts and state level facilities for effective implementation of PMDT. Director instructed NRL NTI team to provide necessary technical support to IRL Karnataka in order to extend universal DST and introduction of new anti-TB drug "Delamanid" as per govt. of India guidelines, thereby strengthening of all the facilities for effective implementation of PMDT in the state of Karnataka.
19.	Dr Paramsivam and Dr Sarin from FIND India Office	18-12-2017	To discuss regarding collaborative projects. They requested the support of NTI in this regard. It was decided to arrange a meeting involving officials of NTI, CTD, CDC Delhi office and FIND India office to prepare an action plan of CBNAAT EQA project. It was informed that NTI will be very happy to implement the jointly developed action plan for

Sl. No.	Name of visitor	Date	Details of visit
			<p>this joint project. Director also informed that a clear protocol indicating clear job responsibilities and standard operating procedures, with approval of competent authorities should be incorporated in the action plan with clear monitoring mechanism so that it will be easier to implement SOP and monitor the project by Director, NTI. The FIND India officials assured that a proper action plan will be developed jointly. It was also informed that 2nd line LPA and gene sequencing projects are delayed due to late receipt of the reagents. Director advised the experts to supply the required reagents so that these projects are completed in time. It was informed by the FIND India officials that two new projects developed on whole gene sequencing facilities at NTI and development of lab management system have been approved by CTD and FIND India will be developing these two new initiatives at NTI and Director appreciated the decision of CTD for strengthening NTI on these two components and assured fullest cooperation from NTI to develop these two new projects at NTI. Director also informed FIND officials that ICELT has completed its work and as per MOU, its existence is concluded, which was also pointed by CTD officials. It was informed by FIND officials that they are taking up this issue with CTD for way-forward regarding ICELT facilities at NTI.</p>
20.	Dr Devanand and Deputy Director, from Regional Health Office, GOI, Bengaluru	20-12-2017	To request NTI support for organization of half yearly review meeting of CBHE to be held at NTI on 11-12 January 2018. Director agreed to their request and informed DH HRD to assist them in

Sl. No.	Name of visitor	Date	Details of visit
			successful organization of the meeting.
21.	Deputy Director, Regional Director's office, Bengaluru	01-01-2018	To discuss regarding CBHI training being organized by them at NTI on 11-12 Jan 2018. It was decided that the conference facilities and hostel accommodation as per requirement will be provided to the participants, as requested by the Regional Director, Bengaluru.
22.	STO Karnataka and RNTCP headquarter consultant	08-01-2018	Regarding the PMDT training for Karnataka state being organized at NTI. They appreciated the support of NTI in this regard.
23.	Dr Devanand, Addl. Director, Regional, and other officials from Regional Director's office, Bengaluru	08-01-2018	To finalize arrangements for CBHI training being organized at NTI. Addl. Regional Director appreciated the support of NTI in this regard. Agenda of the training was finalized.
24.	Dr Madhu Raikar, Director, CBHI, New Delhi and Sr. Regional Director and Addl. Director, Regional, Bengaluru	11-01-2018 to 12-01-2018	To express their sincere thanks to NTI for successful organization of CBHI training organized at NTI and requested the support of NTI for organizing more such CBHI trainings, for which Director agreed.
25.	Director, STDC and RNTCP Consultant, Karnataka	18-06-2018	To convey their appreciation for the support of NTI in capacity building of state RNTCP staff by organizing a meeting at NTI.
26.	Dr Sharath, Chairman of Zonal Operations Research and Dr Deepak, RNTCP Consultant, Karnataka	20-02-2018	To discuss regarding Zonal OR workshop. They requested the support of NTI in this regard and Director agreed for the same. It was decided that the zonal OR workshop will be held from 1-3 March 2018 at NTI and as per the request, NTI will provide necessary support for successful organization of the workshop.
27.	Director, STDC and Chairman State Task Force of Karnataka	27-02-2018	To discuss about organizing series of capacity building workshops for medical college faculty on various components of RNTCP at NTI, for which Director agreed. In this regard, calendar of activities were

Sl. No.	Name of visitor	Date	Details of visit
			prepared by the Chairman, STF; Director, STDC; and DH M&E Division, which was approved by Director. It was informed by state authorities, Karnataka that the venue, hostel facilities and facilitators will be required from NTI. However, final liability for this activity will be taken up by state task force and STO, Karnataka.
28.	Director, STDC and officials of IRL Karnataka	01-03-2018	To discuss about preparing the state of Karnataka for universal DST. I/C NRL and other Consultant Microbiologists also joined the discussion and DST implementation plan were jointly prepared by the officials of NTI, STDC and IRL Karnataka.
29.	Manager, Tulip Hotel, Palace Guttahalli, Bengaluru	05-03-2018	To request considering their hotel for accommodating senior officials visiting NTI. It was informed to them that their request will be considered whenever senior officials visit NTI.
30.	Regional Director from Regional Director's office, Bengaluru		To discuss joint activities of Regional Director's Office and NTI for World TB Day
31.	Dr. Sharath, Chairman, Zonal OR Committee, S-I	22-03-2018	To discuss NTI support in organizing Zonal OR workshop at NTI. Director instructed DH HRD to support successful organization of Zonal OR Workshop as requested by the Chairman.
32.	Dr Deepak, RNTCP Consultant, Karnataka		Discussed regarding recent transfer of Consultants at different places.

INSTITUTIONAL ETHICS COMMITTEE MEETINGS

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

1. The 19th Institutional Ethics Committee Meeting was held in the Institute on 05.08.2017, under the newly chosen Chairmanship of Shri S. Vijay Shankar, Senior Advocate, Ex. Advocate General for Karnataka, in place of Shri V.S. Malimath, who left for his heavenly abode on 22.12.2015.

The meeting was attended by Director, NTI; all the IEC members except one member and the Principal Investigators / Presenters. Brief presentation on the five protocols submitted for ethical clearance was made by the Principal Investigators / Presenters and ethical issues pertaining to each protocol was discussed.

While concluding the meeting, Director expressed appreciation to the new 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 Officers.

2. The 20th Institutional Ethics Committee Meeting was held in the Institute on 17.03.2018, 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.

Out of three protocols, two protocols were approved by the Chairman and committee members.

One protocol was kept pending for ethical approval since the committee members asked the Investigators to provide some clarification in writing and resubmit the proposal for ethical approval in the next IEC meeting.

While concluding the meeting, Director expressed gratitude to the Chairman 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 Officers.

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

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

The following activities were undertaken by I/C RDC during April 2017 to March 2018 at Research and Documentation cell:

(A) Research Documentation Cell:

- Web Administration of TB research portal www.tbresearch.ntiindia.org.in
- Coordination with all the participating nodal centers.
- Processed access request to the documentation portal as & when requested.
- Digitization and uploading of Indian TB research articles received from collaborating centers and published in various publications viz. Int J Tuberc & LD, IJMM, IJMR, IJTb, PHA etc.

(B) Technical assistance to Director's Office

- Assisted Director's office in official and technical correspondence.
- Coordinating in compilation of monthly reports of the institute for onward transmission of the same to DGHS, DDG(TB) and Joint Secretary, Ministry of Health and FW, GoI.
- Compiled the annual report for WHO-SEARO highlighting the progress made in the implementation of agreed work-plan as WHO collaborating centre during the past 12 months (06-2016 to 06-2017) and was uploaded on-to WHO website.
- Co-ordination in organization of 19th IEC committee held on 9th August 2017 and 20th IEC committee meeting held on 17/03/2018:

Correspondence with Research investigators, IEC committee Chairman and Members, Preparation of minutes of the meeting etc.

- Assisted Administration Division in compilation of Annual Report of National TB Institute, Bengaluru for the period April 2017 to August 2017 for inclusion of the same in the Annual Report 2017 of Ministry of Health and FW, GoI.

(C) Miscellaneous

- Support to NTI Web site committee as member.
- Assisted Library Unit in editing and organizing NTI Annual Report 2016-17
- Assisted Publication Division in facilitation & Compilation of NTI Bulletin Vol-52;1-4, 2016.

Publications:

- *An overview of Programmatic Management of Drug Resistance TB (PMDT) in India*; NTI Bulletin, 2016, 52 (1-4). pp. 2-11.
- *TB infection control measures at health care facilities offering HIV & TB services in India: baseline assessment*; Indian J Tuberc, 2017(243), Under Publication.

Acknowledgements

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