

NATIONAL TUBERCULOSIS INSTITUTE BANGALORE

ANNUAL REPORT 2015-16



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

NATIONAL TUBERCULOSIS INSTITUTE
WHO Collaborating Centre
For
Tuberculosis Research & Training

ANNUAL REPORT
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LIST OF ABBREVIATIONS

AIIMS	All India Institute of Medical Sciences
ARTI	Annual Risk of Tuberculous Infection
BCG	Bacillus Calmette Guerin
BBMP	Bruhat Bangalore MahanagaraPalika
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
LPA	Line Probe Assay
MDR	Multi Drug Resistance
M.TB	<i>Mycobacterium tuberculosis</i>
NDRS	National Drug Resistance Survey
NIRT	National Institute of Research in Tuberculosis
NRL	National Reference Laboratory

NTI	National Tuberculosis Institute
NTP	National Tuberculosis Programme
NFSG	Non-Functional Selection Grade
OSE	On-Site Evaluation
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 2015-2016. This report highlights the major activities undertaken by the Institute during the year of 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 most National Advisory Committees, TWG on RNTCP and WHO South-East Asia Regional Technical Working Group on Tuberculosis Care and Prevention (SEAR TWG TB).

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 training courses are organized in close consultation with Central TB Division, New Delhi. The Institute shoulders the responsibility of training medical and paramedical personnel from various states in several facets of Tuberculosis control. Induction training in RNTCP for programme managers, Training 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 Tuberculosis an Open Access Repository of abstracts of published scientific papers from all major national institutes is functional under the TB Net project. The Institute also provides one-day sensitization on

TB Control Programme to medical and para-medical students pursuing life sciences and nursing courses.

The first National Anti-tuberculosis 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 is under progress. The sample intake has been completed from 120 TB Units pan India and Drug Susceptibility Testing (DST) for all the 13 first line and second line anti-TB drugs is under progress. This survey is expected to provide information on the prevalence of anti-tuberculosis drug resistance among new and previously treated patients and will contribute to a better understanding of the national and international situation of TB drug resistance.

Operational research is one of the prime functions of the institute. The studies undertaken/initiated during the period under report were, *Improving TB case finding efficiency and management of TB cases in private health care facilities in Bangalore city, Multi centric Cohort Study of Recurrence of TB among newly diagnosed sputum positive patients treated under RNTCP – a collaborative study, A study of knowledge of Private Practitioners of Bangalore city in diagnosis & treatment of TB, 99 DOTS: a novel project using Mobile Phones to Monitor and Improve Adherence to Tuberculosis Medication – a collaborative study, Disease Prevalence Survey in selected sites.*

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

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

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

A fleeting reference has been made on the organizational set up of the institute and the staff position of the institute. The role of Administrative division in ensuring the efficient execution of technical activities cannot be overemphasized and their contribution finds a mention in the report. The five units under this Division are - Establishment, Accounts, Hostel, Stores and Transport. An important achievement has been the renovation of Robert Koch Block and construction of Guest House in front of Krishna Nivas.

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

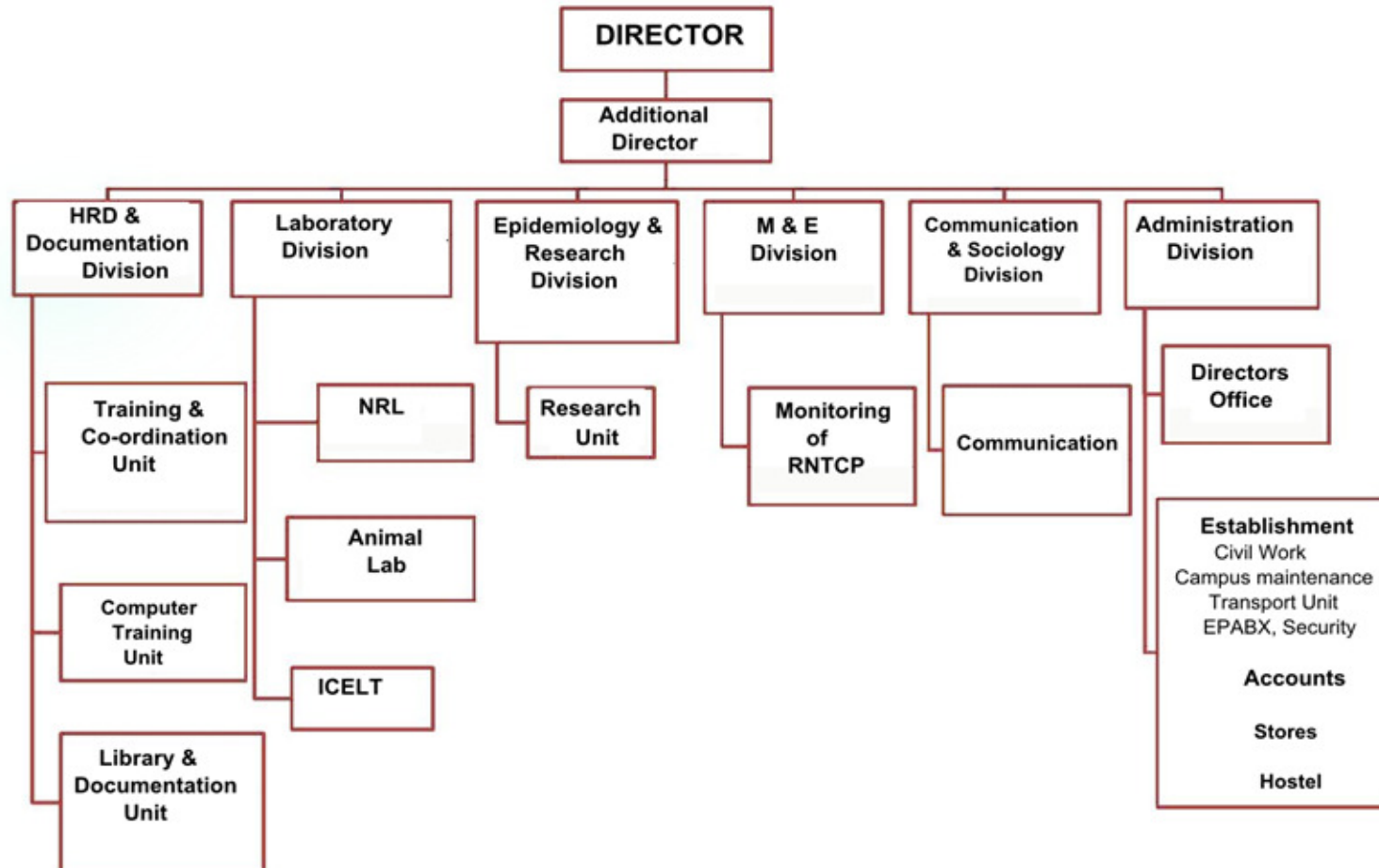
I acknowledge the co-operation, hard work and diligence of all the members of the NTI family and I solicit the same degree of motivation and dedication from all in times to come.

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

Dr. Prahlad Kumar
Director

Dated: 26th July 2016
Place: Bangalore

ORGANOGRAM



1. Human Resource Development & Documentation

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 and Coordination Unit, Computer Training unit and Library & Documentation Unit.

A. Training and Coordination Unit

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

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

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

Sl. No.	Category of personnel	Period	No. of Participants
1	State and District level programme Managers and faculty from Medical colleges	13 th – 25 th April 2015	30
2		18 th – 30 th May 2015	41
3		15 th – 27 th June 2015	20
4		31 st August – 12 th September	40
5		26 th October – 7 th November 2015	26
6		1 st – 13 th February 2016	30

2. PMDT (Programmatic Management of Drug Resistant TB) Training

Sl. No.	Category of personnel	Period	No. of Participants
1	WHO RNTCP Consultant, State Tuberculosis Officer, District Tuberculosis Officer, Sr. Medical Officer, DRTB Coordinator, Deputy Director TB Cell, State Tuberculosis, Professor of Chest Diseases, Assistant Programme Officer / Epidemiologist and Assistant Director of Health Services (TB)	10 th - 14 th August 2015	25

3. Financial Management Training

Sl. No.	Category of personnel	Period	No. of Participants
1	State Finance Managers, Medical Consultant (RNTCP), State Account Officers, Addl. Director of Health Services – TB / STO and State TB Officer	27 th – 28 th July 2015	17

4. Training on Procurement and Supply Chain Management

Sl. No.	Category of personnel	Period	No. of Participants
1	State and district level programme managers	28 th – 30 th September 2015	27
2		18 th – 20 th January 2016	28
3		18 th – 20 th February 2016	20
4		30 th March – 1 st April 2016	27

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

Sl. No.	Category of personnel	Period	No. of Participants
1	Sr. Lab technicians, Microbiologists, Medical college professors	1 st – 13 th June 2015	09
2		24 th August – 5 th September 2015	04
3		16 th – 28 th November 2015	05
4		29 th February – 12 th March 2016.	07

6. Training on LED Fluorescent Microscopy

Sl. No.	Category of personnel	Period	No. of Participants
1	Senior Laboratory Technician, Laboratory Technician, Specialist Microbiologist and Bacteriologist	5 th - 8 th May 2015	15

7. Preventive Maintenance & Minor Repairs of Binocular Microscope

Sl. No.	Category of personnel	Period	No. of Participants
1	Laboratory technicians and	13 th – 16 th April 2015	16
2	Senior Tuberculosis Laboratory Supervisor	6 th – 9 th July 2015	12
3		21 st – 24 th September 2015	07

8. Training in External Quality Assessment

Sl. No.	Category of personnel	Period	No. of Participants
1	DTOs, Microbiologists, STLSs	18 th – 22 nd May 2015	17
2	and LTs	5 th – 9 th October 2015	13

9. National TB Operational Research Training course for professionals associated with Revised National Tuberculosis Control programme

Sl. No.	Category of personnel	Period	No. of Participants
1	State and District level programme Managers and faculty from Medical colleges	4 th – 8 th May 2015	23

10. Training of Trainers for expanding CBNAAT services under RNTCP

Sl. No.	Category of personnel	Period	No. of Participants
1	District Tuberculosis Officer, IRL Microbiologist, DOTS PLUS	16 th – 17 th November 2015	39
2	Supervisor, Deputy Chief Medical Officer, WHO RNTCP Medical Consultant, WHO RNTCP State HQ Consultant and Superintendent (Director)	21 st – 22 nd December 2015	49

11. TOT for Daily Regimen for first line ATT for all HIV-TB Co-infected patients at ART Centers

Sl. No.	Category of personnel	Period	No. of Participants
1	Programme officers of all the state from the state AIDS	22 nd – 23 rd February 2016	63
2	Control Societies, Programme officers of RNTCP and NACO, Pharmacist and Professors	25 th – 26 th February 2016	88

12. Collaborative training activities with

a. CTD-NTI- CDC- 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 th – 24 th July 2015	11

b. NTI – SAARC / NTP Nepal - TB Management Training

Sl. No.	Category of personnel	Duration	No. of Participants
1	Technical staff from NTP, Nepal	24 th – 28 th January	08

13. Training of Trainers (ToT) on Standards for TB Care in India

Sl. No.	Category of personnel	Duration	No. of Participants
1	RNTCP Programme Managers, Microbiologists and Medical College Professors	1 st – 2 nd June 2015	29

14. Other Trainings

Sl. No.	Particulars	Date	No. of Participants	Participants
1.	Training on Biosafety practices in TB Laboratory	26 th – 27 th Nov 2015	37	Associate Professor, IRL- Microbiologist, Regional Biomedical Engineer, Specialist Microbiology, Consultant Microbiologist, Professor & Head and Professor

15. Other workshops / Meetings / CME

a. At NTI

Sl. No.	Particulars	Date	No. of Participants	Participants
1	Sensitization workshop for SLD LPA study	30 th September 2015	17	Medical Officer, Microbiologist (MD), Consultant Microbiologist, Associate Prof & I/C TB C-DST Laboratory, Programme Coordinator, Bacteriologist and Scientist 'B'
2	Capacity Building Workshop of State TB-HIV Co-ordinator and RNTCP Consultants on TB-HIV Collaborative Activities	23 rd – 24 th November 2015	53	WHO- RNTCP Consultant, TB-HIV Coordinator, Medical Consultant, Program Officer, STO and M.O
3	National Training of Trainers Workshop on Implementation of Bedaquiline CAP within RNCTP PMDT	5 th – 8 th January	54	Joint DHS (TB)-cum- SPO RNTCP, Professor, STF Chairperson, WHO Medical Consultant , District TB Officer, Medical Officer-DRTB, Microbiologist (IRL), TB/HIV Coordinator, Technical Associate, National Consultant TB, WHO Medical Consultant, District TB Officer, Microbiologist, Research Officer, Director, STDC, Associate Professor , Chief Medical Officer, Sr. Medical Officer and State TB Officer.

Sl. No.	Particulars	Date	No. of Participants	Participants
4	CME on Standards for Tuberculosis Care in India (STCI) at NTI on the occasion of World TB day	24 th March 2016	60	Private Practitioners from all over Karnataka State

16.Sensitization on TB Control Programme for Undergraduate/ Post graduates / medical / paramedical 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 **1117 students & scholars** of life sciences visited NTI in **36 batches** during the period as follows:-

Sl No	Date	Category of Students	No of Students	Organization
1	13-04-15	Bsc (N)	43	Dr.Shyamala Reddy college of nursing, Blr.
2	11-05-15	Bsc (N)	10	BMJ College of nursing, Bangalore.
3	14-05-15	PG students (MPH)	06	RGIPH & CDC, Bangalore
4	15-05-15	Bsc (N)	55	Sri Devaraj Urs college of nursing, Kolar
5	25-05-15	Msc (N)	03	Padmashree school of nursing, Bangalore
		GNM	32	
6	26-05-15	Bsc (N)	55	St.John's college of nursing, Bangalore

Sl No	Date	Category of Students	No of Students	Organization
7	27-05-15	Bsc (N)	50	SJB College of nursing, Bangalore
8	28-05-15	GNM	55	
9	12-06-15	Community Health workers	20	SOCHARA school of public health & Equity, Bangalore.
10	17-07-15	Bsc (N)	38	Garden city college of nursing, Bangalore.
11	30-07-15	PG's community medicine	05	Rajarajeshwari medical college , Bangalore
12	13-08-15	Bsc (N)	32	SSSIHMS college of nursing, Bangalore.
13	17-08-15	MSW students	30	Oxford college of arts , Bangalore
14	14-09-15	MPH Students	20	Padmashree school of public health, Bangalore.
15	18-09-15	MD Community medicine	13	Govt. Medical college, Calicut, Kerala.
16	21-09-15	MD Community medicine	07	AFMC, Pune, Maharashtra
17	27-11-15	B H M S Students	43	Govt. Homeopathic Medical College, Trivendrum, Kerala
18	30-11-15	Post Msc Bio-tech. Students	25	Oxford college of science, Bangalore.
19	16-12-15	Bsc (N) GNM	06 23	Gautham college of nursing, Bangalore
20	12-01-16	GNM	20	Lakshmi Inst. of nursing, Mangalore
21	22-01-16		58	Krupanidhi college of nursing, Bangalore

Sl No	Date	Category of Students	No of Students	Organization
22	28-01-16	B.Sc(N)	47	Dhanvantary nursing college, Bangalore
23	29-01-16	B.Sc(N)	50	St.Philominas college of nursing, Bangalore
24	01-02-16	B.Sc(N)	25	Adithya college of nursing, Bangalore
25	03-02-16	BMLT	39	Acharya Inst. Of Health sciences, Bangalore
26	05-02-16	BMIT	28	
27	12-02-16	GNM	40	Dhanvantary nursing college, Bangalore
28	15-02-16	MBBS-Interns	49	Sapthagiri Inst.of medical sciences, Bangalore
29	19-02-16	B.Sc(N)	37	Narayana Hrudayalaya nursing college, Bangalore
30	25-02-16	Msc (N)	07	Lakshmi college of nursing, Mangalore
31	10-03-16	B.Sc(N)	15	Chinmaya Inst. of Nursing , Bangalore
32	14-03-16	B.Sc(N)	10	Dayanand Sagar College of Nursing, Bangalore
33	14-03-16	B.Sc(N)	09	MVJ College of nursing, Bangalore
34	21-03-16	Health Inspector Trainees	26	Medical Training Centre, Air Force, Bangalore
35	21-03-16	B.Sc(N) GNM	42 07	Global college of nursing, Bangalore
36	24-03-16	Msc (N)	01	Vaidehi Inst. Of Nursing sciences, Bangalore

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 Bangalore with the mission “to support the scaling up of laboratory capacity building in India and Asia by providing hands-on training courses in the diagnosis and monitoring of major infectious diseases such as TB, HIV/AIDS and Malaria”. Presently, ICELT is imparting trainings on WHO endorsed Newer Diagnostic Techniques for TB and its drug resistance. In addition to Line Probe Assay and Liquid Culture, this year training was also conducted on GeneXpert MTB/RIF, the latest technique in TB diagnostic armamentarium. GeneXpert MTB/RIF is a cartridge based nucleic acid amplification test (CB NAAT) that can diagnose TB and Rifampicin resistance in less than two hours. The Training activities held in ICELT during the year 2015-2016 are given below:

Sl No	Name of training	Participating laboratories	Date	Number of participants
1.	Comprehensive & integrated training on all TB Diagnostics	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	June 1-13, 2015	8
2.	Comprehensive & integrated training on all TB Diagnostics	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	Aug, 24-5thSep, 2015	8
3	National Workshop on Second line DST and evidence collection under PMDT conditions	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	Sep 30, 2015	20
4	LED FM Microscopy	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	Oct 12-16, 2015	09
5	National TB lab Bio safety training	Intermediate Reference Laboratories, C & DST Laboratories & Medical colleges	Nov 26-27, 2015	60

II. Other technical activities conducted by the officers of the Training and co-ordination unit

1. Preparation for all the training activities scheduled during the year 2016-17
2. Preparation of the technical reports of the training activities held during the year 2015-16.
3. Tentative Training Calendar for the year 2016-2017 was prepared.

III. Administrative activities.

- a. Dr. Ravi Chandra .C, CMO-NFSG was involved in the following administrative activities:
 1. Preparation of WHO CC report of NTI for the year 2014-15.
 2. Discharged duties as Chairman of Condemnation committee and Purchase Committee.
 3. As Hostel In charge and Chairman of the Hostel committee, discharged duties successfully to the satisfaction of the trainees accommodated in the hostel.
 4. Member Secretary for the Hindi Rajbasha Samithi
 5. Discharged the duties as Division Head, HRD & Documentation Division, I/c Hostel, Chairman of Condemnation committee and Purchase Committee
 6. Other administrative duties entrusted by the Director from time to time.
- b. Dr. Poornima A, MO was involved in the following administrative activities:
 1. Discharged duties as a member of Departmental Promotion Committee (DPC) and assisted in meetings.
 2. Worked as a committee Member for appointment on compassionate grounds and member of recruitment committee.
 3. Serving as a Liaison officer.
 4. Discharged the duties as Unit Head, Training
 5. Discharged duties as a Stock Verification Officer whenever nominated by the Director for physical verification of items held by various Divisions/Units of the Institute
 6. Other administrative duties entrusted by the Director from time to time.

Computer Training 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
- To support Information and Communication Technology (ICT) Initiatives in the context of the Programme.
- To support Data Management and Statistical Analysis of research studies and other MIS.
- To cater to the maintenance of website / upkeep / up-gradation of IT infrastructure of the Institute.

a. National Drug Resistance Survey:

The Computer Training Unit has been entrusted with the responsibility of implementing the data management module for the ongoing National Drug Resistance Survey. The Data management module for the survey caters to real time registration of samples, capture of results declared by the Lab technician and further verification by the Microbiologist. Also the dash board created for each of the 120 TB units keep the field teams updated with regards to their registration status and quality control activities. Further the DST results of all the registered patients are shared with the concerned field officials in real time by emails.

The following NDRS activities were under taken in the year –

- a. DRS data management module is functional and the features as required are being updated.
- b. Day to day correspondence and submission of interim reports to WHO related to Technical Service Agreement (TSA) between WHO & NTI and other survey related activities.
- c. I/c CTU attended a meeting in WR office, WHO, New Delhi, on 10th September 2015. Issues pertaining to TSA Extension for smooth completion of NDRS were discussed and it was decided to extend TSA as per requirement of duration of the survey.
- d. Conducted in-house sensitization program for lab and data management staffs, related to NDRS software module.

- e. Periodic NDRS project related correspondence is being handled.
- f. Interim analysis & presentation of NDRS data to NTI data monitoring committee on 1st of every month is being compiled & presented.
- g. Monthly reports of NDRS is being compiled & forwarded to CTD & WHO.
- h. I/c CTU attended meeting with Director & NDRS team on 8th October 2015 to review the progress and provide feed-back of the suggestions made in NDRS over-site committee meeting held in CTD, DteGHS, New Delhi on 06.10.2015. NDRS team was instructed to comply with the instructions received from DteGHS and implement them for smooth completion of NDRS
- i. I/c CTU attended the joint meeting of officials of CDC Atlanta, NTI NRL & NDRS team on 13th October 2015 to discuss initiating genetic sequencing project for identification of MDR and XDR cases. Dr Moonan Patric informed about planning of genetic sequencing project to RNTCP India by CDC Atlanta and providing all technical support by Dr Patric.
- j. I/c CTU made a presentation to Dr Jacek Skarbinkski from CDC Delhi office, DDG TB, Director & NTI Officials on 6th January 2016 on OR software

b. TB-Net Project - Establishing a National Database on Tuberculosis – Phase II:

The Phase II of the TB-Net project was initiated upon obtaining approval from the Department of Biotechnology, Ministry of Science and Technology, Government of India. An Open Access Repository of abstracts of published scientific papers from all major national institutes has been launched vide URL <http://tbresearch.ntiindia.org.in>. It attempts to collect, preserve and disseminate the intellectual output of these Institutes available in peer-reviewed journals. Another site <http://ntiresearch.ntiindia.org.in> facilitates archival of research protocols and other documents which are intellectual property of NTI Bangalore.

The report on activities undertaken at NTI as a WHO collaborating Centre has been uploaded to WHO CC website for the year 2014-15.

The I/c Computer Training Unit has contributed as a member of the publication committee in the following publications:

- i. NTI annual report for the year 2014-15
- ii. Compilation & Consolidation of NTI Bulletin Vol.51/1&4, hosted onto NTI website.
- iii. In addition the unit is also responsible for compiling & consolidation of the Institute's monthly, quarterly & annual reports and submission to DteGHS and CTD.

c. IT Support Services:

1. Periodic licensing server configuration & maintenance like SPSS, STATA, McAfee Licensing etc.
2. Application server configuration and maintenance for the following applications www.ntiindia.org.in, www.ntiresearch.ntiindia.org.in, www.ntiindia.org.in/ndrs, www.drs.ntiindia.org.in, www.tbresearch.ntiindia.org.in
3. Maintenance of access to subscribed Journals.
4. Handling matters pertaining to AMC of computers / UPS and issues pertaining to server configuration / Internet services / mailing services
5. Periodic uploading of contents onto NTI website is undertaken as per requirement.
6. Technical inputs pertaining to Internet/ Server / Softwares / Audio Visual Equipments and infrastructure expansion are entrusted to the unit.
7. Periodic technical server configuration / proxy server configuration for Internet services & maintenance there off are being under taken regularly.

d. Other workshops / Meetings/ CME

- a. I/c CTU attended National TB Operational Research (OR) Training course for professionals associated with Revised National Tuberculosis Control programme on 4th to 8th May 2015.
- b. I/c CTU Participated in TB Epidemiology workshop held at Kasrauli, Rajasthan on 29th – 31st July 2015.

- c. I/c CTU attended Course on Systematic review & meta-analysis training program on 10th to 14 Aug 2015 at NIRT Chennai.
- d. I/c CTU facilitated NIKSHAY training on 12th August 2015 for the PMDT (Programmatic Management of Drug Resistant TB) Training in which 25 participants from 13 different states participated.
- e. I/c CTU attended the meeting on 21st October 2015 in which Director, Dr Lal from PATH, Washington Office and Dr Vijayashree from Institute of Public Health, Bangalore to discuss PPM initiatives under TB control. It was informed about development of PPM model labs in Bangalore and Director, NTI expressed his willingness to support such initiatives.
- f. I/c CTU facilitated NIKSHAY training on 24th Nov 2015 for the Comprehensive Training Course for Laboratory Personnel (Solid Culture, Liquid Culture, LED-FM, LPA, CBNAAT) in which 4 participants from 4 different states participated.
- g. I/c CTU attended meeting with Director, Dr Deepak Saini and Dr Srividya from Indian Institute of Science, Bangalore on 26th Nov 2015 to discuss a collaborative study between IISc and NTI. I/c NRL and I/c CTU also took part in the discussion.
- h. Mr. R Jitendra attended NATCON 2015 in Lucknow on 21st Feb 2016 and made a presentation on “First National Anti TB Drug Resistance Survey – Overcoming Implementation Challenges”.
- i. I/c CTU attended meeting with Director on 23rd March 2015 to discuss joint project proposal between CDC-NTI-FIND-CTD on issues pertaining to DRS; quality control of CBNAAT; liquid culture; disease surveillance system; and operational research of RNTCP. These projects are being developed in consultation with CTD with the support of partners
- j. Mr. R Jitendra attended CME to commemorate World TB Day in NTI on 24th March 2015 in which he made presentation related to NIKSHAY for about 100 private practitioners (PP) and officials from Family Physician Association of Karnataka along with the technical staff of NTI participated

e. **Award**

Mr. R Jitendra received Dr O A Sarma Oration guest lecture Award in the 70th National conference Tuberculosis & Chest diseases head at King George Medical University, Lucknow on 21st February 2016.

f. **Other Activities Undertaken**

1. I/c CTU was a member of the committee to review & implement Adhaar Enabled Attendance System (AEBAS) at NTI.
2. Periodic committee meetings, feasibility testing, updation of networking & infrastructure to implement AEBAS was undertaken.
3. Procurement & Supply Chain Management training activity conducted in the Computer Training lab on 29th & 30th Sep 2015.
4. Vishweswara Sharma attended meeting with Director, Additional Director and staff representative on 22nd December 2015 to discuss the discrepancies observed in the 7th CPC report. Director advised to compile the comments pertaining to discrepancies to be forwarded to the concerned authorities.

Library and Documentation Unit

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:

- a. Research Protocol including work instructions endorsed by the Director.
 - b. Final cleansed data base in the format recommended by the documentation division.
 - c. Final analysis undertaken in terms of tables, figures etc.
 - d. Published article with Bibliography.
- 1) 240 volumes of back volumes of journals/periodicals have been bound and stacked in the Library for future reference.
 - 2) Renewed subscription of over 13 journals (inclusive of six online) & periodicals for the year 2015.
 - a. ANTISEPTIC
 - b. INDIAN JOURNAL OF MEDICAL RESEARCH.
 - c. INDIAN JOURNAL OF TUBERCULOSIS.
 - d. INDIAN MEDICAL GAZETTE.
 - e. MEDICAL JOURNAL OF ARMED FORCES OF INDIA.
 - f. THE NATIONAL MEDICAL JOURNAL OF INDIA.
 - g. SWAMY'S NEWS & SWAMY'S HANDBOOK

The following six journals have been subscribed online for the year 2015.

- i. Lancet
 - ii. Tuberculosis.
 - iii. International Journal of Epidemiology.
 - iv. International Journal of TB & Lung Diseases.
 - v. Indian Journal of Medical Microbiology.
 - vi. Journal of Clinical Microbiology.
- a) Renovation work of the proposed Guest Room in the Library Annex is in progress.
 - b) I/c Library co-ordinated/participated in the two WHO NDRS training program held in Kalaniketan by extending services in operations of the audio/visual equipment in Kala Niketan.
 - c) i/c library co-ordinated in participation of five officer/officials in the NATCON 2014 held in Mumbai on 6th and 7th February, 2015.
 - d) i/c library visited DTC, Tumkur on 25.07.2014 for a spot inspection and on 05.08.2014 for alignment of a Chest stand to the existing MMR X-ray unit of the centre. The job was carried out successfully.
 - e) Received NTI bulletins/Newsletters from Ms.Informatics, Bangalore which were sent for digitization on 25.08.2014. The above have been filed in the respective racks.
 - f) As i/c X-ray Section letter dispatched to Vizianagaram regarding servicing of Roll Film Cassette of their centre.

Published:

- a) NTI Annual Report for the year 2014-15 and distributed.
- b) Summaries of NTI studies, Volume-3 (2005 to 2014) (800 copies)

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

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.

As an NRL, NTI supervises and monitors the quality of sputum smear Microscopy in the network of laboratories in the three states allocated viz,, Karnataka, Maharashtra, and Rajasthan

The NRL trains laboratory personnel and is responsible for accrediting state level laboratories i.e., the IRLs, Medical Colleges and other private laboratories for Culture and Drug Susceptibility Testing for detection of Drug Resistant Tuberculosis (DR-TB). Besides these activities it also supports State level Drug Resistance Surveillance (DRS) and DOTS Plus activities.

The NRL is also mentoring two new NRLs:

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

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

A. Quality Assurance System (QAS):

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

B. External Quality assessment (EQA):

EQA is performed by an On-Site Evaluation (OSE) visit. The components of EQA include, infrastructure assessment, panel testing 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 the problems of non-availability of LTs/DTOs, staff structure in STDC, training, reagents quality, disposal of infectious materials and RBRC activities.

NRL does the analysis and feedback of Annexure G to NTI supervised states i.e Rajasthan, Karnataka and Maharashtra.

The annual EQA-OSE visits to the following places was done

Sl No.	State and Labs visited	Dates of visit	Name(s) of NRL Supervisor(s)
1	Rajasthan 1. IRL Ajmer 2. SMS Medical College 3. DTC Jaipur I 4. DTC Jaipur II 5. DTC Udaipur 6. DTC Chittaurgarh 7. CBNAAT – Jaipur 8. CBNAAT - Udaipur	9 th to 14 th February , 2015	Dr. N. SelvaKumar, Mr.A.Ranganatham
2	Karnataka 1. IRL Bangalore 2. KIMS Hubli 3. DTC Dharwad 4. DTC Davengere 5. CBNAAT – Dharwad 6. CBNAAT – Davengere	17 th June to 20 th June, 2015	Mrs.Reena Dr.Lavanya Mr.Ranganatham

Sl No.	State and Labs visited	Dates of visit	Name(s) of NRL Supervisor(s)
3	Maharashtra (Pune division) 1. IRL Pune 2. JJ Hospital, Mumbai 3. GTB Sewree, Mumbai 4. DTC Ratnagairi 5. DTC Thane Rural 6. DTC Thane Corporation 7. CBNAAT – GTB Sewree 8. CBNAAT – KurlaBhaba 9. CBNAAT – IRL Pune	12 th to 15 th October 2015	Mrs.Reena Dr.Lavanya Mr.Ranganatham Mr.Prathap

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 at the NRL. Subsequently, a pre-assessment visit is undertaken by a Central team, the objective of which is to assess the suitability of the laboratory Infrastructure and installation of equipments. Panel cultures are then exchanged between the NRL and the IRL for proficiency testing and retesting. A satisfactory performance is determined in terms of Concordance of more than 90% for Isoniazid (H) and Rifampicin (R); more than 80% for Streptomycin(S) and Ethambutol (E). The laboratory carries out investigation of errors if any in case of an unsatisfactory performance in the Proficiency testing and informs the NRL regarding 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 areas under:

I. Certification of laboratories in first line DST in the year 2015-16

1. IRL Indore- Liquid culture
2. KIMS Hubli – Solid culture
3. DMRC Jodhpur - Solid culture

II . Certification of laboratories in Second line DST in the year 2015-16

1. IRL Orissa
2. SMS Medical College, Jaipur
3. IRL Guwahati
4. IRL Lucknow
5. IRL Pune
6. IRL Bangalore
7. IRL Indore
8. IRL Kolkata

III. Labs in process of certification:

- a. GMC Aurangabad : 1st line solid culture
- b. IRL Karnataka : 1st line solid culture

Annual proficiency testing of certified laboratories in solid, liquid (1st and 2nd Line) and LPA - for 26 laboratories

1. IRL Cuttack, Odisha
2. IRL Kolkata, West Bengal
3. IRL Ajmer, Rajasthan
4. IRL Nagpur, Maharashtra
5. IRL Ranchi, Jharkhand
6. JJ Medical College Mumbai, Maharashtra
7. Bhopal Medical Hospital & Research Centre, Madhya Pradesh
8. IRL Bangalore Karnataka
9. SMS Medical College, Jaipur.
10. IRL Indore, Madhya Pradesh
11. IRL Pune, Maharashtra
12. IRL Jammu, Jammu & Kashmir
13. IRL Srinagar, Jammu & Kashmir
14. P D Hinduja Hospital Mumbai
15. RMRCT Jabalpur
16. CHRC Indore, Madhya Pradesh
17. Metropolis Mumbai
18. GTB Sewri
19. BJ Medical College Pune
20. MGIMS Sewagram
21. KJSomaiya, Mumbai
22. SRL Laboratories, Mumbai
23. GMC Aurangabad
24. SNMC Jodhpur
25. SRL Kolkata
26. RMRC Bhuneshwar

The National Reference Laboratory has certified the JJ Hospital, Mumbai in Extended Second line DST i.e drug Moxifloxacin Levofloxacin, Capreomycin, Amikacin.

The NRL is rendering its support to the state of Karnataka by supporting PMDT services to the 3 districts of Karnataka viz. Bangalore Rural, Bangalore Urban and BBMP.

Analysis and feedback to the reports for the states supervised by NTI:

- a) Laboratory performance indicators
- b) CBNAAT monthly reports
- c) CBNAAT Biannual report for the UNITAID sites

Mentoring of newly formed NRL's:

Sl No.	State and Labs visited	NRL supported	Dates of visit	Name(s) of NRL Supervisor(s)
1	West Bengal 1. IRL Kolkata 2. DTC Bardman 3. DTC Tangra 4. DTC Howrah 5. Bardman Medical College 6. CBNAAT Tangra 7. CBNAAT Howrah	RMRC Bhubaneshwar	27 th – 31 st July , 2015	Mrs.Reena Dr.Lavanya Mr.Ranganatham
2	Madhya Pradesh 1. IRL Indore 2. STDC Bhopal 3. DTC Indore	BMHRC, Bhopal	26 th – 29 th October, 2015	Dr.Selvakumar Mr.Ranganatham Mr.Prathap

External Quality Assurance for Mycobacterium Culture and DST

Sl. No	Proficiency tested for	Month of Reporting	Month of passing	Testing agency	Methods / Media Used	Proficiency Result
1	11th round: Sputum smear microscopy	May 2014	January 2015	STAC, Kathmandu, Nepal	ZN Staining	100%
2	21 st Round of Proficiency testing in Culture and DST	January 2015	July 2015	Prince Leopold Institute of Tropical Diseases, Antwerp, Belgium	Liquid Culture 1 st and 2 nd Line Drugs	100 %

Specimens processed at NTI during the period April 2015- March 2016

Total Samples (<i>Sputum + XDR Culture +PMDT+NTM and OP</i>) registered	5624
XDR suspect culture samples registered	1415
Total number of Patients <i>from 3 Dist,of Karnataka registered for LPA (PMDT)</i>	3187
Total number of Samples <i>from Karnataka registered for LPA (PMDT)</i>	3423
Total No. of samples put up for primary culture <i>OP + 3 Dist of Karnataka – PMDT</i>	2308
Total no. of Line Probe Assay performed	1712
Total number of specimens subjected to Gene-Xpert	174
Total no. of drug Susceptibility tests performed by using MGIT	905
No. of Specimens subjected for identification test (Immuno- Chromatographic Test)	905
Total number of Samples <i>registered for NTM (HPLC)</i>	118
Total number of samples subjected <i>for HPLC</i>	192
Total number of Samples <i>processed for primary culture for NTM(HPLC)</i>	23
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 <i>NDRS Survey</i>	2380
Total number of Samples registered for <i>NDRS Survey</i>	4709
Total number of Samples rejected for <i>NDRS Survey</i>	349
Total number of Samples put for primary culture for <i>NDRS Survey</i>	2765
Total number of <i>NDRS Survey samples</i> put up for DST by (MGIT)	2348
Total number of <i>NDRS Survey samples</i> subjected for GeneXpert	30
Total number of Patients registered for <i>Relapse study</i>	607
Total number of Samples registered for <i>relapse study</i>	996
Total number of <i>Relapse study Specimens</i> put for primary culture	996
Total number of <i>Relapse study samples</i> put up for DST by Solid culture (LJ)	133

PARTICIPATION IN CONFERENCES, WORKSHOPS, TRAINING PROGRAMMES, MEETINGS ETC.

The faculty and technical Staff of NTI participated as Facilitators, Resource person/delegate in Conference /workshops/ Training programmes conducted in both at NTI and outside. The details are furnished below.

Meetings/ Visits: Inside and Outside NTI

Sl. No.	Particulars	Date	Resource person
1	Training in Culture and DST was given at Aurangabad Maharashtra	6 th -10 th April 2015	Mr.Manjunath Achari and Mr. Raghunandhan
2	NRL Co-ordinate meeting at NITRD, New Delhi	19 th and 20 th May 2015	Director NTI, Mrs. Reena K and Dr.V Lavanya
3	Karnataka state review meeting of Culture and DST at IRL Karnataka and	23 rd May 2015	Mrs. Reena K
6	PMDT South Zone Meeting at Kochi, Kerala	8 th to 10 th June 2015.	Mrs. Reena K
7	PMDT review meeting conducted by STO Karnataka	2 nd July 2015	Mrs.Reena K
8	Conducted annual NRL OSE mentoring visit to IRL Kolkata, Along with Team from NRL RMRC Bhuvaneshwar	27 th to 31 st July 2015.	Mrs.ReenaK,Dr.V. Lavanya andMr.Ranganatham A,
9	West Zone PMDT review meeting at Udaipur Maharashtra, Rajasthan which are supervised by NTI were reviewed along with Gujarat, Goa and Madhya Pradesh	24 th -27 th August 2015	Mrs.Reena K
10	Facilitated LED -FM training in IRL Ajmer Rajasthan	6 th -8 th October 2015	Mr.Ranganatham, Mr Jaya Ganesh,

Sl. No.	Particulars	Date	Resource person
11	Selection of 10 cultures for retesting SLDST certification in liquid culture at IRL Bangalore	9 th October 2015	Mrs. Reena K and Mr.Prathap
12	EQA OSE visit to IRL Pune. The team visited JJ Hospital, GTB Sewri, DTC Thane, DTC Ratnagiri and IRL Pune	12 th -15 th October	Mrs.Reena.K, Dr.V Lavanya, Mr.Ranganatham, Mr. Prathap
13	Visited Madhya Pradesh for mentoring visit to NRL BMHRC from 26 th -30 th October.	26 th -30 th October	Dr. Selvakumar, Mr.Ranganatham, and Mr.Prathap
14	Facilitated workshop at Hyderabad about TB management	14 th -18 th December	Dr V. Layanya
15	CBNAAT sensitization workshop at Pune	15 th -16 th December 2016	Mrs. Reena.k
16	Visited KIMS Hubli for their study 'on sample collection - report delivery assessment'	21 st December 2015	Mrs. Reena K along with members from CHAI
17	Visited DTC Davanagere for their study on 'sample collection - report delivery assessment'	21 st December 2015	Dr. V Lavanya along with members from CHAI for their study on sample collection - report delivery assessment
18	Facilitated two days training programme at STO Office at Jaipur	29 th and 30 th December 2015	Mrs. Reena K
19	HPLC training at NTI Bangalore	From 8 th -14 th February 2016	Mrs. Rohini from J.J Hospital Mumbai

Sl. No.	Particulars	Date	Resource person
20	Presented a Research paper, titled 'Speciation of Non-tuberculosis mycobacteria using HPLC under programmatic setting in India'	On 20 th and 21 st February 2016	Mr George Sebastian
21	Attended a review meeting on Multi-centric cohort study on TB recurrence at NIRT Chennai	16 th March 2016	Dr. V K Chadha and Mr George Sebastian
22	Visited Tumkur DTC, CBNAAT site, DMC, District Drug Store and had discussion with patients and KCG General Hospital, Malleswaram, and visited IRL Laboratory, DR-TB center	31 st March 2016 1 st April 2016	Dr. V. Lavanya and Dr. Krishna Murthy along with CTD team Addl. DDG Dr. V.S.Salhotra and Dr. Mayank Ghedia

Animal Laboratory:

The main objective of the unit Animal Laboratory erstwhile name Animal Model Research 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 get familiarized with the procedures, but also to standardize various techniques.

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Status of laboratory animals

Breeding and maintenance of homogenous stock laboratory animals Guinea Pigs

Major Activities

A. Status of laboratory animals;

i. During the period of reporting under reference a total of 15 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.

ii. 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 protocol. The projects are also screened by the Institutional Ethics Committee for addressing the ethical issues. The progress of the project 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 journals.

- The ERD conduct large scale community as well as facility based epidemiological, operational and implementation research in TB all over the country - preparing generic protocols, planning, organizing, implementing, monitoring, supervising, besides data collection, data management, analysis and report writing.
- Providing technical and operational support to STDC's, other state and central level health institutions in the country in conducting TB epidemiology studies and Operational Research (OR).
- Mathematical modeling in TB.
- Providing mentorship and training to state level officials in operational research.
- Monitoring and supervision of programme activities.
- Training to WHO fellows in TB epidemiology.
- Actively Participate in CTD sponsored activities including expert group meetings, workshops etc.
- Present research papers and deliver guest lecturers in conferences and workshops.
- Provide technical support to other countries in conducting TB epidemiology studies and in assessment of epidemiological situation.
- Maintaining a data base of OR studies carried out in the country.
- Assisting CTD in Internal evaluations.

RESEARCH STUDIES

1. Multi centric Cohort Study of Recurrence of TB among newly diagnosed Sputum positive PTB patients treated under RNTCP – Collaborative Study(RP/240)

This is a prospective, multi-centric cohort study with following objectives:

Primary Objective:

1. To estimate the recurrence of TB among newly diagnosed sputum positive pulmonary TB patients who have been successfully treated under RNTCP.

Secondary Objectives:

1. To distinguish between relapse and re-infection among those who have recurrence of TB
2. To identify risk factors for unfavourable treatment outcomes (treatment failed, lost to treatment follow up and died), and recurrent TB among newly diagnosed sputum positive pulmonary TB patients who have been successfully treated under RNTCP

Methodology in brief:

The National Tuberculosis Institute (NTI), Bangalore, is one of the collaborating institute among other six institutes who are participating in the study. The National Institute for Research in Tuberculosis (NIRT), Chennai, is the co-ordinating site. NTI has selected 2 districts namely; Ramanagara (rural) and Mandya (urban) based on convenience, and three Tuberculosis Unit (TU): Ramanagara and Channapatna from Ramanagara district and Mandya TU from Mandya District that had enrolled at least 150 new smear positive pulmonary TB patients in the previous two quarters.

Study Procedures:

236 new smear positive pulmonary TB patients from 3 TUs, treated under RNTCP were enrolled. They have to be followed up till treatment completion, and those with successful treatment outcome have to be followed up for a period of 12 months after completing treatment. These patients are subjected to Sputum collection where in 2 samples (spot and early morning sample) have to be

collected from study participants at initiation of treatment, at the time of outcome of treatment, during post treatment follow up at 3rd month, during post treatment follow up at 6th month and at 12 months post treatment follow up /at TB recurrence (Post-treatment Follow-up/ TB Recurrence). Structured interview to be conducted within 14 days of treatment initiation (Initial Patient Interview), at the time of outcome of treatment (Treatment Outcome Interview) and at 12 months post treatment / at TB recurrence (Post-treatment Follow-up/ TB Recurrence Interview). At the end of I.P. of treatment, patients details will be collected from RNTCP treatment card in the end of I.P. form. Sputum examination to be performed for TB smear, culture, drug susceptibility tests (DST) and genotyping and blood tests for diabetes mellitus and HIV infection at treatment initiation and at the time of recurrence.

Current Status:

Altogether, a total of 236 patients have been enrolled in the study from the rural and urban districts of Ramanagar and Mandya respectively. 10 patients were initial defaulters/ TB no. not given by RNTCP/ died before starting treatment/ transferred out etc. Uptill March 2016, 209 patients have completed the intensive phase and 192 have completed the continuation phase of TB treatment respectively. For 226 patients, outcome interview schedule is filled. Out of them, 187 patients have successfully completed the TB treatment (Cured-182, treatment completed-5), 10 patients are declared as treatment failure, 14 patients are lost to follow up (LTFU) and 20 patients have died.

Post treatment, 132 patients were followed at 3 rd month, out of which 12 patients had TB recurrence/relapse, 1 patient died and 8 patients were lost to follow up. At 6 th month post treatment follow up, out of 90 patients followed, 3 had TB recurrence/relapse, 1 patient died and 7 patients were lost to follow up.

Future course of action:

Post treatment follow up at 12th month is still to be taken up.

2. Improving TB case finding efficiency and management of TB cases in private health care facilities in Bangalore city (RP/239)

Objectives:

1. To sensitize private health care providers (PPs) about standard TB diagnostic procedures
and treatment regimen including direct observation of treatment
2. To set up provider networks for TB case finding and treatment
3. To implement recording and reporting system in Private Health Care Facilities (PHCFs)
4. To describe the outcome of activities undertaken in terms of case finding, treatment outcome and lessons learnt.

Methodology in brief:

Major study procedures involved are (i) Mapping of PHCFs and public health facilities (ii) Networking of health facilities; private – private, private-RNTCP (iii) Sensitization of PPs in Indian Standards for TB Care (INDSTC) and proposed project (iv) Sensitization of all RNTCP officials about the project (v) Establish and implement recording and reporting system in PHCFs : TB suspect card, treatment card, health facility TB register, TB notification format (vi) Training of private labs in sputum microscopy (vii) Collect and manage data.

Current status:

The study is in progress in PHCFs coming under the purview of Dasappa TU. Seven CMEs were conducted both at NTI as well as in few PHCFs to sensitize the Private Practitioners on the STCI and Operational guidelines of the project. Data collection is in progress. A total of 250 symptomatic cards and 80 treatment cards have been collected. Data entry and analysis is in progress.

Constraints - Despite several reminders to CTD for supply of GeneXpert cartridges, the same is yet to be sent.

Presentation - Preliminary data analysis of the study was presented in NATCON conference 2015-16 held at Lucknow.

Future course of action - All patients for whom treatment cards have been collected will be followed up for treatment outcome. Data analysis and report writing is to be taken up.

3. A study of knowledge of Private Practitioners of Bangalore city in diagnosis & treatment of TB

This study was conducted with the objective 1) to find out the proportions of PPs having adequate knowledge regarding diagnosis and treatment of a new case of pulmonary TB and 2) to find out the proportions of PPs complying with mandatory TB case notification.

Methodology:

A series of CMEs were conducted at NTI for the PPs practicing in the areas covered by a selected Tuberculosis Unit (TU) in Bangalore city. The study will be conducted among PPs participating in CMEs.

Prior to starting of the technical deliberations for CMEs, the PPs were informed about the objective of the study. They were further appraised of the study procedures involving filling up a brief semi-structured proforma which will help in appropriate planning of PPM projects in TB control and to refine the technical content of subsequent CMEs. Doctors were informed about the study and after seeking their verbal consent, they were asked to fill up the proforma without identifying themselves and option of not filling the questionnaires was also given to them. The proforma consists of questions on the knowledge regarding diagnosis and treatment of pulmonary TB, and to assess their compliance to TB case notification.

Current status: Data entry and analysis completed for 148 questionnaires responded by Private Practitioners. Paper writing is in progress.

4. Active Tuberculosis Case Finding (ACF) in Bangalore city slums- pilot study using revised algorithm

This study was conducted with the objective 1) to determine the case yield and 2) to assess the accessibility and feasibility of ACF in urban slums.

Methodology:

Study was carried out among individuals ≥ 10 years of age residing in the selected slum of Bangalore City. House to house registration of all individuals ≥ 10 years of age residing in the study area for more than one month was undertaken. All registered individuals were interviewed for presence of symptoms suggestive of PTB and history of ATT in past 6 months was also elicited during the visit. Two sputum samples were collected from symptomatic and were subjected to sputum smear microscopy at NTI laboratory.

Pilot study was undertaken in Siddharth Nagar Slum. Field work was undertaken from July to November 2015. Study temporarily suspended.

Current status: Registration and screening of individuals > 10 yrs. by visiting house to house was undertaken. A total of **2979** (M- 1467, F- 1512) individuals were registered.

Symptom screening was done for **2360**(M- 1069, F- 1291) .Twenty six (M- 18 and F- 8) individuals were found to be symptomatic.

B. RESEARCH PAPERS PUBLISHED:

Papers published (as co-author):

1. Prevalence of Pulmonary TB in Wardha district, Maharashtra, Central India, Journal of Epidemiology & Global Health, Dec.2015; 5(4): S11-S18.
2. Prevalence Survey of Bacillary Pulmonary Tuberculosis in Western Uttar Pradesh, India. J Infect Pulm Dis 1(2): doi <http://dx.doi.org/10.16966/jipd.108>
3. TB case notification by private practitioners in Pune, India: how well are we doing? PHA 2015; 5(3): 173–179

Papers submitted for publication (as main author / co-author):

1. Cost Analysis of Different Diagnostic Algorithms For Pulmonary Tuberculosis Varying In Placement Of XpertMtb/Rif
2. Drug induced hypothyroidism during intensive phase of treatment for MDR TB
3. Engaging PPs& Ayurveda practitioners in Bilaspur to increase case detection
4. Tobacco smoking cessation intervention for TB patients in Rajasthan
5. Relationship between nutritional support &TB treatment outcomes among persons living below the poverty-line in West Bengal.
6. Do TB-HIV diagnostic facilities at all health institutions increase the proportion of TB cases tested for HIV?"

Papers prepared for publication

1. Sub national TB prevalence surveys in India – a consolidated report

C. Training Activities:

1. Mr. Shivashankara and Mr. Jameel Ahmed underwent training course on science communication through print media from 5th to 9th October 2015 at NISCAIR, New Delhi.
2. Mrs. Praseeja P., SSO, Dr. Bhoomika Bajaj, Jr Epidemiologist and B.A. Shivshankar, Health visitor attended one week training on Research Methodology and Evidence Based Medicine in St.Johns Research Institute, Koramangala from 23rd to 27th November 2015.

D. Other Technical activities:

1. Drafted chapter on “Diagnosis” - “RNTCP technical and operational guidelines”
2. Baseline data collection in Tumkur for planning of pediatric TB inventory study
3. Piloting 99 DOTS: a novel project using Mobile Phones to monitor and improve adherence to Tuberculosis Medications – a collaborative study
4. Re-analysis of prevalence survey data from 10 states in India.

4. MONITORING AND EVALUATION

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.

Hitherto, this section adhered to the responsibility of documenting and archiving the various Research Protocols (RP) approved and studies conducted in the Institute up to RP no.236.

A. Regarding Monitoring work – RNTCP data validation:

- M&E Action plan was prepared for the period 2015-2016 and submitted to the Director.
- Divisional meetings were held regarding reorganization & strengthening of Monitoring work.

B. Central Internal Evaluation:

The faculty of the Institute assisted the Central TB Division in Internal Evaluation with the objective of assessing the achievements and constraints encountered in implementation of RNTCP and to provide recommendations for necessary corrective actions.

C. Other technical activities:

Officer attended TCC meetings, Hindi & Purchase Committee meetings.

D. Miscellaneous:

Officers and Staff of the Division attended the Hindi week Competitions and Hindi day Programmes and World TB day functions and seminars conducted at NTI, Bangalore.

5. COMMUNICATION AND SOCIOLOGY

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 **1172 students & scholars** of life sciences visited NTI in **37 batches** during the period as follows:-

SL.NO	CATAGORY OF STUDENTS	NO.OF STUDENTS
01	Msc(Nursing)	008
02	Post Msc(Bio-tech)	025
03	BSc(Nursing)	587
04	DGNM	250
05	BSc(MIT)	028
06	BSc(MLT)	039
07	Post graduate Medical students.	049
08	MBBS Students	043
09	BHMS Students	30
10	MSW's	26
11	Health Inspector Trainees	20
12	community workers	15
Total number of students		1172

Awareness program for Self help group

An onsite TB awareness program was conducted for self help group leaders. A total of **60 BPL Women** attended this program at Kanthi Kiranam Social Service centre, JP Nagar, Bangalore on 27-04-2015.

Other activities

1. Divisional head extended his services as facilitator for RNTCP Modular Training, Operational Research Training and MDR-TB Counselor's Training conducted by the HR Division.
2. Divisional head was part of a series of sensitization programmes conducted in NTI and private health facilities for private practitioners on Standards for TB Care in India.
3. Divisional head has extended his services in the capacity of chairman of the local purchase committee and also as member of purchase committee, condemnation committee and Hostel committee.
4. Divisional head was also nominated as a presenting officer by the central vigilance commission, Min. of H & FW for departmental enquiry.
5. Mr.Mallikarjunaiah , Social worker & Mr.O.Srinivasalu Sister Tutor have been deputed on other official duty to Bruhat Bengaluru Mahanagara Palike(BBMP),Govt. of Karnataka, Since 6th November 2016. Mr.O.Srinivasalu Sister Tutor, though he on deputation is sometimes extending his support by taking orientation classes.
6. Sri. Govindarayanawamy-X-Ray Technician has been assigned the responsibility as in-charge for all medical claims by office order No.29/2/97-2016/Estt/Vol.II Dated: 29th January 2016.
7. Mr.Mallikarjunaiah , Social worker & Mr.O.Srinivasalu, Sister Tutor have reported back to the Division on 01/06/2016, from Bruhat Bengaluru Mahanagara Palike (BBMP),Govt. of Karnataka.

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 2015 to March 2016 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 VI 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
01	Group 'A'	15	10	05
02	Group 'B'			
	Gazetted	03	01	02
	Non-Gazetted	29	23	06
03	Group 'C'	98	90	08
		145	124	21

Promotions

Sl. No.	Name	Designation	Date
01	Sri.K.Mohan,UDC	Head Clerk	01.04.2015
02	Sri.Narayana Rao,LDC	UDC	01.04.2015

03	Sri.M.Ramamurthy, Lab. Attendant	Lab. Assistant	01.09.2015
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Retirements on attaining the age of superannuation

Sl. No.	Name	Designation	Date
1.	Shri.B.R.Thimmegowda	Lab. Assistant	31/08/2015
2.	Shri.Varadaraju	MTS	31/01/2016

Retirements other than superannuation

Sl. No.	Name	Designation	Date
01	Sri. R. Praksh	Cook	12/09/2015

Transfers from NTI

Sl. No.	Name	Designation	Date
01	Sri S Nagaraju	SA	07/08/2015
02	Sri Arjun Kumar Gupta	JSO	30/10/2015
03	Smt. Malathi V. Joshi	SA	30/10/2015
04	Smt. M.A. Sharadha	SA	30/10/2015

Transferred to NTI

Sl. No.	Name	Designation	Date
01	Sri Mridul Das	JSO	05/10/2015
02	Sri Ravi Kumar Jaiswal	JSO	08/09/2015
03	Sri Bipin Kumar Verma	JSO	08/09/2015
04	Sri.Krishan Murari Singh	JSO	15/04/2016

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 2013-14 for carrying out maintains and new works. Of which, an amount of Rs.1, 00, 00,000/- was spent Major Works and Rs. 9, 87,941/- was spent Under Machinery & Equipment. The following Civil, Horticultural and Electrical works were executed during the period under report, in addition to other routine repair & maintenance work.

CIVIL & HORTICULTURAL WORKS

1. Providing Road Carpeting and Kerb alignment work in NTI Campus and Staff quarters area.
2. Renovation of Robert Koch Block (Laboratory Block, providing granite cladding and flooring with replacing of Fully Glass door and providing stainless steel railing and vitrified tiles for Lab rooms.
3. Construction of Guest House in front of Krishna Nivas.
4. Horticulture and Landscaping work near the existing Guest House area.
5. Surface dressing and cleaning the vacant land near the Pump House.

ELECTRICAL WORKS

1. Running and Maintenance of 125KVA DG Set and 1No Passenger lift.
2. Providing New 125 KVA DG Set for the Laboratory Block, Training Block and Auditorium at NTI Campus.
3. Providing SITC of AFMC panel and allied works for New 125 KVA DG Set at NTI Campus.
4. Providing of Power wiring and other miscellaneous works for the Laboratory Block 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 had fleet of 7 vehicles and the unit is responsible for the upkeep of the vehicles including in-house repair of vehicles, if feasible. The unit also maintains all documents pertaining to registration, insurance and condemnation of vehicles.

Accounts

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 on account of grant of PCA from retrospective effect.
- d. Processing of payments pertaining to procurements made through stores and annual maintenance contracts services.
- e. Details of Budget received under Non Plan and Plan and Expenditure up to end of October 2015 is as follows:

(Rupees in Thousands)

	Budget received	Expenditure
Non Plan	83800	83700
Plan	27500	27000
Total	111300	110700

- f. The revenue generated by the Institute for the year 2015-16 through various sources was credited to the consolidated fund of Government of India as given in the table below:

Year	Amount (Rs.)
2015-2016	Rs.5,33,830/-

Stores

Stores cater to the logistic needs of various sections of the Institute. It is responsible for procurement and supply of stores items for the smooth functioning of the Institute. This involves extensive procedures viz., receipt of indents from individual sections 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 section include:

- i. Maintenance of stores /stock ledger.
- ii. Arrangement for Annual Maintenance of equipments held by different sections.
- iii. Arrangement for Annual Stock verification
- iv. Arrangement for condemnation and disposal of unserviceable items as per laid down procedure.

Hostel

The hostel of the institute caters to the accommodation needs of medical & paramedical trainees attending various training programmes and also officials visiting from head quarters 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.

7. PARTICIPATION IN CONFERENCES, WORKSHOPS, TRAINING PROGRAMMES, MEETINGS ETC.

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

At NTI

Sl. No.	Particulars	Date	Participant
1.	CME was organized to commemorate World TB Day in NTI. Presentations were made on Indian standard of TB care and the experience of PPs was shared and panel discussion was organized to answer questions raised by PPs.	24 th Mar 2016	Dr Prahlad Kumar, Director, Officers and technical staff of NTI along with about 100 private practitioners (PP) and officials from Family Physician Association of Karnataka
2	Delivered lectures, facilitated group work, chaired plenary sessions and provided ongoing mentorship including editing of protocols, analysis & preparation of manuscripts for publications, as chief facilitator during Capacity building workshop (national level); 13 protocols drafted during the workshops & finalized thereafter.	4-8 May 2015	Dr V K Chadha, Public Health Consultant

Sl. No.	Particulars	Date	Participant
3	Scientific paper writing, O.R. capacity building workshop and project mentorship for professionals working with RNTCP: 5 manuscripts were finalized and submitted for publication.	17 th -24 th July 2015	Dr V K Chadha, Public Health Consultant

Outside NTI

Sl. No.	Particulars	Date	Participant
1.	Participated in the Joint Monitoring Mission for RNTCP in New Delhi. Actively involved in the discussion of thematic area; guided group discussion and assisted in drafting of report. Also participated in preparation of report to Union Secretary of Health on 22.04.2015 in Ministry of Health & Family Welfare, Nirman Bhavan, New Delhi.	17-23 April 2015	Dr Prahlad Kumar, Director
	Participated in two meetings (1) "Expert Committee meeting to discuss modalities to rollout feasibility pilot of daily regimen under RNTCP" and (2) "Fifth expert committee meeting on regulation of newer anti-TB drugs" held in Nirman Bhavan, New Delhi	21 st April 2015	
2.	Attended National laboratory committee meeting at National Institute of TB Respiratory Diseases, New Delhi, addressed the participants in Inaugural session and guided group discussion.	19 th to 20 th May 2015	
3.	Attended expert committee meeting on pilot project to finalize the guidelines for use of the New Drug Bedaquilin & also to finalize the guidelines of the daily drug therapy to be initiated in 100 districts in the country, which was chaired by Directorate General of Health Services, Government of India.	21 st May 2015	Dr Prahlad Kumar, Director
4.	Visited Laboratory & DRTB Centers at GTB Hospital, Mumbai	22 nd May 2015	

Sl. No.	Particulars	Date	Participant
5.	a. Attended National expert committee meeting on use of Bedaquilin under RNTCP held at Hotel Taj Mahal, New Delhi. b. Chaired the Scientific session, guided the Group Discussion & also addressed the participants in the concluding Session.	30 th June to 3 rd July 2015	Dr Prahlad Kumar, Director
6.	Participated in the WHO sponsored workshop regarding Bedaquiline at New Delhi	1 st – 3 rd July 2015	Dr. V.K. Chadha, Public Health Consultant
7	a. Attended PMDT & TB HIV Regional review of east zone held at Raipur, Chattisgarh. The review was chaired by DGHS. b. Chaired the Scientific session, guided the Group Discussion & also addressed the participants in the concluding Session.	15 th – 17 th July 2015	Dr Prahlad Kumar, Director
8.	Participated in TB Epidemiology. Modeling workshop for TB Burden estimation held at Kasrauli, Rajasthan. Dr V.K. Chadha presented a two hour talk on “TB Burden in India” as the opening talk which set the tone for the rest of the workshop.	29 th – 31 st July 2015	Dr Prahlad Kumar, Director Dr. V.K. Chadha, Public Health Consultant
9.	Meeting with Dr Sinha, RNTCP WHO Consultant, Rajasthan to discuss activities pertaining to PMDT in the state of Rajasthan and challenges being faced by the state as well as support from NTI, Bangalore to meet these challenges	3 rd August 2015	Dr Prahlad Kumar, Director
10.	Meeting held at Directorate of Health Services, Govt of Rajasthan to discuss initiating Second line DST in laboratory of SMS Medical College & also prepare IRL, Ajmer to initiate Culture & DST laboratory at Medical College, Jodhpur for taking over the process of accreditation of 1 st & 2 nd line DST by liquid culture Method.	4 th August 2015	

Sl. No.	Particulars	Date	Participant
11	Visited culture & DST Laboratory at SMS Medical College, Jaipur & held discussion with Dr Bharti Malhotra, Professor & HOD of Microbiology & other laboratory staff. It was decided that SMS Medical College laboratory will perform 2 nd line DST & there is no need to send the samples to NTI, Bangalore for diagnosis as SMS Medical College laboratory is already accredited to perform 2 nd line DST. It was also decided that training to the laboratory staff members will be provided by the NRL of NTI, Bangalore. Other technical support & supervision of Laboratory will continue to be rendered by NTI, Bangalore	4 th August 2015	Dr Prahlad Kumar, Director
12	a. Discussion with DDG(TB), Addl DDGs & the consultants in the office of DDG (TB) to finalize the agenda & presentation to be made in the meeting with Dr Tom Fridein, Director, CDC, Atlanta. b. Attended the meeting with Dr Tom Fridein, Director, CDC, Atlanta, which was chaired by Director General of Health Services & made presentation on the NDRS.	10 th August 2015	Dr Prahlad Kumar, Director
13.	Participated in Technical Support Group for e-Nikshay project at Nirman Bhavan, New Delhi,	11 th August 2015	Dr. V.K. Chadha, Public Health Consultant

Sl. No	Particulars	Date	Participant
13	<p>a. Participated in the workshop held at NITRD, New Delhi for finalization of Technical & operational guidelines of RNTCP.</p> <p>b. Chaired the Scientific session, guided the Group Discussion & also addressed the participants in the concluding Session held at NITRD New Delhi.</p> <p>c. Dr VK Chadha presented the draft chapter on “Diagnosis “ & contributed actively to chapter on “Active case finding”</p>	17 – 19 th August 2015	Dr Prahlad Kumar, Director Dr. V.K. Chadha, Public Health Consultant
14.	<p>a. Attended the National Consultation on Role of Nutrition in TB control at Le-Meridian Hotel, New Delhi, which was inaugurated by DGHS & DG ICMR, Secretary Health Research. The Joint Secretary, Mr. Anshu Praksh also graced the Inaugural Session.</p> <p>b. Chaired the Scientific session, guided the Group Discussion & also addressed the participants in the concluding Session.</p>	20 th August 2015	Dr Prahlad Kumar, Director
15.	<p>a. Attended NTF core committee meeting on Role of Medical College in RNTCP held at room No 406, A Wing, DGHS, Nirman Bhawan, New Delhi.</p> <p>b. Actively participated & it was informed to NTF that appropriate technical Support will be provided by the Institute as per requirement of NTF & CTD in order to strengthen this component of RNTCP.</p>	21 st August 2015	Dr Prahlad Kumar, Director

Sl. No	Particulars	Date	Participant
16.	<p>a. Meeting with Dr Ranjani Ramchandran, Mr Gangadharan, Mr Deepak Sharma and Mrs Poonam Mehra from WR office, India in WR office, WHO, New Delhi, along with I/c CTU and Dr Lakshmi R, Sr. Microbiologist of NDRS. Issues pertaining to financial arrangements for smooth completion of NDRS were discussed and it was decided to extend TSA as per requirement of duration of the survey.</p> <p>b. Meeting with Dr Paramsivan, Dr Reddy and team from FIND in Hotel Taj, New Delhi to discuss action plan of ICELT.</p>	10 th Sep 2015	Dr Prahlad Kumar, Director
17.	<p>Attended symposium on FIND project in New Delhi. Chaired scientific session, made presentation on perspective of NRL in PMDT and support rendered by FIND in this regard. Also addressed the participants in the concluding session.</p>	11 th Sep 2015	
18	<p>1. Meeting with DDG (TB), Addl. DDGs, CTD, DteGHS and Dr Ranjani Ramachandran, WHO, in CTD, DteGHS, New Delhi to discuss technical and administrative issues of NTI.</p> <p>2. Attended over-site committee meeting of NDRS, chaired by DDG (TB). Director made a presentation on updates of NDRS and necessary clarifications were given to the members and the Chairman.</p>	6 th Oct 2015	Dr Prahlad Kumar, Director Dr V K Chadha Public Health Consultant
19.	Meeting in the office of DG, ICMR, New Delhi to discuss collaborative research studies between NTI and NIRT.	7 th Oct 2015	Dr Prahlad Kumar, Director
20.	Participated in Launch of state-level disease burden initiative	12 th October 20 15 at PHD House, New Delhi	V K Chadha Public Health Consultant

Sl. No	Particulars	Date	Participant
21.	Consultation meeting on adherence in TB treatment	13 th Oct 15 at Taj Ambassad or Hotel, New Delhi.	V K Chadha Public Health Consultant
22	<ol style="list-style-type: none"> 1. Attended “National research committee meeting” as a Member of the committee in Nirman Bhavan, New Delhi. Presentation on the NTI proposed inventory studies was made and provided clarifications to the Chairman and members pertaining to the study. Actively participated in the discussion for the proposals presented by various Investigators. 2. Attended a meeting of National expert committee on diagnosis and management of tuberculosis under RNTCP to discuss drug regimen proposed for the RNTCP daily regimen Implementation pilot in Nirman Bhavan, New Delhi. 3. During the meeting, progress of NDRS was provided to DGHS and DG ICMR & Secretary HR, as required by them. 	14 th Oct 2015	Dr Prahlad Kumar, Director
23	Meeting with Dr Devesh Gupta, Addl. DDG, CTD, New Delhi, about NTI related issues. Discussions were held about various issues pertaining to technical and administrative matters of NTI.	15 th Oct 2015	
24	Attended the function for releasing TB seals by Hon’ble Governor, Karnataka, in Raj Bhavan. The function was also attended by Hon’ble Health Minister, Principal Secretary Health, Government of Karnataka, Officials from Karnataka TB Association and other TB control Officers, Karnataka.	20 th Oct 2015	Dr Prahlad Kumar, Director

Sl. No	Particulars	Date	Participant
25	<p>1. Visited the state of Rajasthan to provide technical support for strengthening EQA and PMDT services, on the request of state TB control authorities of Rajasthan, Director held meeting with STO, Rajasthan to prepare plan of the visit to various centres in Rajasthan. The STO along with other officers of State TB Cell, Rajasthan, decided to visit State TB Demonstration & training centre (STDC), Ajmer, to review preparedness of the districts where CBNAAT machines are being installed. Accordingly, Director accompanied the STO and additional programme manager to IRL Ajmer to facilitate training. Director mentioned about usefulness of CBNAAT for early detection of DR-TB cases and reviewed preparedness of the districts in detail. Director also appreciated the efforts of DTOs and their team for their support to carry out NDRS and completion of intake of patients from Rajasthan.</p> <p>2. Visited C&DST lab at SMS Medical College, Jaipur and had interaction with Dr Bharathi Malhotra, Professor, Dept. of Microbiology & I/c C&DST lab. The RNTCP Consultants of Rajasthan and other C&DST staff also participated in the discussion. During the discussion it was observed that the lab is accredited for LPA and 1st & 2nd line anti-TB drugs by liquid culture. An observation was made about non-functioning of negative pressure area at IRL Ajmer because of which samples from some of the districts in Western parts of Rajasthan were not being received for 2nd line DST. Director instructed the STO, IRL Ajmer officials and WHO Consultants to look into the matter and find solutions at the earliest.</p> <p>3. Visited DTC and DR-TB sites at Jaipur, Rajasthan.</p>	07 – 13 December 2015	Dr Prahlad Kumar, Director

Sl. No.	Particulars	Date	Participant
26.	<ol style="list-style-type: none"> 1. Visited CTD, DteGHS, New Delhi and held meeting with DDG in his Chamber. Briefed DDG about the visit of Director to the state of Rajasthan and explained the observations made. 2. DDG reviewed the progress of NDRS and Director informed about completion of almost 99% of the intake of samples. Since WHO supplies were received recently, rest of the samples would be taken up and completed at the earliest. Director also requested DDG to visit NTI for which DDG agreed. 3. DDG informed Director, NTI to take over the job of monitoring of RNTCP at NTI, Bangalore, for which. Director informed about preparing and submitting an action plan to CTD, to take appropriate action for initiating monitoring job. 4. Attended monthly meeting of CTD to discuss various components of the programme. 	14-15 December 2015	Dr Prahlad Kumar, Director
27.	Meeting with Director General of Health Services, GOI in Bangalore. DG reviewed NDRS and directed the Director, NTI to initiate establishment of drug resistant surveillance system; and develop NTI as Operational Research Nodal Centre for RNTCP. Director expressed gratitude and informed that NTI would comply to the instructions of DGHS and would support RNTCP on the identified areas, as desired by DGHS.	11 th Jan 2016	

Sl. No.	Particulars	Date	Participant
28.	Meeting with DGHS to brief the status of NDRS being carried out in NTI. DGHS instructed Director, NTI to initiate DRS surveillance system in NTI and also to coordinate with CTD to initiate action for developing TB disease surveillance system and support supervision, monitoring & Evaluation of RNTCP. Director informed DGHS that these instructions will be complied in consultation with DDG (TB).	3 rd Feb 2016	Dr Prahlad Kumar, Director
29	14 th Winter Symposium on Advances in Tuberculosis Research held at CMC Vellore on. Delivered talks on : a. TB Burden in India and its trends b. Chaired session on 'TB Diagnostics'	12 th & 13 th February 2016	Dr V K Chadha, Public Health Consultant
30.	1. Held meeting with STO and Director, STDC, Kerala, CTD Officials, Chairman of NTF to finalise Agenda of inaugural session of National task Force (NTF) meeting in Kerala.	14 th Feb 2016	Dr Prahlad Kumar, Director
	2. Attended NTF meeting at Thiruvananthapuram, Kerala. Director chaired scientific session, guided group discussion and addressed the participants.	15-16 February 2016	Dr Prahlad Kumar, Director Dr V K Chadha, Public Health Consultant
31.	1. Attended as Examiner for evaluation of thesis submitted for award of Ph.D. Degree of AIIMS by Mr. Raj Narayan Yadav, Ph.D. Student, Department of Medicine. The other examiners were: Dr. S.E. Hasnain, Professor, Indian Institute of Technology, Delhi; Dr. S. K. Sharma, Professor, AIIMS, New Delhi; and Dr. Sanjeev Sinha, Professor, AIIMS, New Delhi 2. Attended the meeting organized by Dr S.K. Sharma, AIIMS which was attended by Dr. S.E. Hasnain, Professor, Indian Institute of Technology, Delhi; and Dr. Sanjeev Sinha, Professor, AIIMS, New Delhi, where a decision was taken about the facility of next generation sequencing being performed in AIIMS, to be extended to NTI also. Director welcomed this joint collaborative activity proposed by AIIMS.	19 th Mar 2016	Dr Prahlad Kumar, Director

Sl. No	Particulars	Date	Participant
32	Meeting with DDG (TB) and WHO SEARO officials in the Taj Hotel to finalise Agenda of WHO SEARO meeting and launching of new initiatives by Hon. Union Health & FW Minister.	20 th Mar 2016	Dr Prahlad Kumar, Director
33	1. Attended World TB Day event at Taj Hotel where Hon. Union Minister for H&FW launched new initiatives. Also participated in the panel discussion as one of the members.	21 st Mar 2016	Dr Prahlad Kumar, Director Dr V K Chadha, Public Health Consultant
	2. Attended NTF Coordination Committee meeting as one of the members, which was chaired by Dr Behera. 3. Held meeting with Dr Jacek of CDC Delhi office regarding joint research project of CDC and NTI as well as joint proposal of CDC-FIND-CTD-NTI. In this regard, Director informed about arranging a meeting in DDG's office involving all the participating centres to finalise action plan, which was agreed by CDC officials.		Dr Prahlad Kumar, Director

a. Participation in Training Programmes

Sl. No.	Participants	Date	Details of training
1	Dr. V.K. Chadha, Public Health Consultant	10 th – 23 rd April 2015 New Delhi & Shillong	<p>Participated as member of WHO sponsored Joint Monitoring Mission aimed at reviewing the progress towards the implementation of National strategic plan 2012-17 for universal access of TB care, challenges and strategies for intensified TB control efforts.</p> <ul style="list-style-type: none"> • He was the team leader for : <ol style="list-style-type: none"> (1) Field visit to State of Meghalaya (2) Thematic Group: Epidemiology, Surveillance, Monitoring & Evaluation. • He prepared the reports for the above and made presentations on 17th & 20th April respectively in New Delhi. • He also debriefed the state officials including Addl. Chief Secretary, Meghalaya on observations of the visit & recommendations through a presentation in Shillong on 15th April 2015.
2	Mrs. N. Sangeetha, Chief Statistical Officer (Director)	19 th April to 2 nd May 2015	Advance Management Programme for ISS officers (Director Level) Overseas Component Learning (OLC) @ Shanghai, Beijing, Hangzhou in China and Seoul, Daejeon in South Korea - Indian Institute of Management, (IIM) Calcutta, Joka

d. National & Zonal Task Force workshop/ Meeting

1	Zonal Task Force workshop of North Zone at King Georges Medical University, Lucknow, UP from 18 th to 19 th November,2015	Dr V K Chadha, Public health Consultant -
2	Zonal Task Force workshop of south Zone at Trivandrum from 23 rd to 24 th November,2015	<p>Performed the following tasks in each of the ZTF workshops:-</p> <ol style="list-style-type: none"> 1. Delivered a talk on “Optimum utilization of CB NAAT”, 2. Facilitated group work on “strengthening Monitoring & evaluation” 3. Chaired presentation of Group works 4. Participated as an expert for panel discussion on “Standards of TB care in India” 5. Participated in ZTF core committee meetings 6. Participated in Zonal OR Committee meetings
3	Zonal Task Force workshop of East Zone at Kolkata from 26 th to 27 th November,2015	
4	Zonal Task Force meeting of North East Zone held at Agartala, Tripura from 7 th to 8 th December, 2015	
5	Zonal Task Force workshop of south Zone – 1 held at Visakhapatnam , Andhra Pradesh from 10 th to 11 th December,2015	
6	Zonal Task Force meeting of West Zone held at Gandhi medical college, Bhopal, MP from 15-01-2016 to 16-01-2016	
7	Dr. V.K. Chadha participated as facilitator in North Zonal OR Workshop FROM 15 th - 17 th October, 2015 at MM Medical College & Hospital, Solan.:11 protocols prepared	
8	Zonal OR workshop of south Zone II –held at Govt Hospital of Thoracic Medicine, Tambaram Sanitorium , Chennai from 21 st to 23 rd January2016:10 protocols drafted	
9	Zonal OR workshop of North East Zone–held at NEIGRIHMS Shillong from on 4 th - 6 th February 2016:5 protocols drafted	

e. 70th National Conference on TB & Chest Diseases (NATCOM) held at King George Medical College, Lucknow from 19th – 21st February 2016

1	Dr Prahlad Kumar, Director Attended NATCON 2015 in Lucknow. Chaired scientific sessions, coordinated and moderated panel discussions. Also attended the Editorial Committee Meeting of TB Association of India.
2	Dr. V. K. Chadha delivered a guest lecture on ‘Active Case finding’.
3	Dr. Bhoomika presented paper on “Improving TB case finding efficiency and management of cases in private health care facilities in Bangalore city”.
4	Dr. S.K. Tripathy presented a paper on ‘Does extension of intensive phase in smear positive pulmonary TB patients taking treatment under DOTS reduces unfavourable outcome?’
5	Mr. R Jitendra I/c CTU on the “Challenges faced in planning and implementation of NDRS”
6	Mr. R K Srivastava, Mr. Jameel Ahmed participated in 70 th National Conference on TB & Chest Diseases

f. INSTITUTIONAL ETHICS COMMITTEE MEETING

Meeting	Participants	Date & Place
18th Institutional Ethics Committee meeting to discuss and finalize Five research protocols	Chairman Hon’ble Justice V.S. Malimath; Dr Prahlad Kumar, Director, NTI (Member); other outside members of IEC; and Principal Investigators & Presenters of the protocols.	22nd August 2015 at NTI, Bangalore

RESEARCH DOCUMENTATION CELL (RDC)

Mr. Sanjay Singh discharged the duties and responsibilities as in-charge RDC. The monthly reports pertaining to RDC was submitted to Division Head, ERD upto October, 2015. Vide the circular no. 24/1/2015-16/Misc/Estt/Vol. II/1427 dated 13th October, 2015 the I/C RDC was instructed by administration section to report to Director's Office.

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:

1. Indian Institute of Science (IISc), Bangalore
2. Institute of Bioinformatics, Bangalore
3. Mahatma Gandhi Institute of Medical Sciences (MGIMS), Wardha
4. National Institute for Research in Tribal Health (ICMR), Jabalpur
5. National Institute for Research in Tuberculosis (NIRT), Chennai
6. National Institute of Tuberculosis and Respiratory Diseases (LRS), New Delhi
7. National JALMA Institute of Leprosy and other Mycobacterial Diseases (ICMR), Agra
8. National Operations Research Committee, Central TB Division, Govt. of India
9. National Task Force, Zonal Task Force & State Task Force of Medical Colleges
10. National Tuberculosis Institute (NTI), Bangalore
11. New Delhi TB Centre (NDTBC), New Delhi
12. State Tuberculosis Centres
13. Tuberculosis Association of India (TAI)

The following activities were undertaken by I/C RDC during **November 2015 to March 2016** at Research and Documentation cell:

(A) Research Documentation Cell:

1. Web Administration of TB research portal
www.tbresearch.ntiindia.org.in
2. Correspondence with all the participating nodal centers.
3. Provided access of full text of documents as & when requested.
4. Digitization and uploading of Indian TB research articles received from collaborating centres and published in various publications viz. Int J Tuberc & LD, IJMM, IJMR, IJTB, PHA etc.

(B) TB-HIV and Airborne Infection Control (AIC)

Maintaining TB-HIV and (AIC) files

1. Participated in the meeting of TB-HIC collaborative activities organized by CTD and NACO at NTI, Bangalore
2. Represented NTI in the Airborne Infection Control (AIC) Assessment activities by NACO & CTD at Bowring and Lady Curzon, Hospital Shivajinagar, Bangalore
3. Reviewed a document on 'Supervision, Monitoring and Evaluation (SME) Guidelines 2016' drafted by NACO & CTD for TB-HIV collaborative activities in India.

(C) Technical assistance to Director's Office

1. Completed all the task given by Director
2. Assisted Administration division in compilation of 2015-2016 outcome budget annual report.
3. Assisted Administration division in compilation of 2015-2016 annual report required by the Ministry of Health & FW for printing of consolidated annual report of the ministry.

4. Compiled a document on achievements 2015 and action plan 2016 for the entire institute, required by the Directorate General of Health Services.
5. Assisted Director's office and Administration division in compilation and online completion of National Survey on Resources Devoted to Scientific and Technological (S&T) Activities conducted by Ministry of Science and Technology.
6. Assistance in Organization of 18th Institutional Ethics Committee (IEC) Meeting

(D) Miscellaneous

1. Support to NTI Web site committee as member.
2. compilation of Summary of NTI Studies part -3
3. Assisted Library Unit in editing and organizing NTI Annual Report 2014-15
4. Assisted Publication Division in Compilation of NTI Bulletin Vol-1-4, 2015.

(E) Courses

1. Completed successfully **Masters of Public Health (MPH)** Course from GIHM, New Delhi in Technical collaboration with Mahatma Gandhi University, Meghalaya.
2. Participated in a course '**A Primer in Systematic Review and Meta Analysis**' organized by The Union in Collaboration with ICMR, Liverpool School of Tropical Medicine, Mc Gill University and Cochrane.

8. VISITORS

During the year the Institute had the privilege of having the following dignitaries as visitors.

Sl. No.	Name of visitor	Date	Details of visit
1.	Dr Ranjani Ramachandran, NPO Laboratories, WHO; and Dr Anand, CTD	1 st April 2015	To discuss supply of logistics for NDRS and release funds as per TSA, etc.
2.	Dr Sharath, Asst. Prof., ESI Medical College	10 th April 2015	To discuss NTM study and also about his participation as Facilitator in the OR workshop to be held in the Institute during May 2015.
3.	Dr Sachdeva, Addl DDG, CTD, Dr Mayank Ghedia from CTD	8 th May 2015	NDRS review was carried out including the laboratory visits. It was observed about the delay in supply of required lab materials for NDRS from WHO. Dr Sachdeva was requested to co-ordinate with WHO & expedite the supply so that DST can be performed on the samples received from field.
4.	Dr. Jagadish Prasad, Director General of Health Services, DteGHS, New Delhi	29 th June 2015	To discuss various issues of the institute and following instructions were given: a. Directed the Director NTI to ensure data safety of NDRS and the NDRS data should only be presented to authorities of DGHS & Minister of Health. b. He also directed that all the communication from outside institutions & organizations should be received by Director & all the communication should be sent through Director only. No other officers without formal approval of Director should send any communication out of the Institute.

Sl. No	Name of visitor	Date	Details of visit
	Dr. Jagadish Prasad, Director General of Health Services, DteGHS, New Delhi	29 th June 2015	<p>c. DGHS also expressed concern that many outside organizations & Institutions directly invite officials of the institute which is not as per established practice and the DGHS directed the Director to ensure that all the requests from outside organizations & Institutions for the Technical support from NTI should be monitored & nomination from Institute should be communicated by Director only.</p> <p>d. DGHS also expressed concern about slow progress of the DST under NDRS & directed the Director to expedite supply to be received from WHO.</p>
5.	Dr Sarabjit Chada, UNION, New Delhi	22 nd July 2015	Discussion held related to cooperation between RNTCP & UNION and role to be played by NTI.
6.	Dr Patric Moonon, CDC, Atlanta	23 rd July 2015	To discuss progress of NDRS. I/c CTU & NDRS study coordinator also joined the discussion. It was informed about the visit of Dr Jacek from CDC to NTI on 27 th July 2015.
7.	Dr Jacek, CDC Atlanta, posted from CDC Atlanta to CDC Delhi Office	27 th July 2015	<p>a. Discussion was held on the priority areas on collaboration between CDC Atlanta & NTI.</p> <p>b. Visited NRL & also discussed the progress of NDRS.</p>
8	Mr Anshu Prakash, Joint Secretary, Govt of India, Ministry of Health & Family Welfare, New Delhi	28 th July 2015	<p>a. Reviewed progress of NDRS.</p> <p>b. JS appreciated the intake of samples from the states under the NDRS. However asked clarification about slow progress of performing DSTs. NDRS team informed that because of non-supply of the required items from WHO, the DST progress is slow.</p>

Sl.No	Name of visitor	Date	Details of visit
8.	Mr Anshu Prakash, Joint Secretary, Govt of India, Ministry of Health & Family Welfare, New Delhi	28 th July 2015	c. JS held telephonic discussions with WHO representative to India & Dr Ranjani Ramachandran, Laboratory focal point, WHO, to expedite the supplies of set carriers & other logistics, required to be supplied by WHO so that the DSTs can be expedited for timely completion of the survey. d. Director expressed sincere thanks to Joint Secretary for his guidance & support to NDRS.
9.	Mr. Kamath WHO Official of Bangalore Office	27 th August 2015	Meeting with I/c CTU, to discuss the Statement of Accounts to be sent to WHO for extension of the time period of NDRS considering the late supply of the reagents & logistics from WHO.
10.	Dr Sanjay, Blue Peter's laboratory Hyderabad		Regarding PMDT Support provided by the Private Lab to the RNTCP.
11.	Dr Venkatesh from Indian Institute of Veterinary Science, Bangalore	2 nd September 2015	To discuss joint project using guinea pigs for the research studies.
12.	Dr Rudresh, Secretary, TB Association of Karnataka, Bangalore	3 rd Sep 2015	To discuss rendering of technical support from NTI to TB Association of Karnataka.
13.	Dr Salhotra, Addl. DDG, CTD, DteGHS, New Delhi, who was at NTI for sensitization workshop	28 th Sep 2015	Discussed the issues pertaining to NTI pending in CTD. It was assured that the pending issues of NTI with CTD will be looked into on priority basis.
14.	Dr Ravindra, Managing Director, Suguna Hospital, Bangalore	29 th Sep 2015	Regarding the project taken up by NTI involving private practitioners in Dasappa TU, including their hospital. He appreciated NTI in taking up this project.
15.	Dr Ranjani Ramachandran & Dr Malik Parmer from WHO; Dr Salhotra along with Dr Imran & Dr Anand from CTD, who were at NTI for sensitization workshop		To review NDRS. Director along with NDRS team & analysis team of NTI; and I/c CTU discussed various components of NDRS and it was decided that a detailed presentation be made by NTI team in the oversight committee meeting chaired by DDG (TB) to be held in DteGHS, Nirman Bhavan, New Delhi on 06.10.2015.

Sl.No	Name of visitor	Date	Details of visit
16.	Dr Moonan Patric from CDC Atlanta	12 th Oct 2015	To discuss progress of NDRS.
17.	Director, Institute of Veterinary Science		To discuss collaborative studies by using NTI bred albino guinea pigs for their studies.
18.	Secretary General, Karnataka TB Association, Bangalore	19 th Oct 2015	Regarding the technical support to be provided by NTI to TB Association of Karnataka. The Secretary General requested NTI's support and guidance for their activities pertaining to TB control. Director assured full cooperation and support for all technical activities pertaining to strengthening of TB control in the state of Karnataka.
19.	Dr Lal from PATH, Washington Office and Dr Vijayashree from Institute of Public Health, Bangalore	21 st Oct 2015	To discuss PPM initiatives under TB control. It was informed about development of PPM model labs in Bangalore and Director, NTI expressed his willingness to support such initiatives. I/c CTU, I/c NRL, Divisional Heads, HRD and Laboratory took part in the discussion.
20.	Pay & Accounts Officer, Chennai	28 th Oct 2015	Regarding cooperation between accounts team of NTI and PAO, Chennai. The PAO appreciated the work carried out by NTI accounts team, in the absence of regular Accountant and appreciated the efficient work of Mr Saravanan in following accounts procedures in the Institute. Director expressed sincere thanks to PAO for his support to NTI accounts team.
21.	Dr Rohini Sharma from AIIMS, New Delhi	29 th Oct 2015	To discuss collaborative project between AIIMS, New Delhi and NTI, Bangalore. I/c NRL and Jr. Bacteriologist joined the discussion and they were instructed to facilitate Dr Rohini to process NTM samples being received from AIIMS for HPLC and LPA tests and on completion of this work, a report to be sent to AIIMS with copy to Dr Rohini.

Sl. No	Name of visitor	Date	Details of visit
22.	Dr Deepak Saini from Indian Institute of Science, Bangalore.	9 th Nov 2015	To discuss collaboration between IISc and NTI on some important projects. I/c NRL and I/c CTU also took part in the discussion. Director advised the team members to prepare concept note to be forwarded to DteGHS for their perusal.
23.	Dr Dharma Rao, Director, Min. of H&FW, GOI; Dr Salhotra, Addl. DDG, CTD; Dr Malik Parmar, WHO; Dr Imran; and Dr Anand, CTD	16 th & 17 th Nov. 2015	In connection with computer lab training programme and CBNAAT sensitization programme.
24.	Dr Paramasivam from FIND and Dr Paul Jensen, CDC.	26 th Nov 2015	In connection with TB Lab bio-safety training at ICELT, NTI. Discussed about strengthening of bio-safety in the labs in the country.
25.	Dr Deepak Saini and Dr Srividya from Indian Institute of Science, Bangalore.	26 th Nov 2015	To discuss collaboration between IISc and NTI. I/c NRL and I/c CTU also took part in the discussion.
26.	Dr Jacek Skarbinkski from CDC Delhi office and officials from NIRT Chennai.	1 st Dec 2015	To discuss collaborative research project to be undertaken by NIRT, Chennai and NTI, Bangalore with the support of CDC Atlanta. Dr Jacek informed about providing support to NIRT and other national institutions for whole genome sequencing for identification of DR TB. It was informed that NIRT, Chennai lab will be developed for this new activity with the support of CDC. He also mentioned about development of drug resistant surveillance system at NTI, as per the decision taken by CTD and CDC Delhi Office. Director expressed appreciation for the initiative and thanked CDC and CTD for their support. A decision was taken about development of the project proposal for DR surveillance system and forwarded to CDC. It was also informed to CDC and NIRT that for providing the samples for any research project, a formal communication from CTD is required, without which it may not be possible to provide any samples from NTI. CDC and NIRT assured that only after getting the required approval from CTD, the request for samples will be sent to NTI.

Sl. No.	Name of visitor	Date	Details of visit
27.	Dr Ranjani Ramachandran, WHO and Dr Anand, CTD	21 st & 23 rd December 2015	To discuss TSA for NDRS for the period 1 st January to 16 th September 2016. I/c CTU, NDRS Study Coordinator and Sr. Microbiologists, NDRS participated in the discussion.
28.	Mr Ravindra Pattar, Joint Secretary and Financial Advisor of AIIMS, Bhubaneswar	4 th Jan 2016	To discuss about involvement of AIIMS, Bhubaneswar in TB control.
29.	Dr Jacek Skarbinkski from CDC Delhi office	6 th Jan 2016	<p>a. To discuss establishment of drug resistant surveillance system with the support of CDC. The meeting was chaired by DDG, who was at NTI for Bedaquiline TOT, and attended by NTI officials: Additional Director, NDRS team and I/c CTU. DDG desired that NTI should take the lead in this regard.</p> <p>b. At this junction, DDG also desired about taking up of monitoring, supervision and evaluation of RNTCP by NTI, for which Director expressed willingness and informed that NTI will be very happy to support CTD in this regard.</p> <p>c. A presentation on OR software was made by I/c CTU which was appreciated by DDG and he desired that this software could be utilized for OR component of RNTCP.</p>
30.	Dr Sharath, Asst. Professor, ESI Medical College, Bangalore	11 th Feb 2016	To discuss research studies being carried out by NTI in collaboration with Dr Sharath and to extend NTI support for strengthening operational research in Medical Colleges of Karnataka. Director assured fullest cooperation from the Institute in this regard.
31.	Dr Om Prakash, Member of Institutional Ethics Committee, NTI	8 th Mar 2016	To discuss identifying the next Chairman of the IEC. The undersigned along with Dr Om Prakash visited Shri S. Vijay Shankar, Senior Advocate, Ex. Advocate General for Karnataka, with a request to be the Chairman of NTI Ethics Committee. A formal request letter was also handed over to Shri S Vijay in this regard.

Sl. No.	Name of visitor	Date	Details of visit
32.	Dr Markandey Pillai, past President of IMA and Dr S.S. Agarwal, present President of IMA	10 th Mar 2016	To discuss involvement of IMA in RNTCP. After detailed deliberations, DDG (TB) was contacted telephonically for his consent in this regard and DDG (TB) informed that IMA can be involved in implementation of daily regimen in 104 districts in 5 states, which is being rolled out very soon.
33.	Dr Paramsivan and Dr Sanjay Sarin from FIND India, New Delhi	15 th Mar 2016	To discuss the support of NTI in the collaborative study between FIND and CTD on 2 nd line LPA. In this connection, Director informed about the communication received from Dr Salhotra, Addl. DDG, CTD and the willingness of NTI to facilitate this study as per the requirement of CTD. Dr Paramasivam also informed about the plan of FIND in collaboration with CDC Delhi office and CTD to have quality control of CBNAAT machine and liquid culture machines and the support required by NTI in this regard. Director informed about preparation of concept note and holding of meeting involving officials of CTD, FIND, CDC and NTI, to finalise action plan in this regard.
34.	Officials from Family Physician Association	15 th Mar 2016	To discuss finalization of Agenda for the CME to be organized at NTI on World TB Day and also to finalise the presentations to be made on 24.03.2016 and to keep up the time limit for presentation as per the Agenda. They also assured fullest cooperation for successful organization of CME at NTI on 24.03.2016.
35.	Dr Patil, State TB Officer, Karnataka	29 th Mar 2016	On joining as new STO, to seek the support of Director, NTI for development of Bangalore urban TB control model project and appreciated the support extended by NTI so far for diagnosis of cases in Bangalore Urban, Rural and BBMP and PMDT activities. Director assured all technical support to strengthen RNTCP activities in Karnataka.

Sl. No.	Name of visitor	Date	Details of visit
36.	Dr V.S. Salhot ra, Addl. DDG, CTD, DteGHS, New Delhi	29 th Mar 2016	To discuss the visit to Tumkur district, K.C. general Hospital, Bangalore, IRL and DR TB sites in Bangalore on 30 th & 31 st March 2016, along with NRL team of NTI. Addl. DDG requested to arrange AC vehicle for the field visit, for which Director instructed Addl. Director/I/c Lab to provide appropriate support to Addl.DDG as requested by him.
37.	Police Inspector, Vyalikaval Police station, Bangalore	31 st Mar 2016	To discuss safeguarding the property of NTI. He assured to provide all support to safeguard the property of NTI and Director appreciated the support provided by Vyalikaval Police station in this regard.

Acknowledgements

The Director acknowledges the effort of Mr Jitendra, Mr V. Sharma, Mr. Sanjay Singh and Mr Ravindra in editing & organizing the publication of this report.