

NATIONAL TUBERCULOSIS INSTITUTE BANGALORE

ANNUAL REPORT 2014-15



**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
2014 - 15



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

email: nti@ntiindia.org.in
<http://ntiindia.kar.nic.in>

Year of Publication: 2015
No of copies:

Facilitator
Dr. Prahlad Kumar

Compiled & Edited
By

Mr. R Jitendra
Mr. Vishweswara Sharma

Publisher
National Tuberculosis Institute, Bangalore-560 003

CONTENTS

	<i>PAGE NO.</i>
ABBREVIATIONS	
FOREWORD	
ORGANOGRAM	
1 HUMAN RESOURCE DEVELOPMENT DIVISION	01
2 LABORATORY DIVISION	20
3 EPIDEMIOLOGY AND RESEARCH DIVISION	28
4 MONITORING AND EVALUATION DIVISION	47
5 COMMUNICATION AND SOCIOLOGY DIVISION	48
6 ADMINISTRATIVE DIVISION	53
7 PARTICIPATION IN CONFERENCES, WORKSHOPS, CONTINUING MEDICAL EDUCATION, TRAINING PROGRAMMES, MEETINGS, OTHER ACTIVITIES.	59
8 VISITORS	78
9 <i>ACKNOWLEDGEMENTS</i>	83

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 2014-2015. 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 and TWG on RNTCP.

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 has been launched 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 Revised National Tuberculosis Control Programme (RNTCP), in collaboration with the National Tuberculosis Institute, Bangalore; U.S. Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO); started a National Antituberculosis 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. This survey is expected to provide information on the prevalence of antituberculosis 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*. In addition to these a new study “*An active TB case finding (ACF) survey to improve the case detection in the slums of Bangalore city, Karnataka*” was proposed during the year.

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 the auditorium (Kalanikethan).

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

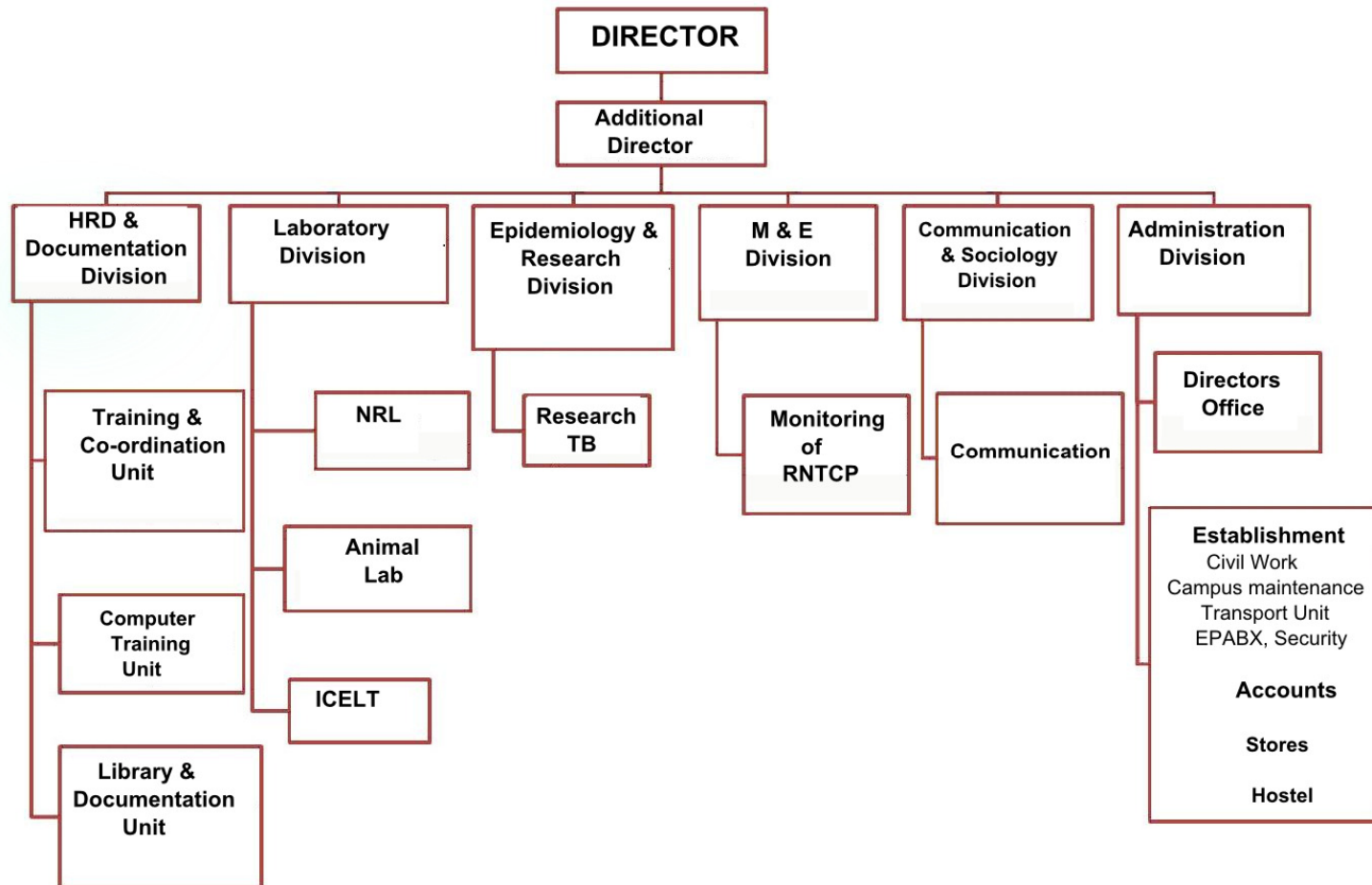
I acknowledge the co-operation, hard work and diligence of all the members of the NTI family and I solicit the same degree of motivation and dedication from all in times to come.

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:
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	7 th – 19 th April 2014.	26
2.		12 th – 24 th May 2014	17
3.		30 th June – 12 th July 2014	25
4.		1st – 13th Sept 2014	14

2. Master Trainers training in NIKSHAY

Sl. No.	Category of personnel	Duration	No. of Participants
1	STO, DTO, STC/STDC officials	16 th June 2014	19
2	WHO RNTCP Consultants, Medical Officers, Statistical Assistants NIKSHAY for Partners and Data Entry Operators	17 th June 2014	24
3		18 th June 2014	18
4		20 th June 2014	21

3. National Masters Trainers Training on Standards for TB Care in India

Sl. No.	Category of personnel	Duration	No. of Participants
1	STO, DTO, STC/STDC officials WHO RNTCP Consultants, Medical Officers, Statistical Assistants NIKSHAY for Partners	16 th – 17 th February 2015	25
		19 th – 20 th February 2015	28

4. Training on Procurement and Supply Chain Management

Sl. No.	Category of personnel	Period	No. of Participants
1	State and district level programme managers	2 nd – 5 th June 2014	24
2		22 nd – 24 th December 2014.	9

5. Preventive Maintenance & Minor Repairs of Binocular Microscope

Sl. No.	Category of personnel	Period	No. of Participants
1	Laboratory technicians and Senior Tuberculosis Laboratory Supervisor	16 th -19 th Sept 2014	17
2		10 th - 13 th November 2014	08
3		1 st - 4 th December 2014	6
4		8 th -11 th December 2014	11

6. Training in External Quality Assessment

Sl. No.	Category of personnel	Period	No. of Participants
1	DTOs, Microbiologists, STLSS and LTs	31 st March - 4 th April 2014	12
2		28 th July to 1 st August 2014	18
3		23 rd – 27 th February 2015	16

6. Training in Culture (solid) and Drug Sensitivity Testing

Sl. No.	Category of personnel	Period	No. of Participants
1	Microbiologist and LTs from IRLs	27 th Oct– 6 th Nov 2014	09

7. Second Line Drug Susceptibility Testing

Sl. No.	Category of personnel	Period	No. of Participants
1	Microbiologists, Laboratory Technicians, Assistant Professors and Technical Officers	18 th – 22 nd August	02

8. LED Fluorescent Microscopy

Sl. No.	Category of personnel	Period	No. of Participants
1	Microbiologists, Laboratory	26 th – 29 th May 2014	13
2	Technicians, Assistant	21 st – 24 th July 2014	06
3	Professors and Technical Officers	28 th – 31 st July 2014	10

9. 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	22 nd September– 2 nd October 2014	15

- b. World Health Organization (WHO)

- i. TOT of National Drug Resistance Survey

Sl. No.	Category of personnel	Duration	No. of Participants
1	All the Programme officers from study area	24 th - 25 th April 2014	61
2	All the Programme officers from study area	9 th & 10 th June 2014	61
3	All the Programme officers from study area	17 th and 18 th November 2014	94

c. Training on Prevention and Treatment of Tuberculosis

Sl. No.	Category of personnel	Duration	No. of Participants
1	District Tuberculosis Control Officer For award of WHO fellowship from Sri Lanka	1 st – 19 th Sept 2014	02

8. Other Trainings

Sl. No.	Particulars	Date	No. of Participants	Participants
1.	Counseling Skills Training for MDR TB Counselor training	28 th April – 2 nd May 2014	27	MDR-TB Counselors from Haryana, Maharashtra, Karnataka, Uttar Pradesh, Jharkand, Bihar, Rajasthan, Tamil Nadu
2.	MGIT Training	18 th – 22 nd August 2014	2	Uttar Pradesh and Chandigarh
3.	Counseling Skills Training for MDR TB Counselor training	13 th – 18 th October 2014	11	MDR-TB Counselors from New Delhi
4.	Training of Trainers (TOT) for project “Innovative intensified TB case finding and appropriate treatment at high burden ART centers in India”	15 th to 16 th Dec 2014	51	RNTCP programme managers, Professors of Medical college, Officials from USAID, CTD, officials from AIDS prevention society from Tamil Nadu, Maharashtra, New Delhi, Karnataka, Telangana state, Nashik, Mumbai and Andhra Pradesh
5.	National Level Training for District AIDS Prevention and Control Unit (DAPCU)Team - KSAPS	27 th – 30 th January 2015	36	DAPCU officials Karnataka

Sl. No.	Particulars	Date	No. of Participants	Participants
6.	National Level Training for District AIDS Prevention and Control Unit (DAPCU)Team - KSAPS	10 th – 13 th March 2015	33	Officials from DAPCU, Karnataka
7.	National Level Training for District AIDS Prevention and Control Unit (DAPCU)Team - KSAPS	16 th – 19 th March 2015	30	Officials from DAPCU, Karnataka
8.	State Level Sensitization Programme on Operational Research for Medical College Faculty conducted by JD (TB), Karnataka	27 th March 2015	39	Faculty from Medical Colleges of Karnataka

8. Other workshops / Meetings / CME

a. At NTI

Sl. No.	Particulars	Date	No. of Participants	Participants
1.	National Joint review meeting on TB-HIV collaborative activities	16 th - 17 ^h July 2014	44	RNTCP programme managers and officials of State AIDS Prevention Societies from Andhra Pradesh, Dadra & Nagar Haveli (Union Territory), Daman & Diu, Gujarat, Goa, Tamil Nadu, Maharashtra, Mumbai, New Delhi, Odisha, Karnataka, Kerala and Puducherry
2.	Discussion on Epidemiological analysis using latest available data	18 th February 2015	14	Officials from WHO, CTD, NTI and Gates Foundation
3	NRL Microbiologist meeting	2nd – 5th March 2015	20	Microbiologists from NTI, CTD, NITRD- New Delhi, NIRT-Chennai, NRL Odisha and NRL-Uttar Pradesh
4	CME on Standards for Tuberculosis Care in India (STCI)	24 th March 2015	81	Private practitioners from Karnataka

9. 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 **1487 students & scholars** of life sciences visited NTI in 45 **batches** during the period as follows:-

Sl. No	Date	Category of Students	No of Students	Organization
1	07-04-14	Bsc(N)	32	Manipal college of nursing, Bengaluru.
2	08-04-14	Bsc(N) GNM	06 26	St.Theresa's college/School of nursing, Bangalore.
3	10-04-14	Bsc(N) GNM	30 25	Sea college of nursing, Bangalore
4	11-04-14	Bsc(MIT)	20	Acharya inst. of Health science,Bangalore
5	26-05-14	Bsc(N)	37	Sea college of nursing, Bangalore
6	27-05-14	Bsc(N)	52	St.John's college of nursing, Bengaluru
7	17-06-14	Pre-final year MBBS students	53	Sapthagiri Inst. of higher medical sciences, Bengaluru.
8	14-07-14	III yr GNM	50	Narayana Hrudayalaya school of nursing,Bangalore
9	28-07-14	Bsc(N)	25	Sri Sathya Sai Inst. of Higher Medical Sciences college of nursing, Bengaluru
10	07-08-14	MSW's	20	Oxford college of Arts,Bengaluru.
11	12-08-14	Trainees of Different Cadre	20	INSA, Bangalore.
12	26-08-14	PG's-Community medicine	03	JJMMC,Davanagere
13	16-09-14	Relapse Study Contractual Staffs	07	NTI, Bangalore

Sl. No	Date	Category of Students	No of Students	Organization
14	17-09-14	PG's-Community medicine	12	Bangalore medical college,Bangalore
15	18-09-14	WHO Fellowship Trainees	02	NTI, Bangalore
16	26-09-14	GNM	39	Narayana Hrudayalaya College of nursing, Bangalore
17	28-10-14	GNM	62	Gautham Inst. of Nursing , Bangalore
18	29-10-14	Bsc (N)	42	Gautham college of nursing, Bangalore
19	27-11-14	Bsc (N) DGNM	42 09	Narayana Hrudayalaya college of Nursing , Bangalore
20	28-11-14	DGNM	31	St.Philomina's school of nursing, Bangalore
21	03-12-14	Bsc (N)	20	Chinmaya college of Nursing , Bangalore
22	17-12-14	Bsc(MLT)	41	Acharya Inst. of Health sciences, Bangalore
23	18-12-14	Bsc (N)	59	NIMHANS, Bangalore
24	19-12-14	Bsc(MIT)	33	Acharya Inst. of Health sciences, Bangalore
25	23-12-14	DNB-Family medicine	07	St.Martha's Hospital, Bangalore
26	13-01-15	Bsc (N)	36	St.John's Hospital college of Nursing , Bangalore
27	23-01-15	Bsc(N)	55	St.Philomina's college of nursing, Bangalore
28	27-01-15	Bsc (N)	48	St.John's Hospital college of Nursing , Bangalore
29	28-01-15	Msc-Life science	15	Mount Carmel college, Bangalore
30	29-01-15	Medical PG students-Community medicine	07	Rajarajeshwari Medical college, Bangalore
31	02-02-15	Bsc (N) Msc(N)	36 03	Kalabyraveshwara swamy college of nursing, Blr.

Sl. No	Date	Category of Students	No of Students	Organization
32	10-02-15	GNM	19	Manipal School of nursing, Bangalore
33		Msc(N))	13	Lakshmi memorial college of Nursing , Mangalore
34	13-02-15	Bsc (N) Msc(N)	15 03	Dayananda sagar college of nursing, Bangalore
35	16-02-15	BTFS-post Msc Bio-Tech	14	The Oxford college of science, Bangalore
36	18-02-15	Bsc (N) Msc(N)	49 01	St.John's college of nursing, Bangalore
37	24-02-15	GNM	43	Lakshmi Memorial Inst of nursing, Mangalore
38	25-02-15	Bsc (N)	42	Sea college of nursing, Bangalore
39	02-03-15	Bsc (N) GNM	26 22	Dhanvantari college of nursing, Blr.
40	09-03-15	Bsc (N)	42	Global college of nursing, Bangalore
41	10-03-15	Bsc (N)	40	
42	11-03-15	Bsc (N)	27	St. Martha's college of nursing, Bangalore
43	16-03-15	Bsc(Micro,Biochem)	42	Acharya's Bangalore B school, Bangalore
44	17-03-15	Bsc (N)	52	Padmashree college of nursing, Bangalore
45	19-03-15	Health visitor trainees	22	Air force medical training centre, 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 2014-2015 are given below:

Sl. No	Name of Training	Participants	Date	Number of Participants
1	Training on Line Probe Assay – Genotype MTBDR Plus, Version 2.0	Laboratory technicians and Microbiologists	21-25th April 2014	5
2	Laboratory Training on Growth Detection, Identification and Drug Susceptibility Testing of Mycobacterium tuberculosis using Liquid Media	Laboratory technicians and Microbiologists	19-30 May 2014	5
3	ToT Training of LC SLDST & LPA DST	Laboratory technicians and Microbiologists	8-12 December 2014	10
4	ToT Training of LC SLDST & LPA SLDST		15-19 December 2014	10

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 2014-15
2. Preparation of the technical reports of the training activities held during the year 2014-15.
3. Tentative Training Calendar for the year 2015-2016 was prepared.
4. In-house training for NDRS software for Laboratory staff on 5th & 6th Aug 2014 & CTU.

III. Administrative activities

- a. Dr. Ravi Chandra .C, CMO-NFSG was involved in preparation of Annual report committee and WHO CC report of NTI for the year 2013-14
- b. Dr. Ravichandra C, CMO-NFSG discharged the duties as Division Head, HRD & Documentation Division, I/c Hostel, Chairman of Condemnation committee and Purchase Committee
- c. Dr. Poornima A, MO discharged the duties as I/c Training Unit w.e.f 6th February 2015.
- d. Tentative Training Calendar for the year 2015-2016 was prepared.

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 First National Anti-tuberculosis Drug Resistance Survey of India. The Data management module for the survey involves implementation of IT features like bar coding of Sputum samples to streamline the receipt of samples- from over 120 Tuberculosis Units across the nation at NTI, Optical mark recognition to ensure data accuracy and customized Laboratory Information Management System (LIMS). The development of the said module is functioning & updates are done as & when it requires.

The following NDRS activities were under taken in year –

- a. Design & development of DRS data management module.
- b. Correspondence & execution of all NDRS related preparatory activities like printing of stationary & other relate issues.
- c. Conducted in-house sensitization program for lab and data management staffs, related to NDRS software module.
- d. I/c CTU facilitated the Trainers of Training (TOT) programme of NDRS held at Institute :

Sl No	Date	No. of Participants
1	24 th - 25 th April 2014	64
2	9 th – 10 th June 2014	74
3	17 th & 18 th November 2014	93

- e. Day to day correspondence and submission of interim reports to WHO related to Technical Service Agreement & other survey related activities.
- f. I/c CTU attended meeting at Ahmedabad, Gujarat on 30th June & 1st July 2014 RNTCP project on free drug distribution and establishment of pharmacy and laboratory surveillance as well as schedule H1 implementation in Mehsana, Ahmedabad
- g. I/c CTU participated as facilitator for NDRS TOT training for DTOs, MOTCs, DMC LTs, STS, STLS & RNTCP Consultants held at Agra - Uttar Pradesh, between 10th to 17th September 2014.
- h. Interim analysis & presentation of NDRS data to the Principle Investigator and NTI data monitoring committee on 1st of every month is being compiled & presented.
- i. Monthly reports of NDRS is being compiled & forwarded to CTD & WHO.

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.

- c. The report on activities undertaken at NTI as a WHO collaborating Centre has been uploaded to WHO CC website for the year 2013-14.
- d. 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 2013-14

- ii. Compilation & Consolidation of NTI Bulletin Vol.50/1&4, hosted onto NTI website.
- iii. In addition the unit is also responsible for compiling&consolidation of the Institute'smonthly, quarterly &annual reports and submission to DteGHS and CTD.

e. IT Support Services:

- i. The unit also handles matters pertaining to the Annual Maintenance Contract of Computers and peripherals with a full time resident engineer and AMC of UPS.
- ii. Technical inputs pertaining to Internet/ Server / Softwares / Audio Visual Equipments and infrastructure expansion are entrusted to the unit.
- iii. Updated and installed the latest version R.21 of the mailing server. Feasibility for conversion of broadband to internet lease line with ISP providers is underway.
- iv. Periodic technical server configuration / proxy server configuration for Internet services & maintenance there off are being under taken regularly.

f. Other workshops / Meetings/ CME

- a. I/c CTU facilitated in NIKSHAY training programme held in the Institute on 16th, 17th, 19th& 20th June 2014 as coordinator to the training in which 101 participants attended the training from 23 states.
- b. A one day OMR software orientation programme held in the unit on 25th June 2014 for the data management team of NDRS.\
- c. I/c CTU attended Operation Research (OR) course module 1 & 2 from 22nd Sept to 2nd Oct 2014. The OR course was conducted in collaboration with the UNION.

- d. I/c CTU attended the first “Master Trainers training on Standards for TB Care in India” (STCI) on 16th& 17th February 2015 facilitated by Dr. Sreenivas, WHO NPO and Dr Kiran Rade, CTD Representative.
- e. I/c CTU attended the National Task Force (NTF) meeting at Shimla, on 14th& 15th March 2015.

g. Other Activities Undertaken

- a. Installation of sign board at Jayachamarajendra Wodeyar Auditorium & other Conference halls were undertaken.

B. Library and Information Services & Documentation

I Activities undertaken by the library are:

- a. 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.
- b. Coordinating with CTU in digitization of important research studies and hosting the same on the internet/intranet.
- c. Library provided the information needs of the faculty, staff of the Institute besides Medical and Para-medical trainees and delegates/visitors from medical fraternity.
- d. Coordinated in periodicals updating of the NTI website, both internet and intranet.

II Additional Activities:

1. 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.
2. 240 volumes of back volumes of journals/periodicals have been bound and stacked in the Library for future reference.
3. Renewed subscription of over 13 journals (inclusive of six online) & periodicals for the year 2015.
 - I. ANTISEPTIC
 - II. INDIAN JOURNAL OF MEDICAL RESEARCH.
 - III. INDIAN JOURNAL OF TUBERCULOSIS.
 - IV. INDIAN MEDICAL GAZETTE.
 - V. MEDICAL JOURNAL OF ARMED FORCES OF INDIA.
 - VI. THE NATIONAL MEDICAL JOURNAL OF INDIA.
 - VII. SWAMY'S NEWS & SWAMY'S HANDBOOK

4. 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.
5. Renovation work of the proposed Guest Room in the Library Annex is in progress.
6. 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.
7. i/c library co-ordinated in participation of five officer/officials in the NATCON 2014 held in Mumbai on 6th and 7th February, 2015.
8. 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.
9. 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.
10. As i/c X-ray Section letter dispatched to Vizianagaram regarding servicing of Roll Film Cassette of their centre.
11. Published:
 - a) NTI Annual Report for the year 2013-14 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.

III. Administrative activities

- a. Dr. Ravi Chandra .C, CMO-NFSG was involved in preparation of Annual report committee and WHO CC report of NTI for the year 2014-15
- b. Dr. Ravichandra C, CMO-NFSG discharged the duties as Division Head, HRD & Documentation Division, I/c Hostel, Chairman of Condemnation committee and Purchase Committee
- c. Dr. Poornima A, MO discharged the duties as I/c Training Unit w.e.f 6th February 2015.

IV. Documents / Articles published:

1. NTI annual report for the year 2013-14
2. NTI Bulletin Vol.50 hosted onto NTI website.

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 3 states allocated viz, Karnataka, Maharashtra and Rajasthan.

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

The NRL is also 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 facilitated 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. Annual NRL EQA-OSE visits to Karnataka, Maharashtra and Rajasthan was performed by the EQA DRS team.

Accreditation of Laboratories

Accredited Mycobacteriology laboratories are a pre-requisite for the efficient Diagnosis and follow-up of MDR-TB patients. Towards this objective, efforts are being made to establish IRLs to cater to the diagnostic and follow-up needs of DR-TB patients, in each state. Provision also has been made for inclusion of Laboratories of Medical Colleges and the Private Sector, interested in Participating in the diagnosis and follow-up of such cases. The Microbiologists and Laboratory Technicians from such laboratories are trained by the NRL. Subsequently, a pre-assessment visit is undertaken by a Central team, the objective of which is to assess the suitability of the laboratory Infrastructure and installation of equipments. Panel cultures are then exchanged between the NRL and the IRL for proficiency testing and retesting. A satisfactory performance is determined in terms of Concordance of more than 90% for Isoniazid (H) and Rifampicin (R); more than 80% for Streptomycin(S) and Ethambutol (E). The laboratory carries out investigation of errors if any in case of an unsatisfactory performance in the Proficiency testing and informs the NRL regarding any corrective action taken. A pre-accreditation visit is then undertaken by a central team to assess the Laboratory's technical performance, prior to formal accreditation. Accreditation is initially for a period of two years. During this phase, the accredited Laboratory is required to regularly and satisfactorily participate in proficiency testing exercises conducted by the NRL. The minimum number of participations in the proficiency testing is once prior to and twice within the first year of accreditation. Following this the laboratory is required to undergo Proficiency testing at least once in every two years. An onsite – evaluation of the laboratory, is undertaken within the first year of accreditation. A re-assessment is performed before the lapse of two years of accreditation, for which the laboratory applies six months in advance. Thereafter, re-assessment of the accredited culture and DST facility is conducted every two years. The details of the accreditation visits made are as under:

Labs accredited for solid culture in 2014-15

- a. RMRC Bhubaneswar

Labs accredited for liquid culture in 2014-15**1. 1st line drugs**

- a. IRL Pune
- b. IRL West Bengal
- c. IRL Odisha
- d. IRL Bangalore

2. 2nd line drugs

- a IRL Nagpur
- b. JJ Hospital ,Mumbai
- c. Metropolis, Mumbai
- d. SMS Jaipur

Labs accredited for LPA in 2014-15

- a. RMRC Bhubaneswar
- b. SNMC Jodhpur
- c. GMC Aurangabad
- d. NBMC Siliguri

Proficiency Testing of accredited laboratories in LPA

Annual proficiency testing was conducted for the following thirteen labs by sending panel of 20 cultures in April 2014.

- 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 Karnataka
- 9. SMS Medical College, Jaipur.
- 10. IRL Indore, Madhya Pradesh
- 11. IRL Patna
- 12. IRL Pune, Maharashtra

Proficiency Testing of accredited laboratories in Solid Culture

Annual proficiency testing was conducted for the following thirteen labs by Sending panel of 20 cultures in April 2014.

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. Choithram Hospital & Research Centre, Indore, Madhya Pradesh
9. SMS Medical College, Jaipur.
10. IRL Indore, Madhya Pradesh
11. Mahatma Gandhi Institute of Medical Sciences, Sewagram, Wardha, Maharashtra
12. IRL Pune, Maharashtra
13. RMRCT Jabalpur, Madhya Pradesh

Proficiency Testing of accredited laboratories in Liquid Culture

Annual proficiency testing was conducted for the following four labs by sending panel of 20 cultures in April 2014.

1. SMS Medical College, Jaipur.
2. P.D. Hinduja Hospital Mumbai, Maharashtra
3. Super Religare Laboratories Ltd, Mumbai, Maharashtra
4. IRL Nagpur, Maharashtra

External Quality Assurance for Mycobacterial Culture and DST

Sl. No	Proficiency tested for	Month of Reporting	Month of passing	Testing agency	Methods / Media Used	Proficiency Result
1	11 th round: Sputum smear microscopy	June, 2014	January, 2015	STAC, Kathmandu, Nepal	ZN Staining	100%
2	20 th round: Culture and DST	March, 2014	July 2014	Prince Leopold Institute of Tropical Diseases, Antwerp Belgium	Liquid culture first and Second line Drugs	100%

Specimens processed at NTI during the period April 2014- March 2015

Total number of all the specimens registered (<i>NDRS + Others</i>)	3488
Total number of Patient for <i>NDRS</i> registered	2668
Total number of specimens for <i>NDRS</i> registered	5336
Total number of <i>NDRS specimens</i> rejected	321
Total number of <i>NDRS</i> specimens put up for the Primary culture	5673
Total number of <i>NDRS specimens</i> subjected for DST by MGIT	316
Total number of <i>NDRS specimens put up for gene Xpert</i>	32
Total number of the all the specimens expect <i>NDRS</i> and Relapse study registered (<i>PMDT+OP+ XDR</i> Samples)	3488
Total number of specimens registered from patients referred to NTI	23
Total number of specimens put up for the Primary culture(<i>PMDT & OP</i>)	1834
Total number of Relapse study patients registered	279
Total number of Relapse study specimens registered	279
Total number of Relapse study specimens put up for the Primary culture	324
Total number of <i>Relapse study specimens</i> subjected for DST by solid culture	142
Total number of specimens subjected for Identification tests	78
Total number of sensitivity tests done by Proportion method both for first and second line drugs using LJ	111
Total Cultures samples registered for Proficiency testing received	30
Total Cultures samples registered for 20 th round of Proficiency testing received from Belgium	20
Total number of sputum specimen of MDR suspects registered for DOTS Plus under Plan B	nil
Total <i>XDR</i> suspect culture samples registered	965
Total no. of Drug Susceptibility test performed using MGIT	987
Total no. of No. of Specimens subjected for identification test (Immuno-Chromatographic Test)	763
Total no. of Line Probe Assay performed	953
Total no. of specimens subjected to Gene Xpert	15
Total no. of HPLC done	110

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.

Other Technical Activities

Sl. No.	Particulars	Date	Resource person
1	Field visit to Ramanagar and Channapattana	7 th -11 th October 2014	Mr.Ranganatham along with EPS staff
2	EQA of sputum smear Microscopy along with IRL team to Bangalore Rural DTC	18/12/2014 and Bangalore Urban DTC on 19/12/2014	Dr.N.Selvakumar and Mr.Raghunandhan
3	Bangalore BBMP and Conducted field EQA sputum smear Microscopy	22 December 2014	Dr. Selvakumar and Mr. Raghunandhan

1. TOT National DRS Training was conducted from 24th to 25th April 2014 at NTI Bangalore and 65 participants attended the same.
2. TOT National DRS Training was conducted from 9th & 10th of June 2014 at NTI Bangalore and 74 participants from 10 States attended the same.
3. Registration of 1st sample for NDRS at NTI Laboratory from Broadway TU on 1st of July 2014.
4. Dr. Shanmukanandhan Study Coordinator for NDRS and Dr. S.Lakshmi, Sr. Microbiologist for NDRS join on 14th July 2014.
5. Mrs.Anupurba Roy Chowdry, Sr. Laboratory Technician EQA DRS Project resigns and left institute on 16th July 2014.
6. Dr.Ashok kumar DDG (TB/HIV). Dr.Sachdeva Additional DDG, Dr.MalikParmar WHO NPO, Dr Mayank Gedia CTD Consultant visit Laboratory to review NDRS Project on 17th July.
7. Dr. Lavanya joined for EQA DRS Project as Consultant Microbiologist on 31st July 2014.
8. Special ADG Dr.Attani Visits Laboratory on 4th August 2014.

9. In-house training for NDRS software for Laboratory staff was held at CTU on 5th and 6th August 2014.
10. Ms.R.Lakshmi joined for NDRS Project on 14th August 2014 as Sr.Microbiologist.
11. Ms. Smitha joined NTI as LT for NDRS Project in 9th September 2014.
12. Mr. Somashekar LT-B joined NTI for Relapse Study on 13th September 2014.
13. Mr. Sharath Kumar B. S LT-C joined NTI for Relapse Study on 15th September 2014.
14. Ms Meenakshi joined NTI as SLT for NDRS Project in 26th September 2014.NDRS sensitization Workshop was held at NTI from 2nd-6th March 2015

Animal Model Research Unit (AMRU):

The main objective of the unit AMRU is to experiment in Laboratory Animals 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.

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

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 177 albino guinea pigs were raised in healthy condition. Appropriate preventative measures were taken to check outbreak of diseases among breeding stock. Outdoor shelter for Retired Breeders was maintained in good condition.
- 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. *Improving TB case finding efficiency and management of TB cases in private health care facilities in Bangalore city*

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.

Activities undertaken	Date
In-house work <ol style="list-style-type: none">a. Protocol was prepared & presented to Institutional Ethics Committee and approval obtainedb. Mapping of PHCFs was undertakenc. Study formats and Project guide were prepared as per Standards of TB Care in India (STCI)d. Extensive revision of Operational Guidelines was undertaken by the Division Heade. The field teams visited all the PP's, to complete the registration process and facilitated assigning HEID codes for TB notification. Relevant data entry was undertaken.f. Approval from Karnataka Medical Council (KMC) regarding Issue of Certificate of accreditation for conducting CME Programmes was taken after completing all the formalities.	April 2014 – March 2015

Activities undertaken	Date
<p>State Officials sensitization meetings</p> <ul style="list-style-type: none"> a. ERD field officials approached the Office bearers of Professional Associations, State & District RNTCP for the Sensitization meetings on Operational Guidelines and to get the feedback before finalization. b. The above said meeting was held at NTI along with the Office bearers of Professional Associations, STO - Karnataka, STDC-Director, BBMP Co-ordinator, WHO RNTCP Consultant, Ex - President of Family Physician Association, Bangalore & MOTC of Dasappa TU took place at NTI. NTI Officers & ERD officials actively participated and later minutes were circulated. c. Dr. V.K. Chadha presented the technical and operational guidelines and detailed discussions were held during the course of the meeting regarding the roles and responsibilities of all stake holders involved in the project 	<p>13th June 2014</p>
<p>Lab Activities:</p> <ul style="list-style-type: none"> a. In order to improve the quality of sputum microscopy in private sector, training of lab technicians of private labs existing in the study area (Coming under the jurisdiction of Dasappa TU) was conducted for three days at NT I, Bangalore. b. NTI lab technician and concerned ERD official visited all the private labs for situational analysis of the present status of sputum microscopy and for on-site training of private L.Ts. c. On-site training was imparted in sputum microscopy and quality assurance of P.D. Hinduja Hospital for all their lab staff. Twelve lab staff (in 2 batches) were imparted the training. 	<p>4th to 6th May 2014</p> <p>June 2014</p> <p>2nd - 3rd Dec 2014.</p>

CMEs & Sensitization Programmes Organised at NTI and at other hospitals

Concerned ERD officials approached personally the Private Practitioners (PPs) to attend the CME programme.	
Ist CME programme was held at NTI, Out of 20 PPs, 18 of them from various nursing homes attended the CME and KMC certificates were issued with credit points	16 th Sept 2014
2 nd CME programme was held at P D Hinduja Hospital, Sampangiramnagar, Bangalore. 31 PPs & 7 Para medics participated in the CME programme, and KMC certificates were issued to the PPs. Mrs Reena from Laboratory participated in this.	21 st Oct 2014
3 rd CME programme was held at NTI, Bangalore. Out of 25 invitees, 21 PPs participated in the CME programme, and KMC certificates were issued.	28 th Nov 2014
Sensitization programme for RNTCP staff was held at NTI, 15 of them participated	6 th Jan 2015
CME programme for PPs was held at Kanva Diagnostics, Bangalore. Out of 50 invitees, 28 PPs participated in the CME programme, and KMC certificates were issued	23 rd Jan 2015
Sensitization programme was held at P D Hinduja Hospital to sensitize the PPs on the study formats and Operational Guidelines	12 th March 2015
Re-sensitization of PPs of P.D. Hinduja Hospital on study formats pertaining to the study was undertaken	
<p><u>Printing of Study formats:</u></p> <ol style="list-style-type: none"> 1. Study formats and calendars were revised, finalized & printed. 2. The same was distributed to PPs of P.D. Hinduja Hospital <p>The contents of the calendar are:</p> <ol style="list-style-type: none"> a. Summary of the operational guidelines of the study. b. Latest diagnostic algorithm with treatment regimen for adult and pediatric doses for PTB. c. Documentation details for filling up of study forms and formats and TB notification. d. List of RNTCP facilities, where patients can be referred for sputum microscopy & treatment along with the contact details of MO- incharge, LT, and STS. e. List of ICTC centres with their contact details. 	

New Innovations:

TB suspect card (Individual TB symptomatic patient card) :

An individual form for each TB suspect was designed to record patient contact details, type of investigations with date, place where undertaken and results, antibiotics and duration for which consumed and if diagnosed as TB the details of health facility where treatment initiated/referred for treatment.

TB Treatment card for Patients treated in Private Health Care Facilities (PHCFs):

A treatment card (on the lines of RNTCP) with additional provision of recording details of drugs prescribed is opened and maintained for each patient treated for TB at PHCFs.

Self carbonated forms in triplicate

Referral card for sputum examination

Referral card for treatment

Referral card for MDR TB suspects

Referral card for HIV testing

**Panel Discussion during the 1st CME programme
held at NTI on 16th Sept 2014**



**Participants who attended the 1st CME programme
held at NTI on 16th Sept 2014**



**Discussion with the participants during the 1st CME programme
held at NTI on 16th Sept 2014**



- ***Main Study was initiated in March 2015***

Concerned ERD field officials met the Director of Rajiv Gandhi Institute of TB & Chest Diseases Dr. Shashidhar Buggi on 26th March 2015 to apprise him about the study & to seek his support and co-operation for management of complicated cases of cirrhosis & other major complications who are being referred by PPs coming under the jurisdiction of Dasappa TU & he has deputed 3 Medical Officers (Ward In charge) to take a lead in managing the referral cases.

Constraints:

1. One of the main objectives of the study was to implement the new diagnostic algorithm (smear microscopy followed by Chest Xray if smear negative and with GeneXpert in the event of any pulmonary abnormality observed on Xray). Despite several reminders to CTD regarding cartridges yet the same has not been sent.
2. The desired support from BBMP, RNTCP and State Officials is not very favorable & forthcoming.

2. Multi centric Cohort Study of Recurrence of TB among newly diagnosed sputum positive PTB patients treated under RNTCP – a collaborative study

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

This is a prospective, multi-centric cohort study.

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, will be the co-ordinating site. NTI has selected 2 districts namely; Ramanagara and Mandya based on convenience, and one Tuberculosis Unit (TU) from each district, that had enrolled at least 150 new smear positive pulmonary TB patients in the previous two quarters.

Study Procedures:

225 New smear positive pulmonary TB patients from 3 TUs treated under RNTCP will be enrolled. They will be followed up till treatment completion, and those with successful treatment outcome will be followed up for a period of 12 months after completing treatment. These patients are subjected to the following procedures:

- a) **Structured interview:** The interview of the study participants is conducted at the following time points
 - i. Within 14 days of treatment initiation (Initial Patient Interview)
 - ii. At the time of outcome of treatment (Treatment Outcome Interview)
 - iii. At 12 months post treatment / at TB recurrence (Post-treatment Follow-up/ TB Recurrence Interview).
 - iv. At the end of I.P. of treatment, patients details will be collected from RNTCP treatment card in the end of I.P. form.
- b) Sputum examination for TB smear, culture, drug susceptibility tests (DST) and genotyping
- c) Blood tests for diabetes mellitus and HIV infection

Activities undertaken	Date
a. Protocol was approved by Institutional Ethics Committee b. Revision of questionnaires were undertaken & the questionnaires were pre-tested in the field c. Ramanagara, Channapatna & Mandya TUs were selected as study areas under Ramanagara & Mandya districts	July 2014
Sensitization meetings were held at these three TUs for STO, DHO & DTO on protocol & study procedures	August 2014
a. Interviews were held & recruitment of contractual field staff was undertaken b. Training was imparted by NTI officials to contractual field staff on study procedures including lab aspects	Sept 2014
Field work was initiated	Oct 2014
Supervision of field work was undertaken by concerned ERD field officials on regular basis	
Total patients intake (from Oct 2014- March 2015)- 180 Intensive Phase interview schedules completed as on 31 st March 2015: Ramanagara – 30, Channapatna – 32, Mandya – 28	
Lab Report <ul style="list-style-type: none"> - Total Samples received from 169 patients - Smear Positive – 145 - Smear Negative- 04 - Culture Positive – 145 - Culture Negative – 04 - DSTs performed – 133 - DST (results awaited) – 55 - Culture samples sent to NIRT for genotyping – 125 	

Sensitization of RNTCP officials in Mandya District



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

Objectives:-

1. To find out the proportions of PPs having adequate knowledge regarding diagnosis and treatment of a new case of pulmonary TB
2. To find out the proportions of PPs complying with mandatory TB case notification.

Material and methods

A series of CMEs have been planned to be 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.

Progress during the year:

1. Protocol was prepared & presented to Institutional Ethics Committee and approval obtained.
2. Study questionnaires were given to PPs who attended the CMEs held in NTI & at P.D. Hinduja Hospital
3. Interim analysis of the questionnaires was undertaken
4. Paper on mid-term analysis was presented in the 69th NATCON at Mumbai from 5th to 7th Feb 2015 titled, 'Knowledge of private practitioners of Bangalore City regarding diagnosis, treatment of pulmonary TB and compliance with case notification' by ERD official.
5. Total enrollment of patients: 125 as on 31st March 2015

4. 99 DOTS: a novel project using Mobile Phones to Monitor and Improve Adherence to Tuberculosis Medications - a collaborative study

Objectives:

1. To further demonstrate the feasibility and acceptance of 99 DOTS in public and private sector
2. To accurately measure patient adherence as well as the barriers to adherence

The experience gained in implementing the strategy will lay the groundwork for a randomized controlled trial, to be proposed in future, with the ultimate aim of recommending its adoption by the programme.

Material and methods

It's a study among new sputum smear positive pulmonary TB patients coming under the jurisdiction of Yeshwantpur TU.

Recruitment of patients

Under RNTCP, consecutive new sputum smear positive pulmonary (NSP) TB patients (N = 100) diagnosed at any of the centers in the TU will be recruited into the study.

99DOTS approach utilizes a custom envelop, or blister card, into which each pack of medication is inserted and sealed by the care provider. When the patient dispenses medication from the blister pack, the pill also break through perforated flaps on the blister card. On the back side of each flap is a hidden number.

During Intensive Phase (IP), as and when DOT provider administers treatment to the patient, he/she will submit these numbers using mobile phone as evidence of drug intake. To avoid the incurring any mobile charges, the numbers are submitted using a missed call. The beginning of the phone number is printed on the outside of the card, while remaining digits are hidden behind the pills.

During Continuation Phase (CP), the same procedure as IP phase will be followed at the time of weekly DOT. For the doses to be consumed by the patient at home, the patient himself will send the missed call as above with the appropriate telephone number. For this purpose, each recruited patient will be trained/sensitized by STS/TBHV/DOT provider. In cases where the missed call on the schedule day of drug consumption is not received by our system with the correct number, they will be identified to be in danger of default and followed up with directed counseling by DOT provider/STS to ensure they get back on course.

Treatment outcomes will include both adherence measured by treatment cards as well as missed call data; for patients in the government program, mid-and post-treatment sputum tests will be conducted. We will also conduct qualitative interviews with a sample of patients, especially those showing poor adherence behavior under 99DOTS, to understand the barriers to their adherence.

Progress during the year:

Study was initiated in December 2014

Total enrollment of patients from Dec 2014 – March 2015– **11**

Patients put on C.P. – **6**

Periodical visits to PHCFs by concerned ERD officials

Constraints:

1. Unable to enroll the patients of required number due to low case detection rate (CDR) at Yeshwantpur TU & exclusion criteria of the study and less than expected cooperation of RNTCP officials.
2. Enrollment of 20 patients from private health care facilities could not be undertaken as non of the thirty PPs invited for the sensitization meeting turned up and despite facility based sensitization for some of the PPs.

5. Disease Prevalence Survey in selected sites:

The epidemiology & research division provided support to P.Is of prevalence surveys carried out in in Wardha, Mohali, 2 districts of U.P. and Chennai in the recent past, for analyzing the data in a uniform manner across all the sites, by missing imputations technique using logistic regression with robust standard error. Finalize the methodology for Meta-Analysis of the prevalence estimates from 10 sites where surveys have been carried out recently during 2008-2010.

1. Dr. V.K. Chadha, Mrs. Sharada, MA, SIG II., had a discussion with Ms. Srividya, Scientist B and Ms. Basilea Watson, Technical Assistant both Statisticians from NIRT, Chennai to: Analyze the data of TB prevalence survey in Chennai in uniformity with the analysis carried out by NTI, for 8 other survey sites. NTI, Bangalore from 17th – 19th March 2015
2. ERD officials analysed the data and provided technical guidance for analysis of Prevalence surveys and ARTI surveys in slums of Delhi and provided technical support during the visit of officials from National Institute of TB & Respiratory Diseases (NITRD), New Delhi to NTI from 10th– 11th Nov 2014.

A. Other Study proposed during the year:**1. An active TB case finding (ACF) survey to improve the case detection in the slums of Bangalore city, Karnataka**

The urban slum dwellers have been recognized as one of the high risk groups (HRGS) in view of their poor socio-economic, living conditions and nutritional status. In view of the above, NTI proposes to conduct ACF for Pulmonary TB (PTB) in a representative sample of slum dwellers in Bangalore City, with the broad aim of demonstrating a new diagnostic algorithm with the following

Objectives

1. To determine the case yield per 100000 population.
2. To assess the accessibility and feasibility of ACF in urban slums.

Methods

Pilot study will be initiated in the following performance year among a total of 10,000 individuals ≥ 10 years of age residing in the selected slums of Bangalore City.

- The purpose of the study is to demonstrate feasibility of Active Case Finding (ACF) in urban slums
- The case finding diagnostic algorithm to be followed for ACF has been designed for optimum case finding efficiency and positive predictive value

: To come up with the appropriate diagnostic algorithm, extensive review of community based data from prevalence surveys was undertaken to find out the pooled sensitivity, specificity, positive predictive value and negative predictive values of screening and diagnostic tool. The algorithm was chosen considering the compromise between efficiency of case finding when compared to prevalence of TB in the community and positive predictive value as the key parameters.

Progress during the year

1. Protocol development and approval by IEC in Jan 2015.
2. Dr. V.K. Chadha presented the protocol at the National level OR meeting which was held at New Delhi from 3rd – 4th Feb 2015.
3. Protocol submitted to CTD for funding & support.

The progress of each of the above studies was reviewed on the 1st working day of every month under the chairmanship of Director or Head – Epidemiology & Research Division; and also thrice weekly by the Division Head.

B. RESEARCH PAPERS PUBLISHED:

A total of 8 scientific papers (4 as exclusive NTI studies, 4 from collaborative studies) were published in International and national journals during the year; the abstracts are as under:

1. Chadha,V.K., Praseeja,P,Gupta, J.,Ahmed, J. ,Sharda, M. A. ,Srivastava, R., Gowda, U., Magesh,V. and Singh,S., Suganthi,P, Lakshminarayana,and Kumar, P.(2014) *A descriptive study of tuberculosis case finding in private health care facilities in a South Indian district* Int J Tuberc Lung Dis, 18 (12). pp. 1455-1458.

Setting: A South Indian district providing anti-tuberculosis services through the Revised National TB Control Programme (RNTCP) and private health care facilities.

Objective:

To ascertain the profile of tuberculosis (TB) patients diagnosed and/or treated in private health care facilities. METHODS: Data on TB cases diagnosed and/or treated in all clinical departments of the medical college, 83 nursing homes and RNTCP health care facilities were collected prospectively.

Results:

About 83% of new TB cases recorded in the private medical college, 47% in nursing homes and 24.5% in RNTCP TB registers were extra-pulmonary. The proportion of retreatment cases was respectively 5.5%, 9.6% and 19.8%. The proportion of males and those in the economically productive age group were similar in the three data sources. About 94% of cases diagnosed in the medical college and 55% in nursing homes were registered for treatment under the RNTCP. About 11% of the smear-positive patients diagnosed in RNTCP were initial defaulters.

Conclusion:

The proportion of extra-pulmonary cases was higher in the medical college and nursing homes and that of retreatment cases was lower than in the RNTCP.

2. Chadha, V. K. ,Praseeja, P. , Hemanthkumar, N. K. ,Shivshankara, B. A. , Sharada,M.A. , Nagendra, N. ,Padmesh, R. , Puttaswamy, G. , Magesh, V. ,Thomas, B. and Kumar, P. (2014) *Implementation efficiency of a diagnostic algorithm in sputum smear-negative presumptive tuberculosis patients* Int J Tuberc Lung Dis, 18 (10). pp. 1237-1242.

Background:

For the diagnosis of smear-negative pulmonary tuberculosis (PTB), India's Revised National Tuberculosis Control Programme (RNTCP) recommends a course of broad-spectrum antibiotics after negative smear on initial sputum examination, followed by repeat sputum examination and chest X-ray (CXR).

Objectives:

1. To ascertain the proportion of presumptive PTB patients smear-negative on initial sputum examination who completed the diagnostic algorithm,
2. To investigate barriers to the completion of the algorithm.

Methods:

In Karnataka State, India, 256 study participants were interviewed in 2012 to ascertain the number of days antibiotics had been prescribed and consumed, the number of re-visits to health centre(s), whether repeat sputum examinations had been performed, whether or not CXR had been performed

and when, and whether PTB had been diagnosed. In-depth interviews were conducted with 19 medical officers.

Results:

The diagnostic algorithm was completed in 13 (5.1%) of 256 participants; three were diagnosed with PTB without completing the algorithm. Most medical officers were unaware of the algorithm, had trained 5–10 years previously, prescribed antibiotics for 10 days and advised CXR without repeat sputum examination, irrespective of the number of days of antibiotic treatment. Other main reasons for noncompletion of algorithm were patients not returning to the health centres and a proportion switching to the private sector.

Conclusion:

Refresher training courses, raising patient awareness and active follow-up of patients to complete the algorithm are suggested.

3. Chadha, V. K. Praseeja, P., Hemanthkumar, N. K., Shivshankara, B. A., Sharada, M. A., Nagendra, N., Padmesh, R., Puttuswamy, G., Ahmed, J. and Kumar, P. (2014) *Are registered sputum smear-negative tuberculosis patients in Karnataka, India, diagnosed by national algorithm?* Int J Tuberc Lung Dis, 18 (12). pp. 1491-1495.

Setting:

Four districts of Karnataka State, India, that have implemented the National Tuberculosis Control Programme (RNTCP).

Objective:

To assess the proportion of patients diagnosed according to the nationally recommended algorithm among new smear-negative (NSN) PTB cases registered under the RNTCP.

Methods:

Information on 201 registered NSN-PTB patients as regards date of initial sputum examination, repeat sputum examination and chest X-ray (CXR) if undertaken, treatment initiation and number of days of antibiotic treatment after initial sputum examination, were collected through record review and patient interviews. In patients with negative or unknown human immunodeficiency virus (HIV) status, the algorithm was considered completed if the patient underwent initial sputum examination, antibiotic trial for 710 days, repeat sputum examination 710 days after initial sputum examination, CXR after repeat sputum examination and anti-tuberculosis treatment 710 days after initial sputum examination. In HIV-positive patients, the algorithm

was considered completed if CXR was performed after or at the same time as initial sputum examination.

Results:

Complete information was available for 170 patients. Of these, the algorithm was completed in 14 (8.2%, 95%CI 0.9–15.5): 1/140 patients with negative or unknown HIV status and 13/30 HIV-positive patients.

Conclusion:

The algorithm was not completed in most patients registered for treatment. Measures are needed to improve the diagnostic process for smear-negative PTB.

4. Somashekar, N, Chadha,V.K, Praseeja, P, Sharada, M. A ,Chandrakala, G., R.Srivastava, R. Kumar P.and Japananda, Swami (2014) ***Role of pre-Xpert® screening using chest X-ray in early diagnosis of smear-negative pulmonary tuberculosis*** Int J Tuberc Lung Dis, 18 (10). pp. 1243-1244.

In a sub-district level hospital in South India, the proportion of patients with abnormal chest X-ray (CXR) was evaluated among smear-negative, Xpert MTB/RIF (Xpert) positive individuals with pulmonary tuberculosis (PTB) symptoms; 384 smear-negative PTB individuals with PTB symptoms and without a history of anti-tuberculosis treatment underwent CXR and Xpert testing of one sputum specimen. Of 378 individuals with both Xpert and CXR results available, 14 were positive for Mycobacterium tuberculosis. Of these, 13 (92.9%) had an abnormal CXR and one was normal. This study highlights the usefulness of CXR before Xpert testing, which needs further validation.

Papers published from Collaborative studies:

1. AshutoshN.Aggarwal ,Dheeraj Gupta, RiteshAgarwal , Sunil Sethi , Jarnail S. Thakur , SharadaM. Anjinappa , Vineet K. Chadha , Rajesh Kumar , Meera Sharma, DigambarBehera , Surinder K. Jindal; Prevalence of Pulmonary Tuberculosis among Adults in a North Indian District: PLOS ONE DOI:10.1371/journal.pone.0117363 February 19, 2015, 10.1371
2. S. Subramaniyam, V.K. Chadha, C. Manuvel, P. Praseeja, M.A. Sharada, N. Nagendra& J. Gupta. Treatment outcome of Tuberculosis patients in a clinic of Bangalore, Ind J Tub 2014. 61; 3 : 189-194
3. Rao VG, Bhat J, Yadav R, Muniyandi M, Bhondeley MK, Sharda MA, Jitendra R, Chadha VK, Wares DF. Tobacco smoking: a major risk factor for pulmonary tuberculosis in central India. Trans R Soc Trop Med Hyg June 26, 2014. doi:10.1093/trstmh/tru082.
4. D. Parija, T. K. Patra, A. M. V. Kumar, B. K. Swain, S. Satyanarayana, A. Sreenivas, V. K. Chadha, P. K. Moonan, J. E. Oeltmann; Impact of

awareness drives and community-based active tuberculosis case finding in Odisha, India, INT J TUBERC LUNG DIS 2014,18(9):1105-1107

5. Murray CJ et al (V. K. Chadha as co-author); Global regional and national incidence and mortality for HIV- Tuberculosis and Malaria during 1990-2013, a systematic analysis for the Global burden of disease study 2013; Lancet 2014, 384 (9947) 1005-70

Tuberculosis OR Training Workshop held at NTI



Commemoration of World TB Day

Dr. V.K. Chadha, presided over the commemoration of World TB Day on 24th March 2015 at NTI & the CME programme which was arranged for PPs from Bangalore city; 62 PPs attended the CME and commemoration of World TB Day; KMC certificates for credit points were arranged and distributed to all the PPs who attended the event. Dr. V.K. Chadha presented the topic on 'Standards of TB Care in India, Dr. Bhoomika Bajaj, presented the topic on 'Operational guideline of a private public mix project for improving TB diagnostic and treatment efficiency'; Dr. S.K. Tripathy participated in the panel discussion.

Discussion during the commemoration of World TB Day on 24th March 2015



RNTCP Modular Training

- Dr. Bhoomika Bajaj, Jr. Epidemiologist (Contractual) attended the 2 weeks RNTCP modular training in NTI.

C. Research & Documentation

Access to all the published TB research articles in India was always a big constrain for Indian researchers as there are numerous publications and the end users must subscribe each publication to get access to these research articles. Keeping this in mind, the National Tuberculosis Institute (NTI), Bangalore under the directives of DDG-TB, Central TB Division established a Research Documentation Cell at NTI during the month of November, 2011. The prime objective of the Cell is to promote and disseminate the TB research work carried out in India at a single platform and also to provide access to researchers, students, and programme & policy managers. After a great hardship and putting best efforts the Cell has developed a National Research Database of the published TB research in India. The database is operational and hosted online as National Research Documentation Portal- <http://tbresearch.ntiindia.org.in>

As on November, 2014 the database consists of 1764 published TB research articles, categorised under 22 different subjects, from the year 1958 to 2015 by the following premier Indian research institutions and organisations:

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

The documentation unit undertook task of periodically updating the website and uploading & digitizing the research publications as and when received from member institutions, collaborating with the member institutions and providing access to the users on request. During the year 2014-15, a major task of digitizing and uploading of NTI research publication from 1958 to 2000 was completed.

D. Other technical & administrative activities undertaken by Dr. V. K. Chadha, Division Head:

Extended his support and guidance in the Epidemiological Data Analysis task for Bhutan TB programme during the visit of the Programme Officer, from Bhutan to NTI, Bangalore from 23rd to 25th April 2014.

1. As Co-chair person, he conducted the interview for Recruitment of Contractual Jr. Epidemiologist on 2nd July 2014 as per the approval of DGHS.
2. Wrote a chapter on “Epidemiology of Pulmonary Tuberculosis and trends in Disease Burden” for publication in Text Book of Pulmonary & Critical Care Medicine, IInd edition, Jaypee Brothers Medical Publishers (P) Ltd. New Delhi.
3. He held a class on Epidemiological aspects of TB for the Sri Lankan WHO participants on 18th Sept 2014 at NTI
4. Designed and initiated pooled analysis of prevalence survey in 8 districts.
5. He drafted paper “Cost analysis of diagnostic algorithms for PTB using GeneXpert in different combinations with sputum microscopy and x-ray”
6. Reviewed about 25 manuscripts on behalf of international and national journals.

4. MONITORING AND EVALUATION

The Monitoring & Evaluation Division of the Institute plays an essential role and forms a supportive unit for the research activities. The Division provides 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.

At present 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.

This wing is also shoulders the responsibility of documenting and archiving the various research protocols approved and studies conducted in the Institute till date. Statistical analysis is being carried out using statistical packages viz; Epi-info, SPSS etc.

B. 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.

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 **1487 students & scholars** of life sciences visited NTI in 45 **batches** during the period as follows:-

Sl No	Category of Students	No of Students
01	Msc(Nursing)	020
02	Msc(Bio-tech)	014
03	Msc(Life science)	015
04	BSc(Nursing)	774
05	DGNM	365
06	BSc(MIT)	053
07	BSc(MLT)	041
08	BSc(Microbiology)	020
09	BSc(Biochemistry)	022
10	Post graduate Medical students.	039
11	Pre-Final year MBBS Students	053

12	WHO Fellowship trainees	002
13	MSW's	020
14	Health visitors	022
15	Trainees of social & community workers	020
16	Relapse Study Contractual Staffs	007
Total number of students		1487

Total no. of students – 1487, Total no.of batches - 45,

Pre-University College Tuberculosis Awareness Programme

Tuberculosis awareness programme for pre-university level students were re-introduced. ACSM team visited **37** Pre-university colleges for delivering the letter intimating respective principals of the college about the TB awareness program conducted by NTI. Further, we requested them to intimate us a convenient date for conducting this programme at their venue.

TB awareness programme was conducted in **14** colleges at their premises in **15** batches. About **3774** pre-university students were educated about the basics of TB disease, burden, its prevention, treatment and the services available under RNTCP.

Methodology of the above training included Audio visual Projection in the form power point presentation, Interactive discussions & distribution of pamphlets in both English & vernacular language. Booklets in Hindi & English with salient points on TB disease, management and its control were given to the principal for keeping the same in their Library.

PHOTOGRAPHS OF PRE-UNIVERSITY STUDENTS TB AWARENESS PROGRAMME





Tuberculosis Awareness programme for Employees of Garment Industry.

There was a request from the Medical officer, Dr.Nagalakshmi Jawahar, First steps Baby wear Pvt. Ltd. for conducting TB awareness program for the employees of their 7 Garment Industrial units. In response to this, TB awareness program for Industrial workers was initiated; and the Senior Treatment Supervisor of the respective TB Unit was also involved to facilitate diagnosis and case finding activities in co-ordination with the industry Medical Officer. About 4700 employees of the said industry were involved in this program.

Other activities

Final translation (English to Kannada) of study protocol, Work instructions, Consent form & Patient interview schedules for the Multi centric cohort study on relapse was carried out during the reporting period.

Initiated the pilot testing of schedules for Multi-centric cohort study on relapse.

A letter dated 10/10/2014 was sent to the Director / Commissioner, Dept. of Pre-University education, Govt. of Karnataka, intimating them about the PU college students TB orientation program & procedures to be followed by these colleges to get benefit of this program

ACSM team Visited The Deputy Commissioner, Regional Office Of Kendriya Vidyalaya Sangathan, Bangalore on 04-11-2014 to intimate & seek their co-operation for conducting TB awareness program for students of Kendriya Vidyalaya in Bangalore city.

1. Prepared the Power Point Presentation on Private Chemists sensitization based on RNTCP TRAINING MODULE FOR COMMUNITY PHARMACISTS.
2. 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.
3. Organised IEC materials & Drug boxes for pre-university students TB orientation program.
4. Developed a power point presentation on TB for Pre- university students orientation program.
5. Updated the Power Point Presentation on TB orientation for Para-medical College students.
6. Initiated the process of updating the display panels in the Scientific Gallery in coordination with all the divisional heads.
7. 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

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 2014 to March 2015 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 is as under

Sl. No.	Category	Sanctioned	In Position	Vacant
01	Group 'A'	15	09	06
02	Group 'B' Gazetted Non-Gazetted	03 29	01 23	02 06
03	Group 'C'	98	92	06
		145	125	20

Recruitments

Sl. No.	Name	Designation	Date
01	Appointment of Dr.Poornima	Medical Officer	06/02/2015

Promotions

Sl. No.	Name	Designation	Date
01	Nil	Nil	Nil

Retirements

Sl. No.	Name	Designation	Date
Superannuation			
01	Dr.Parameshwara Naik retired on Superannuation	Ex - CMO (NFSG)	30/06/2014
02	Sri.Ramakrishnaiah	Ex - Cook	Expired on 21/11/2014
03	Sri.P.M.Sheshadri retired on Superannuation	Ex - Head Clerk	31/03/2015

Voluntary Retirement

Sl. No.	Name	Designation	Date
01	Nil	Nil	Nil

Resignation from Service

Sl. No.	Name	Designation	Date
01	Nil	Nil	Nil

Transfers from NTI

Sl. No.	Name	Designation	Date
01	Sri.B.A.Muralidhara	UDC	20/11/2014
02	Smt.Harmeet Kaur Saini	Statistical Assistant Gr.II	25/03/2015

Transferred to NTI

Sl. No.	Name	Designation	Date
01	Nil	Nil	Nil

Training of Officers/Officials in administrative matters

Sl. No.	Details of Training	Date	Venue	Name of the Officials
01	SSS Induction Training	19/05/14 to 06/06/14	Ministry of Statistics & Programme Implementation, NSSTA, New Delhi	Smt.Harmeet Kaur Saini, Statistical Assistant Gr.II and Sri.Arjun Kumar Gupta, Statistical Assistant Gr.II
02	SSS Induction Training Programme	3 rd to 28 th November 2014	Zonal Training Centre, Kolkota	Smt.Harmeet Kaur Saini, Statistical Assistant Gr.II and Sri.Arjun Kumar Gupta, Statistical Assistant Gr.II
03	Indian Society of Radiographers & Technologies National Conference – 2014 “NCISRT” 14	13 th – 14 th December 2014	Thiruvananthapuram	Sri.M.P.Saravanan, X-T, Sri.S.Ravindra, X-T, Sri.R.Padmasha, X-T, Sri.K.K.Anandababu,X-T

Civil & Electrical works and Maintenance

The Civil 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.90,00,000/- 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 2014-2015 for carrying out maintenance and new works. An amount of Rs.90,00,000/- was spent for Major Work (till March 2015).

Civil, Horticultural and Electrical Works

1. Providing corridor covered with poly carbonate sheet roofing and external painting for the guest rooms for Cauvery Nivas
2. Electrical works for conversion of Reception Room into Guest room at Cauvery Nivas.
3. Providing Vitrified tile flooring over existing mosaic floor in Krishna Nivas, Cauvery Nivas, Training Unit and Lab Building.

4. Providing Air Conditioners with power points for Guest House.
5. Providing Panel board and service connection for Kalanikethan Auditorium.
6. Relocating AC Indoor units of Kalanikethan Auditorium.
7. Providing fittings and rewiring for Autoclave room and washing room in the Laboratory of Robert Koch Block.
8. Renovation of toilets in front of NDRS Unit with vitrified floor tiles work and painting etc.,
9. Running and Maintenance of 125 KVA DG Set and 1 No. of Passenger Lift.
10. Provision of VIP Refreshment room in Ground Floor of P.V. Benjamin Block.
11. Electrical Work for VIP Guest Refreshment area in Ground Floor, Library of P.V. Benjamin Block.

Transport Unit

The Institute had fleet of 11 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. Two vehicles were disposed after condemnation. Now, the Institute is having a fleet of 9 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.

The details of Plan & Non-plan budget allocation and expenditure incurred for the financial years 2010-11, 2011-12, 2012-13 & 2014-15 are furnished below.

Plan Budget

	PLAN	(Rs. in lakhs)
Year	Budget allocated (Rs.)	Expenditure (Rs.)
2011-2012	205.00	174.12
2012-2013	240.00	233.67
2013-2014	265.00	207.43
2014-2015	265.00	196.89

Non Plan Budget

	NON PLAN	(Rs. in Lakhs)
Year	Budget allocated (Rs.)	Expenditure (Rs.)
2011-2012	686.00	665.40
2012-2013	705.00	705.86
2013-2014	806.50	805.57
2014-2015	800.00	798.39

The revenue generated by the Institute for the year 2014-15 through various sources was credited to the consolidated fund of Government of India as given in the table below.

REVENUE GENERATED

Year	Amount (Rs.)
2013-2014	17,51,417-00
2014-2015	5,52,087.00

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. Krishna Nivas block has 27 rooms and Cauvery Nivas has 20 rooms. The Mess attached to the Hostel provides hygienic boarding facility.

7. 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:

a. PARTICIPATION & CHAIRED IN TECHNICAL ACTIVITIES

At NTI

Sl. No.	Particulars	Date	Participant
1.	Chaired the selection committee for recruitment of the staff for NDRS.	4 th Sep 2014	Dr Prahlad Kumar, Director
2.	Chaired the CME for private practitioners with the research project titled "Improving TB case-finding efficiency and management of TB cases in private health care facility in Bangalore city".	16 th Sep 2014	Dr Prahlad Kumar, Director
3.	Inaugurated third Operational research course held from 22 nd September to 2 nd October 2014.	22 nd Sep 2014	Dr Prahlad Kumar, Director
	Inaugurated module 2 of OR course and addressed the participants.	28 th Sep 2014	Dr Prahlad Kumar, Director

Sl. No.	Particulars	Date	Participant
4	<p>Dr. V.K. Chadha as a team member visited Mumbai, 'to assess progress in Mumbai TB Mission and pilot for Universal access to TB Care'. The report of the visit was prepared and submitted to CTD on 15th Dec 2014.</p> <p>The key important contributions from Dr. V K Chadha were pertained to :-</p> <p>(1) Proposed NTI support in active case finding in slums include; cough and other symptoms suggestive of TB as screening criteria at Private Health facilities.</p> <p>(2) Pointing out prescription errors with respect to divided doses by consultants of Godrej Hospital and suggesting re-sensitization of the consultants</p> <p>(3) Suggesting a systematic prescription, audit of prescriptions at all pharmacies and follow up corrective actions</p> <p>(4) Pointing out that consultants at Holy Spirit Hospital were advising all available tests simultaneously leading to wastage of scarce resources-they were advised to follow a logarithmic approach.</p>	10 th – 11 th Dec 2014, Mumbai	Dr. V.K. Chadha Public Health Consultant
5.	Inaugurated along with DDG (TB) "2 nd line DST training organized at ICELT" and "intensified training programme for TB and HIV" at Training Unit of NTI. The other Facilitators of the training were: Dr A Sreenivas, NPO-WHO India; Dr Malik Parmar, NPO-DR TB WHO, India; Dr Ranjani Ramachandran, NPO-laboratories WHO, India; Consultants from CTD & States; STOs and National AIDS control officers.	15 th Dec 2014	Dr Prahlad Kumar, Director
6	Dr. V.K. Chadha participated in 'Training for CHS Public Health Specialist held at NCDC, New Delhi on policy and initiative update': chaired the deliberations on the last day.	21 st to 23 rd Jan 2015	Dr. V.K. Chadha Public Health Consultant
7	Training of "Masters Trainers training on Standards for TB Care in India" (STCI) in two batches which was facilitated by Dr Sreenivas, WHO NPO and Dr Kiran Rade, CTD Representative.	16 th to 20 th Feb. 2015	Dr Prahlad Kumar, Director

Sl. No.	Particulars	Date	Participant
8	Inaugurated the meeting of RNTCP data analysis, which was attended by Dr Sreenivas, Dr Puneet Dewan from Gates Foundation, Dr Kiran Rade and Dr Avijith Chowdry and from NTI, Dr Chadha, Dr Uma Shankar, Dr Tripathy, Dr Ravichandra, Mrs Reena, Mr Jithendra, Mrs Malathi and Mrs Sharadha.	18 th Feb 2015	Dr Prahlad Kumar, Director
9	Visited SMS Medical College, Jaipur, Rajasthan and held discussion with Dr Bharathi Malhotra, HOD, about lab support for PMDT in Jaipur, and also accreditation of 2nd line DST for SMS Medical college, Jaipur.	7 th Jul 2014	Dr Prahlad Kumar, Director
10	Participated in the “Launch of First Nationwide Anti-Tuberculosis Drug Resistant Survey 2014-15” by Hon. Health & Family Welfare Minister at Hotel Oberoi, New Delhi.	6 th Sep 2014	Dr Prahlad Kumar, Director Dr. V.K. Chadha Public Health Consultant
11	Dr. V.K. Chadha facilitated &), participated in ‘Masters trainers training programme on Standards of TB Care in India’ held at NTI	19 th -20 th Feb 2015	Dr. V.K. Chadha Public Health Consultant Dr. Bhoomika Bajaj , Jr. Epidemiologist

Outside NTI

Sl. No	Particulars	Date	Participant
1.	Relapse study training Programme at NIRT	23 rd July 2014	Dr.N.Selvakumar and Mr.Ranganatham
2.	Relapse study tour to Mandya	12/11/2014	Dr.N.Selvakumar, Mr Raganatham, and Mr.Sharath, and Mr. Somashekar
3	Visited DR-TB site at Jaipur, had interaction with the TB Specialist, I/c DR-TB site and discussed about implementation of PMDT in the state of Rajasthan.	21 st Oct 2014	Dr Prahlad Kumar, Director

Sl. No	Particulars	Date	Participant
3	Visited IRL Ajmer along with Director, STDC and reviewed various issues related to IRL. An observation was made about non-functioning of negative pressure area and MGIT liquid culture machines. The concerned IRL team was informed to send a communication to CTD and STO, Rajasthan to take immediately action to rectify the machine to make them operational, without further delay.	19 th Dec 2014	Dr Prahlad Kumar, Director
3.	Visited C&DST lab, SMS Medical College and held detailed discussions with Dr Bharathi Malhotra, HOD, Microbiology Department, SMS Medical College Lab and also had interaction with the Facilitators and participants of the on-going training on C&DST. Dr Bharathi Malhotra also mentioned about the training of SMS medical college lab staff at NTI in II line DST, since the lab has recently been accredited for II line DST. In response the undersigned informed that based on the request from STO, appropriate training support will be provided by NTI. During the discussion, it was also pointed out that liquid culture machine MGIT 960 at IRL, Ajmer has not been put to use since many years. Hence, State TB control authorities in consultation with CTD and NRL NTI, Bangalore may consider shifting this machine from IRL Ajmer to C&DST lab at Jaipur to facilitate proper utilization of the machine. It was also reiterated that NTI will provide all technical support for effective management of PMDT in the state of Rajasthan.	9 th Feb 2015	Dr Prahlad Kumar, Director
4	Attended NIMHANS 19 th convocation function where Hon'ble Prime Minister of India, Shri Narendra Modi was the chief guest and Hon'ble Governor of Karnataka, Shri Vajubhai Vala; Hon'ble Chief Minister of Karnataka, Shri Siddaramaiah; Hon'ble Union Minister for H&FW, GOI, Shri Jagat Prakash Nadda and Hon'ble Minister of State for Medical Education, Govt. of Karnataka, Dr Sharanprakash R Patil were present.	18 th Feb 2015	Dr Prahlad Kumar, Director
5	Attended the "Pre-launch discussion meeting of the childhood TB guidelines" held at NITRD, New Delhi.	20-22 nd March 2015	Dr Prahlad Kumar, Director

b. PARTICIPATION OF CONFERENCES / CME programme.

Sl. No	Particulars	Date	Participant
1.	Attended National conference on environment in Mumbai and presented a paper on TB free India, Myth or Reality. Chaired scientific session and participated in group discussion	28th & 29th June 2014	Dr Prahlad Kumar, Director
2.	Attended and delivered welcome address in the CME programme arranged by Clinton foundation to launch “Initiative for Promoting Affordable and Quality TB Tests” (IPAQT) & New Approaches & Developments; responses to relevant queries by the participants were provided at Le Meridien hotel, Bangalore	24 th Aug 2014	Dr Prahlad Kumar, Director Dr. V.K. Chadha Public Health Consultant
3	Ist CME programme was held at NTI, Out of 20 PPs, 18 of them from various nursing homes attended the CME and KMC certificates were issued with credit points. Dr. V.K. Chadha participated in a CME meeting and presented the topic on “Standards of TB Care in India” Dr. S.K. Tripathy presented the topic on Drug resistance TB – challenges and solutions	16 th Sept 2014	Dr. V.K. Chadha Public Health Consultant Dr. S.K. Tripath TB Specialist
4	Participated in a CME meeting and presented the topic on “Standards of TB Care in India” at Tumkur	11 th Oct 2014	Dr. V.K. Chadha Public Health Consultant
5.	On the invitation of STO and President, Indian Association of Medical Microbiologists, attended National MICROCON 2014 conference held at Birla Auditorium, Jaipur. Participated in the panel discussion, chaired scientific sessions and was Chief Guest of the conference in the concluding session.	19 th Oct 2014	Dr Prahlad Kumar, Director
6	Actively participated in the CME meeting and presented the topic on “Standards of TB Care in India” Presented the topic on Drug resistance TB – challenges and solutions at P.D. Hinduja Hospital, Bangalore.	21 st Oct 2014	Dr. V.K. Chadha Public Health Consultant Dr. S.K. Tripath TB Specialist

Sl. No	Particulars	Date	Participant
7	Dr. V.K. Chadha chaired the CME meeting and presented the topics on “Standards of TB Care in India” & “Operational guideline of a private public mix project for improving TB diagnostic and treatment efficiency” Dr. S.K. Tripathy presented the topic on Drug resistance TB – challenges and solutions conducted at NTI.	28 th Nov 2014	Dr. V.K. Chadha Public Health Consultant Dr. S.K. Tripath TB Specialist
8	Inaugurated the scientific session along with President of the Conference, Dr Rohit Sarin and Vice Chairman, Dr V.K. Arora. Also the first scientific session was chaired by the undersigned, where presentation was made on the selected topics to finalise papers for Awards. The undersigned was also the Moderator for panel discussion of laboratory management under RNTCP and chaired two more sessions in the post-lunch session. Made presentation on “status and updates on the RNTCP” during the conference.	6 th Feb 2015	Dr Prahlad Kumar, Director
9	Attended the 69 th NATCON. a) Dr VK Chadha presented a paper on ‘Cost analysis of diagnostic algorithms for pulmonary tuberculosis using Gene x-pert in different combinations with sputum microscopy and X-ray’ b) Dr.V.KChadha was chairperson for Session on “Epidemiological aspects of Tuberculosis” c) Mr. Joydev Gupta&, Mr. Nagendra presented the paper titled ‘Knowledge of private practitioners of Bangalore City regarding diagnosis, treatment of pulmonary TB and compliance with case notification’.	Mumbai, 6 th - 7 th Feb 2015	Dr.V.K. Chadha, Public Health Consultant Mr. Nagendra, H.V & Mr. Joydev Gupta, FI

c. Participation in the ISS Training Programmes & Other Training Programmes

Sl. No.	Participants	Date	Details of training	Remarks
1	Mrs. N.Sangeetha, Chief Statistical Officer (NFSG)	15 th - 19 th Sep 2014	ISS in service training on Monitoring & Evaluation including Impact Assessment	Administrative training College of India (ASCI), Hyderabad
2	Mrs. N.Sangeetha, Chief Statistical Officer (NFSG)	09 th – 27 th Mar 2014	Advance Management Programme for ISS officers (Director Level) Domestic Component Learning (DLC)	Indian Institute of Management, (IIM) Calcutta, Joka

d. Workshops

At NTI

Sl. No.	Particulars	Date	Faculty
1	Attended workshop to discuss specific and common issues, with various institutions under the Min. of H&FW/Dte.GHS, which was chaired by Mr Chandramouli, Chairperson, Food Safety and Standards Authority of India. Presentation on activities of NTI was made by Director and suggestions on strengthening of various components were made by the members. It was informed in the meeting that NTI is efficiently working with the current mechanism and is the technical arm of CTD under DGHS and all the issues are promptly addressed by personal intervention of DG, DDG (TB) and the concerned Joint Secretary. Therefore, NTI does not propose any autonomy.	3 rd & 4 th April 2014	Dr Prahlad Kumar, Director
2	Attended the workshop on technical and operational guidelines in the Union Office, New Delhi. Guided discussion and facilitated drafting the technical and operational guidelines.	29 th May 2014	Dr Prahlad Kumar, Director

Sl. No.	Particulars	Date	Faculty
3	Participated in the workshop on 'Tuberculosis: Tribal perspective' held at Regional medical research centre for tribals (ICMR), Jabalpur. Chaired scientific sessions and was one of the panelists for panel discussion where relevant information pertaining to MDR-TB in India and NDRS was provided to the experts attending the conference.	21 st June 2014	Dr Prahlad Kumar, Director
4	Attended the seminar 'launch of the WHO bulletin theme issue on BRICS and global health and related events' at New Delhi.	23 rd & 24 th June 2014	Dr Prahlad Kumar, Director
5	Attended National workshop on DST guided treatment for DRTB patients in India held at Hotel Trident, Mumbai. Chaired scientific session and guided group discussion during the workshop.	26-28 August 2014	Dr Prahlad Kumar, Director
6	Attended Research dissemination workshop at National Institute for Research in Tuberculosis (NIRT), Chennai, chaired scientific sessions and guided group discussions.	2 nd & 3 rd September 2014	Dr Prahlad Kumar, Director
7	Dr. V.K. Chadha was facilitator in OR course module 1 & 2 facilitated development of 4 protocols & provided inputs to other protocols developed during the workshop besides delivering 3 lectures and leading the plenary sessions.	22 nd Sept - 2 nd Oct 2014,	Dr. V.K. Chadha Public Health Consultant
8	On the invitation of CTD, participated in the "Workshop on formulating strategies for intensified TB control campaign under the RNTCP" held at Hotel Four Points, New Delhi. Guided group discussion, had interaction on various components of RNTCP and provided inputs and suggestions to intensify RNTCP.	8 - 9 th October 2014	Dr Prahlad Kumar, Director
9	Attended ZTF South-2 workshop at Mahabalipuram, Tamil Nadu, addressed the participants in the inaugural and concluding sessions, guided group discussion and chaired scientific sessions.	15 - 16 th October 2014	Dr Prahlad Kumar, Director
10	Participated in the ZTF north zone workshop at Chandigarh, addressed the participants in the inaugural & concluding sessions, chaired scientific sessions and guided group discussion.	13-14 February 2015	Dr Prahlad Kumar, Director
11	Attended workshop for technical and operational guidelines RNTCP held at New Delhi TB Centre, New Delhi, organized by CTD.	26-28 February 2015	Dr Prahlad Kumar, Director
12	Dr. V.K. Chadha facilitated the OR sensitization workshop organized for State Govt. officials at NTI and he delivered a lecture on 'Formulation of protocol' & gave inputs for operationalization of research projects.	27 th March 2015	Dr. V.K. Chadha Public Health Consultant

Outside NTI

Sl. No.	Particulars	Date	Resource person
1	Attended workshop to discuss specific and common issues, with various institutions under the Min. of H&FW/Dte.GHS, which was chaired by Mr Chandramouli, Chairperson, Food Safety and Standards Authority of India. Presentation on activities of NTI was made by Director and suggestions on strengthening of various components were made by the members. It was informed in the meeting that NTI is efficiently working with the current mechanism and is the technical arm of CTD under DGHS and all the issues are promptly addressed by personal intervention of DG, DDG (TB) and the concerned Joint Secretary. Therefore, NTI does not propose any autonomy.	3 rd & 4 th April 2014	Dr Prahlad Kumar, Director
2	Dr. V.K. Chadha attend the Research Dissemination Workshop, he presented the Operational Research activities undertaken at NTI during the last 5 years held at NIRT, Chennai.	2 nd to 3 rd Sept 2014,	Dr. V.K. Chadha Public Health Consultant
3	Facilitated the training activities of EQA in Sputum smear microscopy to STDC Medical officers and DTOs organized at STDC Patna	13 th -17 th Oct 2015	Dr.N.Selvakumar and Mr Ranganatham
4	Attended a Workshop on evaluation of new TB diagnostics at NIRT, Chennai	8 th -12 th Dec 2014	Mr.George Sebastian
5	Participated in the workshop to revise the Technical & Operational Guidelines of RNTCP, as leader of the group on diagnosis of TB held at NDTB Centre, New Delhi. Revisions, pertaining to revised diagnostic algorithm in pulmonary, Extra-pulmonary, pediatric, TB in HIV and MDR- TB were undertaken. Chapter on diagnosis was prepared under his group leadership and the same was submitted to CTD.	26 th - 28 th Feb 2015	Dr. V.K. Chadha Public Health Consultant
6	NRL EQA visit to Rajasthan was conducted	9 th -14 th Feb 2015	Dr.Selvakumar and Mr.Ranganatham
7	Visited Nagpur to give training in MGIT procedure.	9 th -13 th Feb 2015	DR.Lavanya and Mrs.Shivashankari
8	Dr. V.K. Chadha , as Chief Guest participated in TB control program a dissemination workshop on Strengthening Health Outcomes through the Private Sector (SHOPS) Karnataka state; held at Bangalore to share outcomes and lessons learned from its Tuberculosis Prevention and Care Initiative.	10 th March 2015	Dr. V.K. Chadha Public Health Consultant

e. Meetings

At NTI

Sl. No.	Meetings/CME	Date	Faculty
1	Attended the Training of Trainers for National Drug Resistance Survey: delivered opening remarks as Chairperson & provided inputs during discussions of the meeting.	9 th & 10 th June 2014	Dr. V.K. Chadha Public Health Consultant
2	Participated in the meeting of the Oversight for National Drug Resistance Survey: to review the progress & to deal with challenges held at NTI	10 th June 2014.	
3	Participated in the review meeting on TB-HIV collaborative activities at NTI, Bangalore. Dr Ashok Kumar, DDG (BSD), DAC / MOHFW / GOI graced the occasion as Chief Guest. Dr Sachdeva, CTD; STOs; State AIDS control Officers; STDC Directors; TB-HIV Coordinators and Consultants from southern states participated in this meeting.	16 th to 17 th July 2014	Dr Prahlad Kumar, Director
4	Dr. V.K. Chadha attended the DRS meeting: to review the progress and challenges at NTI.	17 th Nov 2014	Dr Prahlad Kumar, Director Dr. V.K. Chadha Public Health Consultant
5	Dr.V.K.Chadha, led the meeting 'Discussion on epidemiological analysis on latest available programme data': The structure of epi report for the forthcoming joint monitoring mission & the responsibilities for difference institutes/organizations were allotted. Detailed inputs were given regarding analysis of the routine surveillance data.	18 th Feb 2015	Dr. V.K. Chadha Public Health Consultant Dr. Bhoomika Bajaj, Jr. Epidemiologist (Contractual) & Mrs. Sharada MA, SIG II, also participated in the discussion.

Outside NTI

Sl. No	Meetings	Date	Resource person
1	Attended meeting chaired by DGHS, to discuss specific and common issues with the institutions under technical supervision of DGHS concerning strengthening of Directorate General of Health Services.	2 nd April 2014	Dr Prahlad Kumar, Director
2	Attended PMDT south zone review meeting in Hyderabad	10 th - 11 th Apr 2014	Dr.N.Selva Kumar
3	Attended SEAR TB technical working group meeting in New Delhi. Actively participated and guided group discussions.	28 th & 29 th April 2014	Dr Prahlad Kumar, Director
4	Meeting with Dr Neeraj Kulshrestha in CTD, DteGHS, about revision of operational and technical guidelines and also to organize training programme on ACSM. Director assured the fullest cooperation to CTD for all the activities including revision of operational and technical guidelines and organization of training programme for ACSM.	30 th Apr 2014	Dr Prahlad Kumar, Director
5	Participated in the meeting at STDC and SACS, Karnataka along with Dr Sachdeva. Discussions were held on RNTCP and TB-HIV co-infection in Karnataka. Director was requested to provide technical support for strengthening PMDT in Karnataka. Director assured full technical support as per requirement of Karnataka state for effective management of RNTCP, TB-HIV co-infection.	9 th May 2014	Dr Prahlad Kumar, Director
6	1. Attended ACSM HRD Group workshop in Nirman Bhavan, New Delhi. Chaired the meeting along with Dr Neeraj Kulshrestha and provided guidance. It was decided to strengthen capacity building of HRD in the field of ACSM and Director assured that all technical support for capacity building in the field of ACSM would be provided by NTI, as decided by CTD and NTI would organize series of training programmes. 2. Meeting with DDG (TB) to discuss various technical support being provided by NTI to RNTCP. It was informed by DDG that NTI may support some of the districts for rolling out PMDT and supervise monitoring and evaluation. It was informed by Director that NTI would be very happy to further strengthen the support to RNTCP as per requirement of CTD.	28 th May 2014	Dr Prahlad Kumar, Director

Sl. No	Meetings	Date	Resource person
7	Attended RNTCP Review meeting of Karnataka state along with DDG (TB) and Addl. DDG, Dr Sachdeva. Interacted with the TB control programme authorities of Govt. of Karnataka and the DTOs and addressed the participants in the concluding session. During the discussion, the issue of providing technical support by NTI to the state of Karnataka was also raised and Director, NTI assured to provide the desired support to Kar. state for effective management of RNTCP, as and when the request received from CTD and state TB control programme authorities of Karnataka state.	11 th & 12 th June 2014	Dr Prahlad Kumar, Director
8	NRL Mentoring visit to Sikkim and NRL Bhubaneswar	15 th – 21 st June 2014	Dr.N.Selvakumar
9	Attended National Research Committee meeting at Nirman Bhavan, New Delhi. Actively participated and provided technical inputs.	20 th Jun 2014	Dr Prahlad Kumar, Director
10	Attended a seminar on “Evidence in Public Health”: relevant experiences were shared with other participants. at Indian Institute of Public Health, Bangalore	14 th July 2014	Dr. V.K. Chadha Public Health Consultant
11	Attended the meeting “As Expert” arranged by Bill & Melinda Gates Foundation on “Internal dissemination meeting of initial survey results on patient pathways to and quality of TB care, early modeling and discussion on implications” at India International Centre, 40 Max Mueller Marg, New Delhi	21 st & 22 nd Aug 2014	Dr. V.K. Chadha Public Health Consultant
12	<ol style="list-style-type: none"> 1. Meeting with DG to appraise him about the progress of NDRS and to request him to inaugurate launching of 1st sample of NDRS at NTI. DG appreciated the efforts of NTI, Bangalore and informed that he would review NDRS on an appropriate date during July 2014. 2. Meeting with DDG (TB), Dr Ranjani Ramachandran, Dr Sachdeva and Dr Anand regarding sending stationery and sputum sample kits to the TUs where NDRS is to commence from 1st July 2014. It was decided by DDG that stationery items and sputum sample kits could be dispatched by speed post as this is a govt. agency. 3. Meeting with Dr Sreenivasa and Dr Puneet Diwan regarding initiation of NDRS from 01.07.2014. 	23 rd & 24 th June 2014	Dr Prahlad Kumar, Director

Sl. No	Meetings	Date	Resource person
13	Meeting with Dr Behera, Chairman, NTF and various Professors of medical colleges and appraised them about initiation of NDRS from 1st July 2014 and desired their cooperation for effective conduction of the survey.	28th & 29th June 2014	Dr Prahlad Kumar, Director
14	Attended the selection committee meeting at NIRT, Chennai on the request of DG ICMR and Director, NIRT, Chennai for recruitment to the post of Scientist 'C' (medical) at NIRT, Chennai.	11 th Jul 2014	Dr Prahlad Kumar, Director
15	On the invitation of DG ICMR and Director, NIRT, Chennai, attended the selection committee meeting for recruitment to the post of Scientist 'D' (medical) at NIRT, Chennai.	11 th Aug 2014	Dr Prahlad Kumar, Director
16	Attended and chaired the meeting of technical working group and national experts on DST guided treatment of DRTB held at New Delhi TB Centre, New Delhi.	19 th Aug 2014	Dr Prahlad Kumar, Director
17	1. Meeting with Dr Prabha Desikan, Microbiologist, NRL, Bhopal to finalise Agenda for the NRL coordination committee meeting to be held on 21-22 August 2014. 2. Attended NRL coordination committee meeting held at BMHRC, Bhopal. Chaired scientific session and guided group discussion.	20 th Aug 2014	Dr Prahlad Kumar, Director
18	Attended NRL Coordination meeting At BMHRC Bhopal, Madhya Pradesh	21 st and 22 nd July 2014	Dr.N.Selvakumar and Ms.Reena
19	Dr. V.K. Chadha participated in a meeting on TB-DR oversight group held at CTD: to review the progress & to deal with challenges	5 th Sep 2014	Dr. V.K. Chadha Public Health Consultant
20	Participated in the RNTCP review meeting at Karnataka State Training Institute, Bangalore and addressed the participants.	18 th Sep 2014	Dr Prahlad Kumar, Director
21	a. Attended Annual TB laboratories meeting at Udaipur, Rajasthan, addressed the participants in the inaugural and concluding sessions, participated in scientific session and guided group discussion. b. Held discussion with Dr Sachdeva, Dr Rohit Sarin, Dr Mayank Ghedia and Dr Paramasivan for finalization of agenda for annual TB lab meeting on 23.09.2014.	24-26 th Sep 2014	Dr Prahlad Kumar, Director Dr.N.Selvakumar Dr.Lavanya.V and Mrs.Reena
22	Dr. V.K. Chadha participated in a meeting on Intensification of RNTCP as leader of one of the task groups at New Delhi	8 th -9 th Oct 2014,	Dr. V.K. Chadha Public Health Consultant

Sl. No	Meetings	Date	Resource person
23	Meeting with STO, Rajasthan, to review various components of PMDT and the support required from NRL NTI for development of labs in Rajasthan. Also visited C&DST lab at SMS Medical College and had discussion with Dr Bharathi Malhotra, HOD, Microbiology Department, about accreditation of their lab in 2nd line anti-TB drugs.	20 th Oct 2014	Dr Prahlad Kumar, Director
24	Attended the meeting of Chest Physician's Association of Bangalore held at Indiranagar, Bangalore. The Chest Physicians were appealed to render their helping hand in effective implementation of RNTCP and PMDT in Bangalore.	25 th Oct 2014	Dr Prahlad Kumar, Director
25	Attended the meeting of Indian Medical Association (IMA), Bangalore held at Bommasandra, in which doctors of IMA, Bangalore Branch, Director, Bangalore Medical College (BMC), etc., participated. The office bearers of IMA and BMC were requested to render their helping hand in effective implementation of RNTCP and PMDT in Bangalore.	26 th Oct 2014	Dr Prahlad Kumar, Director
26	<ol style="list-style-type: none"> 1. A presentation on the status of NDRS was made in DDG's Chamber where DDG (TB), both Additional DDGs of CTD, Consultants responsible for PMDT, WHO NPO Dr Sreenivas and Dr Malik Parmer were present. Detailed interactions were held. DDG expressed appreciation on the work being carried out for NDRS survey by NTI team. 2. Meeting with Dr Sachdeva, Addl.DDG, Dr Anand and Dr Shah, CTD Consultants, regarding the OR course to be organized at NTI in the month of January 2015. Dr Shah also discussed about the support to be provided by NTI for TB-HIV review meetings to be held in NTI in the month for December 2014. 3. Meeting with Dr Neeraj Kulshrestha, Dr Kiran Rade, Dr Arindam regarding organization of sensitization programme on Indian Standards of TB Care for IMA doctors by CTD at NTI on 24-25 January 2015. It was decided that CTD will communicate to IMA doctors in this regard. 	7 th Nov 2014	Dr Prahlad Kumar, Director
27	Meeting with CDC Atlanta team regarding collaboration between CDC Atlanta and NTI. Dr Kayla informed about joining of Dr Jacek, CDC Medical Officer in RNTCP India team, who will be coordinating with NTI on collaborative projects on the identified areas like surveillance system, support to PMDT, establishment of PMDT in private sector, urban TB control programme, involvement of private sector in TB and infection control measures, etc.	8 th Nov 2014	Dr Prahlad Kumar, Director

Sl. No	Meetings	Date	Resource person
28	Attended WHO SEA regional TB control programme managers meeting. Actively participated, chaired scientific session and guided group discussions.	10-14 th November 2014	Dr Prahlad Kumar, Director
29	Meeting with Director, National JALMA Institute for Leprosy and other Mycobacterial Diseases (NJIL&OMD), Agra to finalise the Agenda for Joint SAC meeting to be held on 29 th & 30 th November 2014.	28 th Nov 2014	Dr Prahlad Kumar, Director
30	Attended Joint SAC meeting of NIRT, Chennai & NJALMA Institute, Agra held at Agra.	29-30 th November 2014	Dr Prahlad Kumar, Director
31	<p>1. Meeting with DDG (TB) at CTD to discuss pending administrative issues related to NTI in CTD. Director requested DDG to fill up the vacant posts at NTI, especially Administrative Officer, Veterinarian, Additional Director, CMO, TB Specialist and Bacteriologist, on priority basis and expressed difficulties being faced due to non-filling up of the vacant posts. DDG assured about filling up of the vacant posts at NTI by taking up the matter with the concerned authorities to expedite the matter.</p> <p>2. Meeting with Dr Sachdeva, Dr Ranjani Ramachandran, Dr Amar Shah and Dr Mayank Ghedia in Dr Sachdeva's chamber to discuss lab scale of plan and updates on NDRS being carried out at NTI. A presentation on updates of NDRS was made by Director and requested the personal support of Dr Sachdeva and Dr Ranjani for timely completion of the survey.</p>	1 st Dec 2014	Dr Prahlad Kumar, Director
32	Attended National expert committee on diagnosis and management of TB under RNTCP in Nirman Bhavan, New Delhi. Actively participated and provided suggestions on various points raised during the discussion.	2 nd & 3 rd December 2014	Dr Prahlad Kumar, Director
33	Meeting with STO, Rajasthan and DDG (TB) at Jodhpur to finalise the Agenda for the ZTF west zone workshop to be held on 18 th & 19 th December at Jodhpur.	17 th Dec 2014	Dr Prahlad Kumar, Director
34	Attended ZTF west zone workshop, addressed the participants in the inaugural and concluding sessions, chaired scientific session and guided group discussion.	18 th & 19 th December 2014	Dr Prahlad Kumar, Director
35	Meeting with DDG (TB) and Dr Salhotra to finalise the Agenda for STO consultants meeting to be held at Bhubaneshwar.	5 th Jan 2015	Dr Prahlad Kumar, Director

Sl. No	Meetings	Date	Resource person
36	Attended STO consultants meeting at Bhubaneswar. Chaired scientific sessions along with DGHS, chaired other sessions, guided group discussion and made presentation on status of NDRS as on 31.12.2014. Also addressed the participants in the concluding session.	6 th to 8 th January 2015	Dr Prahlad Kumar, Director
37	Attended National Research Committee meeting in Nirman Bhavan, New Delhi and actively participated as Member of the committee and provided necessary inputs. During the meeting, discussed with Dr Sachdeva and Dr Neeraj Kulshrestha, about providing technical support to various components of RNTCP and also discussed with Director, Admn., CTD regarding pending administrative issues of NTI.	4 th Feb 2015	Dr Prahlad Kumar, Director
38	Dr. V.K. Chadha participated in the National OR committee meeting & presented protocol on 'Active TB Case Finding in Urban Slums of Bangalore City'.	4 th Feb 2015	Dr. V.K. Chadha Public Health Consultant
39	Meeting with Dr V.K. Arora, Vice Chairman, TAI, and Dr Dholakia, Secretary General, TAI, Maharashtra to finalise Agenda for the inaugural session and organization of the scientific sessions of NATCON 2014.	5 th Feb 2015	Dr Prahlad Kumar, Director
40	Meeting with the officials of State TB Cell and WHO Consultants in Jaipur to discuss status of PMDT in the state of Rajasthan. A visit to the DTC and treatment units in Jaipur was made.	8 th Feb 2015	Dr Prahlad Kumar, Director
41	Attended the National DRS review meeting at CTD, where presentation on progress of NDRS was made. Detailed discussions were also held with Dr Sachdeva, Dr Neeraj Kulshrestha, Dr Malik Parmar, WHO NPO DR-TB and other consultants of CTD. During the discussion, the undersigned was requested to represent CTD in the ZTF meeting of North zone to be held at Chandigarh on 13 th & 14 th February 2015, for which Director agreed.	10 th Feb 2015	Dr Prahlad Kumar, Director
42	Meeting with the ZTF Chairperson, Organizing Secretary and STF Chairman to finalize Agenda for the inaugural session of ZTF to be held on 13-14 Feb 2015.	12 th Feb 2015	Dr Prahlad Kumar, Director
43	Meeting with new DDG (TB) Dr Sunil Khaparde; Chairman, NTF, Dr Behera; and Chairman, ZTF North Zone, Dr Bharadwaj; to finalise the Agenda for inauguration of NTF at Shimla.	13 th Mar 2015	Dr Prahlad Kumar, Director
44	Attended National Task Force (NTF) meeting at Shimla, guided group discussion, made presentation and addressed the gathering in concluding session.	14 th & 15 th March 2015	Dr Prahlad Kumar, Director

Sl. No	Meetings	Date	Resource person
45	Meeting with STO, Himachal Pradesh, to discuss intake of patients under NDRS and he was requested to make personal visit to the TUs selected in Himachal Pradesh to improve intake of patients. The STO assured fullest cooperation in this regard.	16 th Mar 2015	Dr Prahlad Kumar, Director

f. Central Internal Evaluation & EQA Onsite Evaluation (OSE)

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. The details of such visits are as under:

Sl. No.	Name & Designation of the officer participated	Period	Place of conducting
1	Dr.N.Selvakumar and H.D. Surendra	30 th June-5 th July 2014	Visited STDC Nagpur for OSE
2	Smt. N.Sangeetha, Chief Statistical Officer (NFSG)	14 th – 18 th July 2014	Motihari(East Champaran) district &State TB cell, STDC Patna, Bihar,
3	Smt. N.Sangeetha, Chief Statistical Officer (NFSG)	22 nd – 26 th Sep 2014.	Hazaribagh district & State TB cell, Ranchi &STDCItkki, Jharkhand State
4	Dr.N.Selvakumar and Mr.Ranganatham	from 27 th -31 st October.	Annual OSE visit to STDC IRL Pune, and C&DST Labs Mumbai in Maharashtra

g. **INSTITUTIONAL ETHICS COMMITTEE MEETING**

Meeting	Participants	Date & Place
<p>16th Institutional Ethics Committee Meeting on 16.08.2014 In TCC room, NTI, Bangalore</p>	<p>Brief presentation of the following 5 protocols were made and discussion on the ethical issues pertaining to each protocol was held:</p> <ol style="list-style-type: none"> 1. 99 DOTS – Using Mobile Phones to Monitor and Improve Adherence to Tuberculosis Medications. 2. SMS for Sure Observational Study – Pilot Project (to evaluate the impact of SMS on TB treatment adherence in newly diagnosed TB patients enrolled under RNTCP programme). 3. Prevalence and speciation of Non tuberculous Mycobacterium under programmatic settings in India. 4. Molecular characterization of drug resistance mutations of mycobacterium tuberculosis clinical isolates 5. A study of the knowledge of private practitioners of Bangalore city regarding diagnosis and treatment of pulmonary TB. <p>All the protocols were approved by the IEC members.</p> <p>The members were also briefed on the completed / on-going projects of the Institute and provided update on the OR studies conducted under the Union-NTI-CTD-WHO OR course 2012-13, which was approved by the NTI Ethics Committee in October 2012.</p>	<p>Chairman Hon'ble Justice V.S. Malimath; Dr Prahlad Kumar, Director, NTI (Member); other members of IEC; and Principal Investigators & Presenters of the protocols.</p>

Meeting	Participants	Date & Place
<p>17th Institutional Ethics Committee Meeting on 31.01.2015 In TCC room, NTI, Bangalore</p>	<p>Brief presentation of the following 9 protocols were made and discussion on the ethical issues pertaining to each protocol was held:</p> <ol style="list-style-type: none"> 1. Active tuberculosis case-finding (ACF) in urban slums of Bangalore city 2. Design and Validation of a Pictogram based HIV-TB Information leaflet/poster to support the role of community pharmacists in India 3. Will daily Short Message Service (SMS) Reminders Reduce Initial loss to follow up of Smear Positive TB Patients Following Diagnosis? A blinded randomized control trial in one district of South India. 4. Association between specific gene mutations conferring Isoniazid mono resistance in pulmonary tuberculosis patients continued on first line of anti-tuberculosis drugs and their treatment outcomes in Jharkhand. 5. Will sensitizing qualified private practitioners and Ayurveda medical officers improve symptomatic referral and tuberculosis case detection in Bilaspur District, Himachal Pradesh, India? 6. Has the Policy of implementing decentralized TB diagnostic and HIV testing facilities at PHIs other than DMCs and ICTCs – led to increase in TB-HIV case notification in Rajasthan State, India 7. Effect of monitoring DR-TB patients through selected follow-up cultures vis-à-vis the standard schedule among patients treated at Maharashtra, India 8. Incidence of Drug Induced hypothyroidism during Intensive Phase of treatment for multi drug resistance tuberculosis among patients registered under PMDT in Karnataka, India 9. Pilot study to explore the feasibility of smoking cessation intervention in smokers with pulmonary TB in RNTCP 10. Discussions were held and decision was taken. 	<p>Chairman Hon'ble Justice V.S. Malimath; Dr Prahlad Kumar, Director, other members of IEC; and Principal Investigators & Presenters of the protocols</p>

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.	A team from CDC Delhi Office lead by Dr Kayla	7 th Apr 2014	To discuss about collaboration with NTI, Bangalore.
2	A team from Family Physician Association	16 th Apr 2014	To discuss about involving them in TB control and to develop them as a model for effective management of TB control in Bangalore.
3	Dr Ranjani Ramachandran, Dr Malik Parmar, Dr Shibu Balakrishnan and Dr Anand	23 rd Apr 2014	To finalise agenda for the 1 st NDRS sensitization programme to be organized at NTI from 24 th April 2014.
4	Dr Ranjani Ramachandran, WHO NPO	2 nd May 2014	To discuss about preparation of detailed action plan for NDRS. I/c NRL and CTU joined the discussion.
	Dr Nata Nenabde, WR India along with team members		To discuss collaboration with NTI, Bangalore in research and training. Discussions were also held regarding operational issues on NDRS being supported by WHO. The other potential area of discussion was collaboration on components of TB control like HRD and support to NTI by WHO.
5	WHO financial experts, Mr Anil, WHO and Mr Sandil from TNT Courier	5 th May 2014	To discuss collection and transportation of samples from identified TUs to NTI for NDRS. I/c NRL and CTU joined the discussion.
6	Dr Sachdeva, Addl. DDG, CTD, New Delhi	9 th May 2014	To discuss progress of NDRS and to participate in the meetings at STDC and SACS, Karnataka.
7.	The DHS, Jammu	12 th May 2014	to discuss rolling out of PMDT in J&K and the support provided by NRL NTI to IRL Jammu.
8.	Dr Salhotra, Addl. DDG, CTD.	13 th May 2014	1. To discuss various components of RNTCP and the support required from NTI.
	WHO team consisting of Dr Ravindra, Dr Satpathy and Mr Anil		2. Regarding WHO collaboration with NTI in the field of training, research and NDRS.

Sl. No.	Name of visitor	Date	Details of visit
9.	DDG (TB), Addl. DDG, Dr Sachdeva and Dr Malik Parmar, NPO DR-TB	9 th June 2014	About NDRS. Discussions were held regarding the challenges to be faced in implementation of NDRS and possible solutions for the challenges.
10.	Dr Ranjani Ramachandran, Dr Malik Parmar from WHO and Dr Anand from CTD	9 th June 2014	to discuss various actions required to be taken urgently to roll out NDRS on 1 st July 2014.
11.	Dr Sreenivasa, NPO, WHO,	17 th June 2014	To discuss various issues of NDRS and other WHO support to NTI, Bangalore. Dr Sreenivasa reiterated his commitment and support to Director, NTI for effective management of NDRS.
12.	Dr Sreenivasa, NPO, WHO, Dr Puneet Diwan, Bill & Millinda Gates Foundation and Dr Kiran Rade, CTD,	18 th June 2014	regarding NTI support to develop surveillance system for RNTCP, to organize master's training for standard of TB care in India and the pilot project including free drug distribution in Mehsana district of Gujarat. Full cooperation from NTI was assured for all the three important areas of RNTCP as per the requirement of CTD.
13.	STO, Karnataka	26 th June 2014	About providing technical support to the state of Karnataka for development of urban TB control programme in Bangalore. Decisions were taken about sputum sample from 3 districts including BBMP, Bangalore urban and rural to be sent to NTI lab for detection of MDR-TB, for which STO, Kar. expressed his appreciation to Director, NTI. The STO was also requested to provide his support for NDRS, PPM project of Bangalore and BBMP project of non-TB mycobacteria initiated by NTI.
14.	Director, STDC Karnataka	9 th July 2014	About providing technical support for diagnosis of MDR and XDR samples for effective management of PMDT in Karnataka.
15.	Dr James Sheferd from CDC Atlanta	28 th July 2014	Regarding collaboration between NTI and CDC.
16.	Lt. Col. PMP Singh, Station Health Commandant, Bangalore	1 st Aug 2014	To discuss about imparting training on TB control for their staff at NTI.

Sl. No.	Name of visitor	Date	Details of visit
17	Dr Sharath BN, Asst. Prof, Community Medicine, ESIC Medical College, Bangalore	1 st & 5 th Aug. 2014	To discuss various components of establishing the joint project "Prevalence and speciation of Non tuberculous Mycobacterium under programmatic settings in India"
18	Special DG, Dr Athani	4 th Aug 2014	To discuss various issues pertaining to the Institute. Presentation on the activities of the Institute was made and he visited various Divisions and had interaction with the officials working there. The NDRS & other lab initiatives in support of PMDT by NTI; He appreciated well keeping of the building; premises; training facilities, etc., Director was instructed to organize more number of training programmes for 2 nd line C&DST; capacity building of the states for detection of XDR TB so that NTI lab can carry out more important projects like genetic sequencer and research on new technology for diagnosis of TB. Director requested Special DG to fill up vacant posts so that performance of the Institute can be further enhanced.
19	Mr Amarjeet Singh, Director, Administration, CTD, DteGHS, New Delhi,	28 th & 31 st Aug 2014	To discuss pending administrative issues of NTI in DteGHS. NTI Administration was asked to comply with the instructions provided by him during the discussion. He visited different sections of the Institute and held meeting with Director on 31.08.2014.
20	Dr Selvarajan, Joint Director, Karnataka State AIDS Prevention Society (KSAPS), Bangalore	8 th & 9 th Sept 2014	<ul style="list-style-type: none"> - To discuss regarding a workshop to be organized by KSAPS, Bangalore at NTI. - To discuss regarding organization of next TB-HIV training at NTI. I/c Training also participated in the discussion.
21	Dr Ravindranath, Vice Chancellor, Rajiv Gandhi University of Health Sciences, Bangalore	16 th Sept 2014	To discuss collaboration between the two Institutions.
22	DDG (TB) CTD, DteGHS, New Delhi	22 nd Sept 2014	During his visit for Operational Research Course at NTI, visited lab and training Divisions. Reviewed NDRS and other activities of NTI.

Sl. No.	Name of visitor	Date	Details of visit
23	Ms Sunitha, Deputy Director – CB & Counseling, Karnataka Health Promotion Trust, Bangalore	10 th Oct 2014	To finalise Agenda for training of MDR-TB Counselors to be held at NTI from 12-18 October 2014. Training Coordinator also participated in the discussion.
24	Dr Ranjani Ramachandran, NPO-laboratories WHO, India	11 th Nov 2014	To clarify technical laboratory issues raised by the NDRS team of NTI and to guide NDRS team for effective management of the survey.
25	DDG (TB), Dr A Sreenivas, NPO-WHO India; Dr Malik Parmar, NPO-DR TB WHO, India; Dr Ranjani Ramachandran, NPO-laboratories WHO, India; Consultants from CTD & States; STOs and National AIDS control officers.	15 th Dec 2014	During their visit for the “2 nd line DST training organized at ICELT” and “intensified training programme for TB and HIV” at Training Unit of NTI.
26	Joint Director, Office of the AIDS Control programme, Karnataka	23 rd Jan 2015	To discuss TB-HIV training to be organized at NTI as per the instructions received from Dr Ashok Kumar, DDG, NACO, New Delhi.
27	Dr P.R. Narayanan, former Director, NIRT, Chennai	27 th & 28 th Jan 2015	To provide consultation for NDRS and review progress of the survey, as an invitee by NTI for the purpose.
28	Dr Shridhar Narayanan, Ex-Vice President and Head of AstraZeneca and company	28 th Jan 2015	To discuss collaboration with NTI on a new venture in tuberculosis area.
29	Dr Sreenivas, Dr Puneet Dewan from Gates Foundation, Dr Kiran Rade and Dr Avijith Chowdry	18 th Feb 2015	Meeting of RNTCP data analysis at NTI
30	NIMHANS team, Bangalore	21 st Feb 2015	To discuss collaborative projects between NTI and NIMHANS on neuro tuberculosis.
31	Director, Baptist Hospital, Bangalore	23 rd Feb 2015	To discuss collaboration between two institutions and sensitization of doctors in their hospital on Indian standard of TB care and also about processing samples from their hospital for diagnosis of MDR/XDR at NTI.
32	IMA officers of Karnataka	24 th Feb 2015	To discuss organization of sensitization programme on “Indian standard of TB care” for their officials in the state of Karnataka.

Sl. No.	Name of visitor	Date	Details of visit
33	Dr Anand from CTD	2 nd Mar 2015	To finalise the revised plan of NDRS to be submitted to WHO. The NDRS team also participated in the meeting.
	Dr Anand and Dr Mayank Ghedia from CTD	3 rd Mar 2015	To discuss progress of NDRS
34	Dr Sharath, ESI Medical College	9 th Mar 2015	To discuss organization of OR workshop on 27.03.2015 at NTI.
35	Joint Director, HIV AIDS, Government of Karnataka		To finalise Agenda for TB-HIV training on intensified case-finding to be organized at NTI by KSAPS.
36	Dr Devi Shetty, HOD, Narayana Hrudayalaya, Bangalore	10 th Mar 2015	To discuss sensitization of the doctors working in their centre, on Indian standard of TB care and also to provide C&DST services to the Department of Pulmonary in their centre.

Acknowledgement

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