

# **NATIONAL TUBERCULOSIS INSTITUTE BANGALORE**

## **ANNUAL REPORT 2011-12**



**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**  
**2011 - 12**



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**(Directorate General of Health Services)**  
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**INDIA**

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## LIST OF ABBREVIATIONS

AIIMS	All India Institute of Medical Sciences
AMRU	Animal Model Research Unit
AOR	Adjusted Odd's Ratio
ART	Anti Retroviral Therapy
ARTI	Annual Risk of Tuberculous Infection
BCG	Bacillus Calmette Guerin
BBMP	Bruhat Bangalore Mahanagara Palika
CMO	Chief Medical Officer
CPT	Co-trimaxazole Preventive Therapy
CPWD	Central Public Works Department
CTD	Central Tuberculosis Division
DFID	Department For International Development
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
DTC	District Tuberculosis Center
DTLA	District Tuberculosis & Leprosy Assistant
DTO	District Tuberculosis Officer
EQA	External Quality Assurance
HIV	Human Immuno deficiency Virus
HRD	Human Resource Development
HPLC	High Profile Liquid Chromatography
IAEC	Institutional Animals Ethics Committee
ICTC	Integrated Counseling and Testing Centre
IEC	Information Education Communication
IRL	Intermediate Reference Laboratory
I.I.Sc.	Indian Institute of Science
IUAT&LD	International Union Against Tuberculosis & Lung Diseases
JALMA	Japanese Leprosy Mission for Asia
LAN	Local Area Network
LPA	Line Probe Assay
MDR	Multi Drug Resistance
MIFA	Managing Information For Action

MO-TC	Medical Officer - TB Control
M.TB	<i>Mycobacterium tuberculosis</i>
NACP	National AIDS Control Programme
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
PGIMER	Post Graduate Institute of Medical Education & Research
1 TU PPD RT	1 Tuberculin Unit Purified Protein Derivative Refined Tuberculin
PPM	Public Private Mix
PPS	Population Proportion to Size
RBRC	Random Blinded Re-Checking
RNTCP	Revised National Tuberculosis Control Programme
RTI	Right To Information Act
SAARC	South Asian Association for Regional Co-operation
SACS	State AIDS Control Society
SEARO	South East Asia Regional Office
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 2011-12. After half a century of existence, the past year witnessed the remodeling of the Sections of the Institute into Divisions and Units. This landmark event is expected to enhance the scope of contribution of the Institute towards various aspects of TB control. The six Divisions of the Institute are Human Resources Development and Documentation, Laboratory, Epidemiology & Research, Monitoring & Evaluation, Communication & Sociology, and Administration. 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 Institute has been reposed with responsibility to develop human resources to implement the Revised National Tuberculosis Control Programme (RNTCP) and conduct Operational Research to provide meaningful inputs to improve the service delivery of RNTCP. This has been done diligently over the years- the past year being no exception. 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, and the recently introduced Training on procurement & drug logistics management, were some of the important courses held at NTI during the past year. Being a WHO collaborating centre, the Institute had also hosted a Fellowship training course for participants from Sri Lanka. The Institute is supporting the efforts of Central TB Division to implement an electronic case based recording and reporting system to monitor the programme. Also, the task of establishing a data base of trained manpower under RNTCP to support the Human Resource needs is under consideration.

Operational research is one of the prime functions of the institute. Two path breaking studies that are in progress are - Capture-Recapture to estimate incidence, period prevalence and completeness of tuberculosis cases reporting under RNTCP in Tumkur District and Challenges in implementation of diagnostic algorithm for patients having symptoms suggestive of Pulmonary TB with smear negative report on initial sputum examination. The data analysis pertaining to the two major studies - Repeat zonal tuberculin survey for estimating Annual Risk of Tuberculosis Infection and Tuberculosis disease Prevalence surveys in 8 districts of India - were also undertaken. Two Operational Research workshops to augment the capacity of programme workers to undertake operations research were conducted in collaboration with CTD, The Union, CDC Atlanta and WHO. It would be of interest to the readers to go through the summary of the research in progress and papers published which are presented in brief in this report.

The laboratory of National Tuberculosis Institute (NTI) is designated as one of the National Reference laboratories (NRL) for the purpose of quality assurance of the sputum smear microscopy and supporting the laboratory network under the RNTCP for Culture and Drug Sensitivity Testing (C&DST). NTI supervises and monitors the quality sputum smear microscopy network of nine states. 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 DOTS Plus at the state level. The NRL is also responsible for Human Resource Development and capacity building of IRLs for the management of MDR-TB. Also, a training course in Culture & DST of *Mycobacterium tuberculosis* was organized in collaboration with SAARC TB & HIV AIDS Centre, Nepal. In the capacity of International Centre of Excellence in Laboratory Training, the Institute had organized training courses in Line Probe Assay, Biosafety and MGIT.

Participation of faculty and technical staff in various meetings, training programmes, seminars, conferences and workshops have been highlighted in this report.

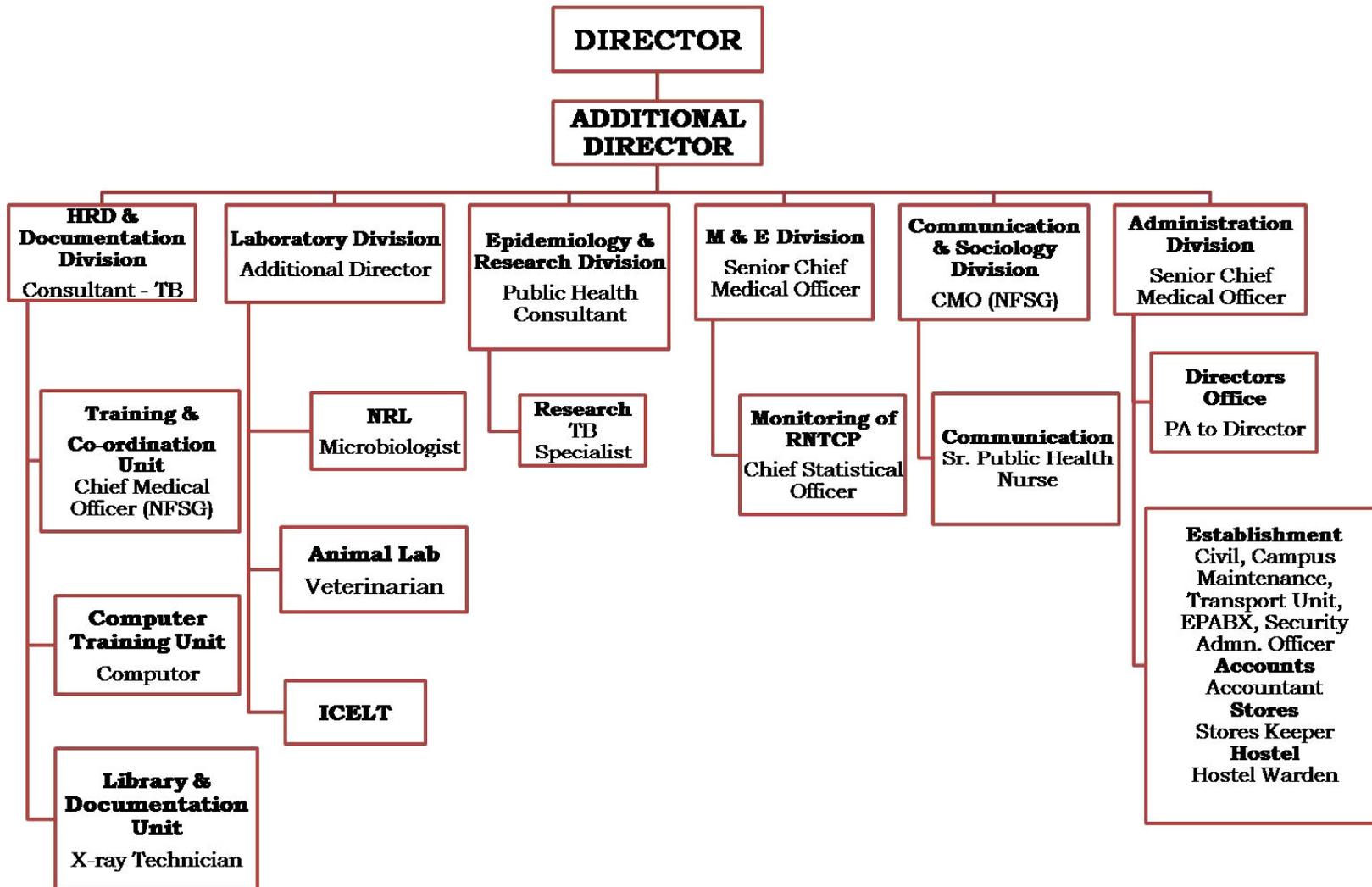
A fleeting reference has been made on the organizational set up of the institute, the staff position and the various committees of the institute. The role of administrative sections in ensuring the efficient execution of technical activities cannot be overemphasized and their contribution finds a mention in the report.

I sincerely appreciate the faculty and staff of the institute for their co-operation, indefatigable effort and diligence during the year. I solicit the same degree of motivation and dedication from the staff of the institute in times to come.

I also express my gratitude to the Central TB Division for their continuous co-operation, guidance and encouragement.

Dr. Prahlad Kumar  
Director

Dated: 11<sup>th</sup> July 2012  
Place: Bangalore



## 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 brief endeavor is made to highlight the contribution of the unit during the last year.

### *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 management of TB-HIV co-infection, quality assurance of sputum microscopy, sputum culture, programmatic 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). Careful planning ensures that all key personnel involved with the RNTCP are adequately trained in RNTCP and also on the newer initiatives under the programme. 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 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.

### **A. RNTCP Modular training**

This twelve days induction training for state and district level programme managers, teachers of medical colleges and medical officers from different states of the country, imparts skills and knowledge for effective implementation of RNTCP. The training methodology is essentially through reading the modules, group discussions, interactions and work exercises. This is augmented with presentations on important aspects of RNTCP and field visits to Tuberculosis Units. The list of the batches in which the course was conducted during the year under report is as under:

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>	<b>Duration</b>
1	State and District level programme Managers and faculty from Medical colleges	02-05-11 to 14-05-11	18	12 days

Sl. No.	Category of personnel	Period	No. of Participants	Duration
2	State and District level programme Managers and faculty from Medical colleges	13-06-11 to 25-06-11	37	12 days
3		01-08-11 to 13-08-11	44	
4		12-09-11 to 24-09-11	29	
5.		14-11-11 to 26-11-11	31	
6.		06-02-12 to 18-02-12	28	
7		21-02-12 to 04-03-12	16	

#### **B. Training in TB-HIV**

Sl. No.	Category of personnel	Period	No. of Participants	Duration
1	State and District level programme Managers	03-10-11 to 04-10-11	13	2 days

#### **C. Training on Procurement and Drug Logistics Management**

Sl. No.	Category of personnel	Period	No. of Participants	Duration
1	State and District level programme Managers and pharmacists	12-03-12 to 15-03-12	34	4 days

#### **D. Laboratory based training**

In the capacity of an NRL, NTI imparts various laboratory related training programmes the details of which are as under:

##### *i. Training in External Quality Assessment (EQA)*

Sl. No.	Category of personnel	Period	No. of Participants	Duration
1	Microbiologists & Laboratory Technicians of State Laboratories from different states of the country	05-04-11 to 09-04-11	13	5 days

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>	<b>Duration</b>
2	Microbiologists & Laboratory Technicians of State Laboratories from different states of the country	04-07-11 to 08-07-11	13	
3		22-08-11 to 26-08-11	18	
4		10-10-11 to 14-10-11	14	
5		16-01-12 to 20-01-12	06	

*ii. Training in Preventive Maintenance and Minor Repairs of Binocular Microscopes*

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>	<b>Duration</b>
1	Laboratory Technicians from different states of the country	03-05-11 to 06-05-11	13	4 days
2		06-06-11 to 09-06-11	17	

*iii. Training in solid Culture & DST*

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>	<b>Duration</b>
1	Microbiologists & Laboratory Technicians of State Laboratories from different states of the country	25-04-11 to 05-05-11	09	10 days
2		15-05-11 to 26-05-11	09	
3		15-06-11 to 25-06-11	08	
4	Microbiologists & Laboratory Technicians of State Laboratories from different states of the country	18-07-11 to 28-07-12	08	
5		02-01-12 to 12-01-12	11	
6		12-03-12 to 22-03-12	05	

*iv. Training in Liquid Culture*

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Period</b>	<b>No. of Participants</b>	<b>Duration</b>
1	Microbiologist & Laboratory Technician from AIIMS, New Delhi.	26-03-12 to 28-03-12	02	3 days

**E. International Centre of Excellence in Laboratory Training (ICELET)**

The International Centre of Excellence in Laboratory Training (ICELET) with the support of Foundation for Innovative Newer Diagnostics (FIND) imparts training in Newer Diagnostic Techniques viz., like Line Probe Assay (LPA), Liquid Culture using Mycobacterial Growth Indicator Tube (MGIT) and Laboratory Bio-safety for Microbiologists from IRL and NRL. The objective of using the LPA is to fast track MDR-TB diagnosis, as it is a molecular technique that detects resistance to Rifampicin & Isoniazid. The training activities held at ICELET during the year under are furnished below:

<b>Sl. No.</b>	<b>Details of Training</b>	<b>Period</b>	<b>No. of Participants</b>	<b>Duration</b>
1	Training in Bio-safety for Microbiologists and Laboratory Technicians from IRLs of Karnataka, Tamil Nadu, LRS Institute, NTI, NIRT, JALMA Institute, FIND, BD India Pvt. Ltd., and Government Hospital of Thoracic Medicine (Chennai) Andhra Medical College, Visakhapatnam, Andhra Pradesh & Govt. Hospital for Chest Diseases, Puducherry	04-04-11 to 06-04-11	13	3 days
2	Training in Liquid Culture for Microbiologists and Laboratory Technicians from NTI, IRL, Thiruvananthapuram, New Delhi TB Centre and GHTM, Chennai	16-05-11 to 27-05-11	04	10 days
3	Training in Line Probe Assay for Microbiologists and Laboratory Technicians from IRLs of Guwahati & Karnataka, TB Culture and DST Lab, Jam Nagar, Gujarat and SMS Medical College, Jaipur	05-09-11 to 09-09-11	04	05 days
4.	Training in Line Probe Assay for Microbiologists and Laboratory Technicians from IRLs of Uttarakhand, Indore, Puducherry and Chatrapati Sahuji Maharaj Medical University, Lucknow.	12-09-11 to 16-09-11	04	05 days
5	Training of Trainers in Line Probe Assay for Microbiologists and Laboratory Technicians from Sir JJ Hospital, Mumbai, AIIMS New Delhi, New Delhi TB Centre and NTI Bangalore	12-12-11 to 14-12-11	04	03 days

Sl. No.	Details of Training	Period	No. of Participants	Duration
6	Training of Trainers in Line Probe Assay for Microbiologists and Laboratory Technicians from IRLs of Raipur, Hyderabad, Pune & Jamnagar and NTI Bangalore	15-12-11 to 17-12-11	05	03 days
7	Training of updates in LPA for Microbiologists from IRLs of Hyderabad, Gujarat, Jharkhand and NTI Bangalore	21-02-12 to 22-02-12	04	02 days
8	Training of updates in LPA for Microbiologists from IRLs of Hyderabad, Gujarat, Jharkhand and NTI Bangalore	23-02-12 to 24-02-12	04	02 days
9	Training of updates in LPA for Microbiologists from IRLs of Guwahati, Pune, Culture & DST Lab, Visakhapatnam and SMS Medical College, Jaipur	27-02-12 to 28-02-12	04	02 days
10	Training of updates in LPA for Microbiologists from IRLs of Lucknow, Puducherry, Indore, Ajmer and JJ Hospital, Mumbai	01-03-12 to 02-03-12	05	02 days

#### F. Collaborative training activities with WHO

##### *Fellowship Training: Regional Training on TB*

Sl.No.	Category of personnel	Period	No. of Participants	Duration
1	Officials from Srilanka	11-04-11 to 15-04-11	3	5 days

#### G. Collaborative training activities with SAARC TB & HIV/AIDS Centre

The Institute took active role in organizing SAARC Regional Training of Trainers (Microbiologists) for Sputum Culture and Drug Susceptibility Testing of *M.tuberculosis* in collaboration with SAARC TB & HIV AIDS Centre, Nepal. Both in-house and external faculty members facilitated the training. The details of activities carried out during the period under report are furnished below:

Sl.No.	Category of personnel	Period	No. of Participants	Duration
1	Microbiologists from SAARC member countries of India, Sri Lanka, Bhutan and Nepal	01-09-11 to 07-09-11	16	7 days

## H. Observational Tour of officials from NTP Nepal

Sl. No.	Category of personnel	Period	No. of Participants	Duration
1	Paramedical staff from NTP Nepal	27-06-11 to 01-07-11	08	5 days

## I. Training of NTI Officials

### (a) AT NTI

The staff and faculty of the institute underwent training on various aspects of diagnostic procedures conducted at the International Centre for Excellence in Laboratory Techniques of the institute. The details of the trainings are furnished below:

Sl. No.	Details of training	Period	No. of Participants	Duration
1	Training in Bio-safety	04-04-11 to 06-04-11	2	3 days
2	Training in Liquid Culture	16-05-11 to 27-05-11	1	12 day
3	Training of Trainers in LPA	12-12-11 to 14-12-11	1	3 days
4	Training of Trainers in LPA	15-12-11 to 17-12-11	1	3 days
5	Training on LPA – Genotype MTBTR Plus Version 2.0	21-02-12 to 22-02-11	1	3 days

**(b). Outside NTI**

The staff and faculty of the institute underwent training on various aspects of Diagnostic procedures under the Tuberculosis Control Programme. The details of the trainings are furnished below:

Sl. No.	Details of training	Period	No. of Participants	Duration
1	National DOTS PLUS training at Trivandrum, Kerala.	26-09-11 to 30-09-11	4	5 days

**J. Onsite training imparted**

The officers / staff of NRL (NTI) provide onsite support and training to the IRLs of different states, the details of which are as under: .

Sl. No.	Details of training	Period	No. of Participants	Duration
1	LPA Hands on Training	23-11-11	04	1 day

***Computer Training Unit***

With the ever growing dependence on computers in the day to day activities and the efficiency that Information Technology brings in, it is imperative to have the manpower trained on both general computing skills and also on applications specific to the area of work. Realizing this need, the Computer Training Unit was established in August 2011. With almost 100% of the RNTCP district quarterly reports being transmitted in an electronic format, the facility to train the Data entry Operators and WHO consultants in the use of Epi-centre (software to compile and transfer district quarterly reports) was required. The unit supports conducting training courses.

**Training of Master Trainers in Epi-centre:**

This training course aims at familiarizing Consultants and Data Entry operators on the Windows version of Epi-center for reporting aggregate quarterly data on case finding and treatment outcome from districts. The schedule of the course organized is as under:

Sl. No.	Category of personnel	Period	No. of Participants	Duration
1	WHO-RNTCP Consultants and Data Entry Operators from different states of the country	06-06-11 to 10-06-11	26	5 days
2		04-07-11 to 08-07-11	33	

Sl. No.	Category of personnel	Period	No. of Participants	Duration
3		11-07-11 to 15-07-11	35	5 days
4		25-07-11 to 29-07-11	31	
5		16-08-11 to 20-08-11	24	

In addition the unit has been extending its support in the analysis of research data of major national research surveys like ARTI Survey and Disease prevalence survey data from 7 sites. A detailed study of the NTI data set of DPS survey was undertaken. A master data base template was built in order to homogenize data from 7 other DPS survey sites. A study of the WHO published 'DPS limebook' on 'Analysis and Reporting' of DPS studies was undertaken. The data from the seven sites were analyzed in line with the recommended procedures. Techniques such as imputation of missing value on the data sets were studied and implemented. Sensitization workshop on the analysis of DPS data using Stata Software by Dr.Charalampos Sisimanides, Statistician WHO Geneva was also held in the facility.

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. Technical inputs pertaining to Internet/ Server / Softwares / Audio Visual Equipments and infrastructure expansion are entrusted to the unit.

### **Establishing a National Database on Tuberculosis – Phase II**

The preparatory work to support the deliverables of the project was initiated upon obtaining approval from the Department of Biotechnology, Ministry of Science and Technology for TB-Net Project.

#### ***Library & Information Services and Documentation***

The Institute has a specialized Category II health scientific library as per the guidelines of the library Review Committee report, Government of India New Delhi. The categorization is based on Resources, Services and Dissemination of Information & Automation activities. The collections include core periodicals on TB and Respiratory diseases and its back volumes, published books on TB and multi disciplinary aspects, reports, proceedings, souvenirs, WHO unpublished documents, selected papers and non-print media viz., slides, cassettes, transparencies, CD-ROMs, etc.

Library & Information Service section holds the responsibility of building up the appropriate collection, its progressive development, and organization of information services to provide increased access to its resources.

The library provides the information needs of the faculty, staff of the Institute besides Medical and Para-medical trainees and delegates / visitors from medical fraternity. The Library also coordinates the activities of the Editorial committee and Publication wing of the institute.

### ***Publications***

Publication wing coordinates the publication activities of the Institute. The major responsibilities of this section are to oversee the regularity of the publication of NTI bulletin and the production of other specialized publications. The faculty and the staff of the Institute contribute the articles for publication.

### ***Documents / Articles published:***

1. NTI Annual Report for the year 2010-11
2. NTI Bulletin **Vol. 44/1&2**

The printing wing assisted various divisions in printing various research forms/schedules besides forms required for administrative division in addition to Reprographic services to the laboratory, Animal Model Research Unit and Training.

### ***Updating of NTI website***

The NTI website was updated with the latest information available.

## 1. LABORATORY

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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 nine states allocated viz., Bihar, Jammu and Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and West Bengal.

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

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

The Quality Assurance (QA) system for sputum smear 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.

The details of EQA-OSE visits undertaken between March 2011 – 2012 are as follows:

Sl. No	State visited	Dates	Team Members
1	STDC Patna (Bihar)	22-06-11 to 25-06-11	Mr. S. Anand Mrs. Mamatha HG Ms. Anupurbha
2	IRL Ajmer & SMS Medical College (Rajasthan)	10-10-11 to 14-10-11	Mr. S. Anand Ms. Mamatha H.G.
3	IRL Cuttack, (Orissa)	21-1-11 to 26-11-11	Mr. S. Anand Ms. Mamatha H.G. Ms. Anupurba

### **Pre-assessment visits:**

As a pre-requisite for accreditation of the IRL for performing culture and DST for detection of MDR-TB, the central team undertakes pre assessment visits for assessing the suitability of the laboratories for accreditation. Pre-assessment visits were undertaken for the following laboratories:

<b>Sl. No</b>	<b>Place / State</b>	<b>Dates</b>	<b>Team</b>
1	MGIMS, Maharashtra	02-05-11 to 03-05-11	Dr. S.K. Tripathy Mr. S Anand
2	IRL Srinagar	20-02-12	Mr. S. Anand

### **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 the any corrective action taken.

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

An onsite – evaluation of the laboratory, is undertaken within the first year of grant of accreditation. A re-assessment is performed before the lapse of two years of accreditation, for which the laboratory applies six months in advance. Thereafter, re-assessment of the accredited culture and DST facility is conducted every two years. The details of the accreditation visits made are as under:

Sl. No	Place / State	Method	Dates	Team
1	IRL Dehradun, Uttarakhand	Solid Culture & DST (LJ Medium)	30-04-11	Mr. S Anand

#### State Laboratories accredited for LPA

NTI was accredited for LPA on 8<sup>th</sup> November 2011 by the CTD. Subsequently, NTI was entrusted with the responsibility of Proficiency Testing of the state laboratories for accreditation of LPA activities. During the period under report, proficiency testing for LPA activities for accreditation was undertaken for the following state laboratories.

Sl. No	Place / State	Method	Dates
1	M.P. Shah Medical College, Jamnagar, Gujarat	Line Probe Assay	01-12-11
2	IRL Ranchi, Jharkhand		14-12-11
3	DTRC, Nellore, Andhra Pradesh,		03-01-12
4	P D Hinduja Hospital, Mumbai, Maharashtra		20-12-11
5	IRL, Trivandrum, Kerala and		22-12-11
6	M R TB Hospital, Indore		24-01-12
7	IRL Cuttack, Orissa		21-02-12
8	IRL Kolkata		19-03-12

#### Proficiency Testing of accredited laboratories in Solid Culture

Two rounds of annual proficiency testing were conducted for the following nine labs by sending panel of 20 cultures in each batch during July 2011 and March 2012.

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.

### Specimens processed at NTI during the period April 2011-March 2012

Total number of specimens registered	1682
Total number of specimens registered from patients referred to NTI	41
Total number of sputum specimen of MDR suspects registered for DOTS Plus under Plan B	283
Total XDR suspect culture samples registered	169
Total XDR sputum samples received from Mumbai	76
Total sputum samples of RP/236 study registered	1045
Total follow-up specimen of DPS study (RP/227)	38
Total Cultures samples registered for 18 <sup>th</sup> round of Proficiency testing received from Belgium	30
Total number of specimens put up for the Primary culture	1471
Total number of sensitivity tests done by Proportion method both for first and second line drugs	341
Total number of specimens subjected for Identification tests	302

Mr. S. Anand, Consultant Microbiologist visited IRL at Ajmer and the laboratory at SMS medical college, Jaipur from 16<sup>th</sup> – 18<sup>th</sup> January 2012 for providing technical support as part of the capacity building and strengthening activities. .

Mr. S. Anand, Consultant Microbiologist visited Jodhpur from 13<sup>th</sup> – 14<sup>th</sup> March 2012 for providing technical support to PMDT laboratory at Jodhpur.

Mr. S. Anand, Consultant Microbiologist visited Jodhpur from 15<sup>th</sup> – 17<sup>th</sup> March 2012 for providing technical support to Culture & DST laboratories in the state of Rajasthan.

### (F) 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	8 <sup>th</sup> round: Sputum smear microscopy	June 2011	March 2012	STAC, Kathmandu, Nepal	ZN Staining	100%
2	17 <sup>th</sup> round: Solid Culture & DST	July 2011	August 2011	Prince Leopold Institute of Tropical Medicine (SNRL), Antwerp, Belgium	First line DST:	100%
3	18 <sup>th</sup> round: Solid Culture & DST	February 2012	Result awaited		Economic Variant Method of PST and MIC method Second Line DST	Result awaited

NTI passed proficiency for liquid culture and first line DST by MGIT 960 automated system in July 2011 with Prince Leopold Institute of Tropical Medicine (SNRL), Antwerp, Belgium and achieved 100% proficiency.

**(G) Status of laboratory animals**

During the above period a total of 573 albino guinea pigs were raised in healthy condition. Appropriate preventative measures were taken to check outbreak of diseases among breeding stock. Two hundred and twenty four (224) freshly raised animals were utilized for the ongoing research projects. Outdoor Shelter for Retired Breeders was maintained in good condition.

## **2. EPIDEMIOLOGY AND RESEARCH**

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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.

### **A Research studies under progress**

The status of the ongoing research projects undertaken during the year are furnished below:

#### ***1. Analysis of Tuberculosis disease Prevalence surveys in 8 districts of India and report writing.***

Data collected for the study undertaken among 71,874 persons *in Nelamangala taluk, Bangalore rural district* and completed in the previous financial year was analyzed and presented during the TB burden meeting held at New Delhi in April 2011. During the meeting, an expert committee was constituted to reanalyze the data for all the 8 districts where surveys were carried out during 2009-10 in accordance with the module prepared by WHO headquarters, Geneva. The expert committee meeting was held at NTI in May 2011 and subsequently the re-analysis was carried out and presented during 2<sup>nd</sup> TB Burden meeting at New Delhi in July 2011. The report for rural Bangalore has been finalized and submitted.

#### ***2. Repeat zonal level tuberculin survey for estimating Annual Risk of Tuberculous Infection (ARTI)***

Data collected among 184958 children during surveys II carried out in 2009-10 was analyzed and data collected among 78648 children during surveys I carried out in 2000-03 was re-analyzed. Results were presented during the TB burden meeting held at New Delhi in April 2011. As per the suggestions offered during the meeting, further analysis was undertaken and presented during 2<sup>nd</sup> TB Burden meeting at New Delhi in July 2011. The report for all the zones was finalized and submitted.

The results of above two studies were re-presented in Ministry of Health, New Delhi during September 2011.

#### ***3. Estimating TB Burden in India***

- i. Inputs for estimations using Onion model were given during the 3 meetings as above.
- ii. Methodologies for estimations in coming years were worked out and presented during the STOs RNTCP Consultants meet held in New Delhi during last week of October 2011.

#### ***4. Challenges in Implementation of Diagnostic Algorithm for Patients having Symptoms Suggestive of Pulmonary TB with Smear Negative report on initial sputum examination***

The objectives of the study are :

- To find out the proportions of smear negative patients that complete the diagnostic algorithm under RNTCP in Karnataka state.
- To find out health system and patient related barriers to completion of diagnostic algorithm for smear negative patients.
- To gain insight into the care seeking behavior of smears negative patients.

The study is under progress

The protocol was prepared and presented to TCC in September 2011 and discussed with the faculty from TRC in October 2011. Necessary revisions in protocol were undertaken, and work instructions and study formats were prepared and re-presented to TCC in first week of November 11. Following the approval from the TCC, necessary planning for the study was initiated and field work commenced in the month of January 2012. The details of the field work carried as furnished below:

Field work is in progress in Mysore from 30<sup>th</sup> January by ERD officials

- Line list of Smear Negative patients were prepared for 4 DMCs using RF1
- 39 patients were interviewed using RF2 - Semi Structured interview Schedule.
- Check list for 4 laboratories were prepared using RF3
- X-ray's were assessed for 3 PHIs using RF4
- Information on PHC infrastructure were collected for 5 PHIs using RF5
- In-depth interview of 3 Medical Officers were carried out using RF6

Data entry of 27 schedules were completed.

#### ***5. Capture - Recapture to estimate incidence, Period Prevalence and completeness of tuberculosis cases reporting under RNTCP in Tumkur District.***

The objectives of the study are :

To estimate the incidence of period prevalence of Tuberculosis disease during the course of one Year

To assess the case finding efficiency of the RNTCP

The study is under progress

Protocol, work instructions and study formats were prepared. Several visits were made to Tumkur by the study team to design the study. The faculty of Siddhartha Medical college and private practitioners were sensitized. The key personnel of STC and STDC Karnataka were briefed about the study and their support were sought for conducting the study. Following activities were undertaken during the period under report.

- A Preliminary visit was made to Tumkur district in September 2011 by the study team to design the study.
- Three sources were selected for the study – RNTCP (TU and DMCs), Medical College and all nursing homes of Tumkur.
- Work instructions and study formats for recording data were drafted during October 2011.
- Several visits made to Tumkur by the study team In November 2011 to design the study with the help of DTO. Sensitization programme was held with the faculty of Siddhartha Medical College. Meeting was held with STO, Karnataka to discuss the modalities of the study. Updated list of nursing homes of Tumkur district was procured from DTO.
- The first CME was conducted in Tumkur city with the support DTO on 26<sup>th</sup> November 2011. List of Health facilities besides the RNTCP where data collection is to be undertaken prepared TU wise. The concerned STS/Health visitor were entrusted to collect the data on monthly basis from the concerned facility by personal visits.
- Before initiating field work, correspondences were made with PPs of nursing homes in Tumkur town and their support was sought for smooth conduct of study. Field work initiated in first week of December 2011. In this month 25 private practitioners of Tumkur city were sensitized regarding the study, Dr Shivakumarappa, IMA president and Dr Shalini, RNTCP in-charge and Dr Asma Tabbassum were co-ordinated to have smooth conduct of the survey at Tumkur and Siddhartha Medical College, Tumkur. Formats for data collection were finalized and study registers given for printing.
- In order to ensure completeness and correctness of address in regard to identifier required for matching of data, the entire pin code list of Tumkur district was obtained and affixed in the register. In addition, the guidelines for filling up the format were also attached with the register. A CME for pediatricians was conducted in Tumkur city in a workshop.
- In January all STS' / STLS' of Tumkur district and Health visitor of Tumkur DTC were sensitized. Private practitioners of Madhugiri, Tumkur and Koratagere were apprised of the study modalities. MO-TCs of Tumkur, Koratagere, Sira, Kunigal, Pavagada, and Tiptur were also sensitized and necessary support and cooperation were sought in regard for smooth conduct of the study and involvement of STS.
- Distribution of study registers in the private hospitals of Tumkur , Koratagere, Sira and Madhugiri was undertaken. Distribution of study registers in SSMC undertaken through Dr Shalini, RNTCP in-charge. Distribution of study registers in DMCs undertaken through DTO and Data Entry Programme prepared for RF1, RF2 and RF3 using EPIINFO software.

- In February, two CMEs were conducted at Madhugiri and Pavagada on 8<sup>th</sup> & 9<sup>th</sup> and the nursing homes were also sensitized. Conducted sensitization of STS' and STLS's of Pavagada TU. Private practitioners of Madhugiri, Tiptur and Turuvekere were apprised of the study modalities. MO-TCs of Tiptur and Turuvekere were also sensitized. Distribution of study registers in the private hospitals of Madhugiri, Tiptur and Turuvekere was undertaken.
- Distribution of duplicate copy of registers given to Mr Jagadeesh, Health Visitor, DMC, SSMC. Updation of log files undertaken through DTO and Re-visit of private practitioner of Tumkur town was undertaken for 11 PPs.
- During first week of March, registers were distributed to the concerned STS/HV for data collection. Six nursing homes of Tumkur town were re-sensitized with a letter of appreciation from Director, NTL.
- Thus till March 2012, 8 planning visits, 4 CMEs, 77 visits for sensitization and distribution of registers and 51 revisits to nursing homes were made.

**6. *Capture-Recapture to estimate incidence, Period Prevalence and completeness of tuberculosis cases reporting under RNTCP in Karnataka State***

The objectives of the study are :

- To estimate the incidence and period prevalence of Tuberculosis disease during a period of six months
- To estimate the efficiency of the RNTCP during a period of six months in case detection of incident and prevalent TB cases

The protocol was prepared and present in the TCC meeting held on 6<sup>th</sup> March.

**7. *Comparison of the MGIT liquid culture system with conventional solid culture system using LJ medium for detection of Mycobacterium tuberculosis.***

Bacteriological confirmation plays a key role in the diagnosis of tuberculosis. The most commonly used conventional Lowenstein Jensen (L.J.) culture method requires at least 6-10 weeks of incubation due to slow growth rate of *M.tuberculosis complex*. Rapid diagnosis is vital for tuberculosis control and the use of the most rapid methods available for culture of *M.tuberculosis complex* is therefore advocated. The automated BACTEC Mycobacterial Growth Indicator Tube (MGIT) 960 system is a state of the art in vitro diagnostic instrument, designed and optimized for the rapid detection of *Mycobacteria* from clinical specimen (except blood). It utilizes a modified 7H9 Middle brook broth base (7ml) with an oxygen quenching fluorescent sensor embedded in silicon at the bottom to detect microbial growth directly from clinical specimens.

The objective of this study is to compare the sensitivity, specificity, positive predictive value, negative predictive value, rapidity & contamination rate of MGIT 960 liquid culture system with conventional solid culture system using Lowenstein Jensen medium for detection of *M.tuberculosis* from sputum samples of TB suspects.

## **Methodology of the Study:**

Two additional sputum samples(C&D) is being be collected from all TB suspects being referred for Sputum smear microscopy at K C General Hospital, Bangalore.

Cold chain is being maintained during the transportation of sputum samples to the NTI Laboratory by Lab attendants.

Following registration the samples are processed by the NALC NAOH method of decontamination and Homogenization. (Procedure as elucidated in the National guidelines for culture and DST). The sediment is inoculated on LJ Medium and MGIT 960 liquid culture system. Two smears per sample were prepared for microscopy. Slides were stained by the Fluorescent staining method and by the Ziehl-Neelsen staining method.

The expected outcome from this study is to validate the sensitivity, specificity, positive predictive value& negative predictive value, rapidity of detection & contamination rate of the new diagnostic tool M.G.I.T

During the period under report around 1100 samples were processed. The data analysis of the study will be done after achieving the desired sample size.

### **8. “Role of Drug Resistant isolates of *M.tuberculosis* on Infectivity, Pathogenesis & Transmission of Tuberculosis in Guinea Pig Animal Model” (R.P. No.232).**

For assessing the variation in the infectivity, pathogenicity and transmission of drug-resistant isolates of *M.tuberculosis*, post-mortem examinations were conducted on one hundred and eighty (180) guinea pigs that were infected earlier, for a prescribed period. Lymph glands (RLG, ILG & SLG)/ Spleen tissues from these animals were aseptically dissected out, mechanically homogenized, serial dilutions prepared and inoculated on LJ media for viable counts of colony forming units (cfu) after its incubation by two independent readers, as per the approved action plan/ work instruction. Gross lesions, if any, were also assessed and scored at the time of necropsy.

During the period under report, eighteen coded drug-resistant isolates of *M.tuberculosis* were inoculated in two hundred sixteen (216) NTI-bred albino guinea pigs (12 for each isolate). Briefly, preserved coded suspensions prepared in the Bacteriology laboratory were injected subcutaneously (0.5ml) in the medial aspect of right thigh in each guinea pig. Weights of all animals prior to inoculation and every week post-infection were recorded.

### **9. “Maintenance of High Virulent status of *M.tuberculosis* strain”.**

Continued passaging of two high virulent strains of *M.tuberculosis* in 08 albino guinea pigs. Post-mortem examinations were conducted on 09 albino guinea pigs. Spleen tissue homogenates from these animals were processed for viable counts besides scoring gross lesions, at the time of necropsy.

### **Technical Support / Consultancy Services**

Dr. V.K. Chadha, Public Health Consultant participated as a member of the research group for Epidemiology, monitoring, supervision, evaluation and results frame work and drafted the relevant chapters for national Strategic plan for RNTCP 2012-17.

### **Operational Research Capacity Building**

Dr. V.K. Chadha, Public Health Consultant provided mentorship for several Operational Research projects undertaken by State Officials / RNTCP Consultants.

### **Review of articles / research protocols / papers**

The faculty of the institute, in addition to their technical activities, provided expert opinion / comments by reviewing various research protocols / papers referred to the institute from various organizations both within India and outside India.

## **4. MONITORING AND EVALUATION**

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The Monitoring & Evaluation Division of the institute plays an essential role and forms a supportive unit for the research activities. This 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, compilation, analysis of data, generating tables and results and interpretation of the results of various research studies.

The Division has experienced subordinate level manpower to maintain the standards of the statistical support for the research activities supervised by officers belonging to Indian Statistical Service (ISS) cadre.

This wing 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. The details of analysis carried out for various research studies are given below:

### ***Treatment Outcome and mortality at one and half year follow-up of TB/HIV patients under DOTs in Mysore District.***

Data entry work and analysis was undertaken. Linear regression outputs using SSS Software were generated and assistance was provided to the Principal Investigator for Report writing and publishing paper.

### **Disease Prevalence Survey**

Analysis of the DPS survey data undertaken for the six sites namely- NTI, Jabalpur, Mohali, AIIMS, Wardha, JALMA were undertaken separately using SPSS

Master database was generated as per DPS lime book for consolidating the prevalence for six sites. National pooled prevalence of the nation was computed.

Analysis was carried out as per the recommendations of Dr. Charalampos Sisimanides, Statistician WHO Geneva, using Lime Book. Basic tables were generated for six sites NTI, Jabalpur, Mohali, AIIMS, Wardha, and JALMA with missing imputation by STATA software.

### ***Factors associated with unfavorable TB treatment outcome in New Smear positive patients treated under Revised National Tuberculosis Control Programme in Bruhat Bengaluru Mahanagara Palike***

Database was created using Epi-Info to digitalize the data. By using MS-Access, data were transferred to SPSS Software for checking completeness, correctness and consistency. Analysis were undertaken to generate linear regression outputs by using SPSS.

***“Role of Drug Resistant isolates of M.tuberculosis on Infectivity, Pathogenesis & Transmission of Tuberculosis in Guinea Pig Animal Model”***

Assistance was being provided as and when required.

***Nelamangala School Study***

Data entry was completed and soft copy of the database was handed over to the Principal Investigator.

**(H) Central Internal Evaluation and Appraisal of DOTS Plus Site**

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 visit are as under:

**Central Internal Evaluation**

Sl. No	Name & Designation of the Officer participated	Period	Place of Conducting CIE
1	Dr. N. Somashekar, TB Specialist	14-08-11 to 18-08-11	Tiruchirapalli, Tamil Nadu
2	Mr. Anand, Statistical officer	13-02-12 to	Tumkur, Karnataka
3	Mr. S. Nagaraju, Statistical Assistant	15-02-12	Dharwad, Karnataka

**Appraisal of DOTS Plus**

Sl. No	Name of the Officer	Period	Site of Appraisal
1	Dr. N. Somashekar, TB specialist	28-06-11 to 30-06-11	Bangalore Urban, Bangalore Rural, Bruhat Bangalore Mahanagara Palike, Kolar & Tumkur of Karnataka
2	Dr. N. Somashekar, TB specialist	16-08-11 to 20-08-11	Dewas, Khargone, Khandwa, Ujjain and Madhya Pradesh
3	Mr. S. Anand, Consultant Microbiologist	16-08-11 to 19-08-11	Jammu & Kashmir

**Hardware facilities**

An exclusive computer laboratory with LAN connectivity and other basic requirements including internet connectivity was established to provide state of art facilities for national/ international trainings.

## **Intranet facility**

A separate domain name “ntiindia.org” was registered and is being operational. The existing e-mail facilities within the Institute have been improved from the conventional centralized system. As part of decentralizing the communication network in the Institute, intranet facility has been launched in the Institute to enable every section to access the email received by the Institute and also transmitting emails to both within the Institute and external organizations/agencies. In the present system, the enclosures of the mails received are traversed to the “inbox” of the concerned sections of the Institute after Director’s perusal. The outgoing mails from the Institute are being sent from the respective sections after approval. This has resulted in not only enhancing the efficiency but also conservation of paper.

## 5. COMMUNICATION AND SOCIOLOGY

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### Scientific Gallery

As part of the ACSM activity, the institute has a scientific gallery which has rich source of information for all those engaged in TB control activities. The photographic display session will leave an indelible impression in the minds of the visitors on different aspects of Tuberculosis and its control, achievements of the Institute, the evolution of the programme, its monitoring aspects.

The ACSM materials comprises of display boards, photographs of luminaries in the field of TB, milestones in the development of TB Control Programme, salient features and facilities available under the TB Control Programme. Besides, projection and information kiosk facilities have been installed for the benefit of trainees and visitors to the Institute on Education Tour. The projection materials are being revised periodically to include the latest guidelines of RNTCP. A new power point presentation on the various aspects of Tuberculosis & its control programme was introduced for the benefit of the visitors.

The target group for the scientific gallery comprises of medical, para-medical personnel working in both teaching & non-teaching institutions and students of graduation & post graduation from other life science subjects.

This facility is extended to the visitors during all working days of the week (i.e, Monday to Friday). The Scientific Gallery could be visited by interested visitors / institution on a mutually agreed date.

### Sensitization on TB Control Programme for Undergraduate/ Post graduates / medical / paramedical students:

The Institute also provides one-day sensitization on TB Control Programme to medical (including Ayurvedic, Homoeopathy & Unani), para-medicals, under graduate and post graduate students pursuing life sciences and Nursing courses. The scientific gallery had a total 2498 students in 67 batches from 46 educational institutions during the year under report. The details of the visits are furnished below:

Sl. No.	Date	No. of participants	Organization
1	05-04-11	17	Yenepoya college of Nursing, Mangalore.
2		40	St. John's college of Nursing, Bengaluru
3	07-04-11	33	Shantini College of Nursing, Bengaluru
4	11-04-11	40	Oriental College of Nursing, Bengaluru
5	13-04-11	47	Sri lakshmi college of Nursing, Bengaluru
6	25-04-11	56	Sri Kalabyraveswara College of Nursing, Bengaluru
7	28-04-11	33	PES College, Bengaluru
8	29-04-11	23	Alva's Homoeopathic Medical College, Moodabidiri, Dakshina Kannada
9	02-05-11	40	Acharya & BM Reddy College of Pharmacy, Bengaluru
10	04-05-11	47	

Sl. No.	Date	No. of participants	Organization
11	06-05-11	32	
12	09-05-11	41	
13	10-05-11	42	
14	11-05-11	52	Krupanidhi College of Pharmacy, Bengaluru
15	18-05-11	22	Global College of Nursing, Bengaluru
16	19-05-11	56	Air Force Medical Training Centre, Bengaluru
17	23-05-11	25	St. Philomena's College of Nursing, Bengaluru
18	26-05-11	39	St. John's college of Nursing, Bengaluru
19	27-05-11	51	Brite College of Nursing, Bengaluru
20	01-06-11	10	R V College of Nursing, Bengaluru
21	03-06-11	24	Dr. John College of Nursing, Bengaluru
22		15	Gautham College of Nursing, Bengaluru
23	10-06-11	34	Nehru College of Nursing, Bengaluru
24	15-06-11	42	IKON College of Nursing, Bidadi, Ramanagara District, Karnataka
25	17-06-11	52	Vaidehi Institute of Nursing, Bengaluru
26	28-06-11	50	K R College of Nursing, Bengaluru
27	30-06-11	20	Vishwa Sai School of Nursing, Bengaluru
28	30-06-11	33	BGS College of Nursing, Mysore
29	04-07-11	43	Ambigara Chowdaiah College of Nursing, Bengaluru
30	06-07-11	39	Nagarathamma College of Nursing, Bengaluru
31	08-07-11	28	Adventist College of Nursing, Bengaluru
32	12-07-11	39	JOSCO College of Nursing, Bengaluru
33	18-07-11	30	Krupanidhi college of Pharmacy, Bengaluru
34	19-07-11	54	Kempegowda College of Nursing, Bengaluru
35	21-07-11	60	Padmashree College of Nursing, Bengaluru
36	26-07-11	11	Adichunchanagiri College of Pharmacy, BG Nagara, Mandya District
37	28-07-11	35	National Institute of Unani Medicine, Bengaluru
38	29-07-11	27	Sapthagiri College of Nursing, Bengaluru
39	16-08-11	60	Sri Devaraj Urs Medical College, Kolar
40	17-08-11	60	
41	27-08-11	50	Siddhartha Medical College, Tumkur
42	20-09-11	10	National Centre for Disease Control, Bengaluru (WHO fellows from South Asian Countries)
43	26-09-11	52	St Martha's College of Nursing, Bengaluru
44	28-09-11	45	
45	28-10-11	52	Padmashree College of Nursing, Bengaluru
46	11-11-11	62	Air Force Medical Training Centre, Bengaluru
47	22-11-11	42	JOSCO College of Nursing, Bengaluru
48	29-11-11	17	Bhagwan Mahaveer jain college of Nursing, Bengaluru
49	30-11-11	30	St. Philomena's College of Nursing, Bengaluru
50	05-12-11	61	Krupanidhi college of Nursing, Bengaluru

<b>Sl. No.</b>	<b>Date</b>	<b>No. of participants</b>	<b>Organization</b>
51	08-12-11	51	Oxford college of Nursing, Bengaluru
52	23-12-11	46	Gautham school of Nursing, Bengaluru
53	03-01-12	53	Lakshmi memorial Inst. Of Nursing,Mangalore
54	05-01-12	50	T. John college of Nursing , Bengaluru
55	09-01-12	37	Gautham College of Nursing, Bengaluru
56	10-01-12	38	
57	17-01-12	54	Global College of Nursing, Bengaluru
58		41	Narayaba Hrudayalaya College of Nursing, Bengaluru
59	21-02-12	01	Oxford college of Nursing, Bengaluru
60	23-02-12	52	Dr.Shyamala College of Nursing, Bengaluru
61	01-03-12	17	Garden City College of Nursing, Bengaluru
62	02-03-12	24	Lakshmi memorial Inst. Of Nursing,Mangalore
63	05-03-12	39	St. John's college of Nursing, Bengaluru
64	12-03-12	31	Prajwal College of Nursing, Bengaluru
65	20-03-12	27	Air force medical Training centre, Bengaluru
66	27-03-12	17	GIRH & FWT, Ambattur, Dindigul Dist. Tamil Nadu
67	29-03-12	30	Shantini College of Nursing, Bengaluru

## 6. ADMINISTRATION DIVISION

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In accordance with the directions of Dte.GHS, the organization set up was restructured in the month of August 2011 by replacement of erstwhile Sections with Divisions and units functioning under each Division. The Administration Division of the institute caters to all the administrative requirements of the institute. The five units under this Division are Establishment, Accounts, Hostel, Stores and Transport Units. The achievements of the unit are furnished below, in brief,

### Establishment

The unit caters to the administrative matters, general upkeep of campus through CPWD, provision of 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
1.	Group 'A'	15	12	03
2.	Group 'B'			
	<i>Gazetted</i>	03	01	02
	<i>Non-gazetted</i>	36	23	13
3.	Group 'C'	103	94	09
<b>Total</b>		<b>157</b>	<b>130</b>	<b>27</b>

### Recruitments

Sl. No	Name	Designation	Date
1.	Mr. Sandeep Kumar	LDC	12/09/2011
2.	Mr. Santhosh Kumar	Gardner	23/12/2012

**Promotions**

Sl. No	Name	Designation	Date
1.	Mr. P.M Sheshadri	Head Clerk	01/10/2012

**Retirements**

Sl. No	Name	Designation	Date
<b>Superannuation</b>			
1.	Smt. Rahelamma Abraham	Upper Division Clerk	31-05-11
2.	Sri. P. Krishnamurthy	Lab. Assistant	31-08-11
3.	Dr. L. Suryanarayana	Senior CMO	30-09-11
4.	Smt. S. Susheela Rani	Head Clerk	30-09-11
5.	Smt. Narasamma	Safaiwala	29-02-12
6.	Smt.V.N.Saroja	Senior Public Health Nurse	31-01-12
<b>Voluntary Retirement</b>			
1.	Dr.(Mrs) Sophia Vijay	Consultant	17-01-12

**Transfers from NTI**

Sl. No	Name	Designation	Date
1.	Mrs. S.Leena - transferred on promotion as Deputy Advisor, Fiscal Policy Institute, Finance Department, Govt.of Karnataka	Sr. Statistical Officer	27.06.2011
2.	Mrs. G. Sumathi - transferred to Indian Bureau of Mines Chennai	Statistical Assistant	04.11.2011
3.	Mr. Sree Sayee Prasad - repatriated to Ministry of Health & Family Welfare, his parent department at New Delhi	Administrative Officer	09.11.2011

**Transferred to NTI**

Sl. No	Name	Designation	Date
1.	Mrs. P. Praseeja - transferred from National Sample Survey (Field Operation Division) Regional Office, Bangalore	Sr. Statistical Officer	16-08-2011

Sl. No	Name	Designation	Date
2.	Mr. M. Ananda - transferred from National Sample Survey (Field Operation Division – South), Andhra Pradesh	Statistical Officer	08-09-2011

### Training of officers / officials in administrative matters

Sl. No.	Details of Training	Date	Venue	Name of the officer
1	“Right to Information Act”	14-09-11 to 16-11-11	Parsam Institute of Statutory Rules Bangalore	Dr.C.Ravichandra, CMO (NFSG)
2.	Workshop on hospital / diagnostic services provided to CGHS beneficiaries at Bangalore		Kendriya Sadan Bangalore	Smt.S.L.Nagarathna, UDC

### Events observed / celebrated

Republic Day, Independence Day and Hindi Day were observed. Vigilance Awareness week was observed from 31-10-11 to 05-11-11 with the theme- Participative Vigilance.

### 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. 1, 10, 00,000/- under the head of account PLAN–Capital- Major Works and Rs. 35, 00,000/- under machinery and equipment was allocated to the Institute during the financial year 2011-12 for carrying out maintenance and new works. An amount of Rs.1, 04, 50,000/- and Rs. 25, 43,000/- were spent respectively for carrying out maintenance and new works. The following Civil, Electrical and Horticultural works were executed during the period under report in addition to the routine repairs & Maintenance works.

### Civil & Horticultural works

1. Renovation and repairing work of existing Auditorium (Kalanikethan).
2. Furnishing and wall paneling to the existing Auditorium (Kalanikethan).
3. Horticulture work of landscaping and relaying hedge beds.
4. Special repair to external wall with patch plastering and exterior painting of old quarters.
5. Construction of surface drain along the western side of compound wall of the campus and changing the sanitary pipes outside the quarters.
6. Construction of New manholes and sewerage pipes for old quarters No.1 to 7.
7. Alteration / Civil works in Bacteriology section.

8. False ceiling, Vinyl flooring work for LPA Rooms of Bacteriology section and Venetian blind for computer server room.
9. Aluminum Extrusion work for Bacteriology section and Statistical section.
10. Distemper work in the 1<sup>st</sup> and 2<sup>nd</sup> floor of P.V.Benjamin block.

### **Electrical works**

1. Renovation and repairing work of existing Auditorium (Kalanikethan).
2. Networking of various computers in Benjamin Block.
3. Operation and maintenance of specialized E&M services.

In additional to the above, the facilities available at AMRU were upgraded to accommodate a new International Centre for Excellence in Laboratory Training (ICELT) with funding from Foundation for Innovative New Diagnostics (FIND).

### **Transport Section**

The Institute has fleet of 11 vehicles and this section is primarily responsible for its upkeep and provision of the vehicles for various sections of the Institute as per requirements. The section also handles maintenance of all documents regarding registration, insurance and condemnation. The section is also equipped to undertake in-house repairs of vehicles.

### **Accounts**

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

- a. Preparation of 12<sup>th</sup> five year plan outlay
- b. Preparation of annual budget and performance budget proposals
- c. Drawing and disbursement of salaries, traveling allowances, medical reimbursement & other claims and advances related to the staff & officers
- d. Calculation and disbursement of MACP arrears, Pay re-fixation, and payment of arrears
- e. 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 2009-10, 2010-11 & 2011-12 are furnished below.

<b>PLAN</b>		<b>(Rs. in lakhs)</b>
<b>Year</b>	<b>Budget allocated (Rs.)</b>	<b>Expenditure (Rs.)</b>
2009-2010	195.00	112.74
2010-2011	195.00	172.21
2011-2012	195.00	174.10

<b>NON PLAN</b>		<b>(Rs. in Lakhs)</b>
<b>Year</b>	<b>Budget allocated (Rs.)</b>	<b>Expenditure (Rs.)</b>
2009-2010	639.50	636.23
2010-2011	618.00	615.37
2011-2012	683.00	663.53

The revenue generated by the Institute for the year 2011-12 through various sources was credited to the consolidated fund of Government of India as given in the table below.

#### **REVENUE GENERATED**

<b>Year</b>	<b>Amount (Rs.)</b>
2011-2012	4,33,735

## **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 19 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.

### **Conferences:**

#### **Participation and papers presented**

Sl. No.	Particulars	Date	Participants	Paper /poster presented
1	66 <sup>th</sup> NATCON 2011 held at Dehradun	18-11-11 to 20-11-11	Dr. V K Chadha, Public Health Consultant  Dr Preetish S. Vaidyanathan, CMO(NFSG)  Mr. Sanjay Singh, Field Investigator  Mr. George Sebastian, Junior Bacteriologist	Chaired the Scientific Session on Epidemiology.  Made a present-ation on “Trained Manpower Development – Challenges under RNTCP”.  Was awarded Dr. C Srinivas Rao Award from TB Association of India for the Paper on Disease Prevalence Survey in Nelamangala Taluk in Rural Bangalore  Presented a poster titled “Comparison of Mercury vapor lamp with conventional Fluorescent Microscopy”
2	24 <sup>th</sup> Annual conference of Gujarat State TB association held at Ahmedabad.	15-05-11	Dr. P. Kumar, Director	As first awardee, delivered “Dr M.D. Deshmukh Memorial Oration titled TB control in India

Sl. No.	Particulars	Date	Participants	Paper /poster presented
3	Conference on TB Diagnostics in India – from importation and imitation held at St. John’s Research Institute, Bangalore	24-08-11	Dr. P. Kumar, Director	

## Workshops

### At NTI

Sl. No.	Particulars	Date	Resource person
1	TB Operational Capacity building workshop organized in collaboration with Central TB Division, NTI, The Union, WHO-India and CDC, Atlanta). Seventy delegates in two batches from various states of the country participated.	22-08-11 to 29-08-11	Faculty from The Union, CTD, NTI, CDC Atlanta and WHO participated as resource persons.
		26-03-12 to 31-03-12	
2	Expert Group Workshop on ‘Analysis of Disease Prevalence Data’ represented by Public Health Consultant & statisticians from NTI, MGIMS, Wardha, TRC Chennai and NIMS, New Delhi	02-05-11 & 06-05-11	Dr. Charalambos Sismanidis,, Statistician from WHO Geneva
3	EQA Module Revision Workshop	10-06-11 to 16-06-11	Mr. S. Anand, Consultant Microbiologist Mrs. Hema Sundaram, Consultant Microbiologist, Mrs. Reena K. Consultant Microbiologist Mr. H D Surendra, Laboratory Technician Mrs. Mamatha H G, Sr. Laboratory Technician

## Outside NTI

Sl. No.	Particulars	Date	Resource person
1	Chaired Preliminary sessions of the workshop to discuss the results of DPS and ARTI surveys undertaken by various Institutes, held at LRS Institute, New Delhi and made presentation.	05-04-11 & 06-04-11	Dr. P. Kumar, Director Dr. S.K. Tripathy, TB Specialist Mr. S. Anand, Consultant Microbiologist
2	Indo-US workshop on “Facing the reality of multidrug resistant tuberculosis challenges and potential solutions in India” held in the Indian National Science Academy (INSA), New Delhi and made a presentation on “India’s response to manage MDR-TB”.	18-04-11 & 19-04-11	Dr. P. Kumar, Director Dr. S K Tripathy, TB Specialist n Mr. S. Anand, Consultant Microbiologist
3	Inaugurated and chaired the scientific session of the IRL Microbiologists experience sharing workshop at Hotel Clarion, New Delhi and lead the discussion on strengthening laboratory network for effective diagnosis under RNTCP.	30-06-11 & 01-07-101	Dr. P. Kumar, Director Mr. S. Anand, Consultant Microbiologist
4	Chaired and participated in the scientific session of the workshop on TB Disease Burden to finalize the estimates on TB disease in the country held at LRS Institute, New Delhi.	07-07-11 & 08-07-11	Dr. P. Kumar, Director, Dr. V K Chadha, Public Health Consultant
5	Chaired scientific session of the ZTF Workshop of East zone at Ranchi, Jharkhand. Made presentation on Operational Research and guided group discussion of zonal OR committee meeting.	04-08-11 to 08-08-11	Dr. P. Kumar, Director,
6	Chaired scientific session of the ZTF Workshop of South zone at Hyderabad. Made presentation on Operational Research and guided group discussion of zonal OR committee meeting.	11-08-11 to 12-08-11	Dr. P. Kumar, Director,

<b>Sl. No.</b>	<b>Particulars</b>	<b>Date</b>	<b>Resource person</b>
7	Chaired scientific session of the ZTF Workshop of North zone at Maulana Azad Medical College, New Delhi. Made presentation on Operational Research and guided group discussion of zonal OR committee meeting.	14-09-11 to 15-09-11	Dr. P. Kumar, Director,
8	Participated in the WHO Regional Workshop on Public Private Mix / Practical Approach to Lung Health in TB Control held at Kathmandu Nepal	19-09-11 to 23-09-11	Dr Preetish Vaidyanathan, CMO(NFSG)
9	Chaired scientific session of the ZTF Workshop of West zone at Ahmedabad. Made presentation on Operational Research and guided group discussion of zonal OR committee meeting.	29-09-11 to 30-09-11	Dr. P. Kumar, Director,
10	Inaugurated and chaired the scientific session of the IRL Microbiologists experience sharing workshop at Hotel Clarion, New Delhi and lead the discussion on strengthening laboratory network for effective diagnosis under RNTCP.	01-12-11 to 02-12-11	Dr. P. Kumar, Director Mr. S. Anand, Consultant Microbiologist
11	Participated in the NTF workshop at LRS Institute, New Delhi, guided group discussion, attended NTF meeting and provided inputs in drafting the recommendations.	21-12-11 to 22-12-11	Dr. P. Kumar, Director Mr. S. Anand, Consultant Microbiologist
12	Chaired the scientific sessions and facilitated group discussion in the National Consultation on diagnosis and treatment of pediatric tuberculosis at LRS Institute, New Delhi.	31-01-12 & 01-02-12	Dr. P. Kumar, Director

## Meetings

### At NTI

Sl. No.	Meetings/CME	Date	Resource person
1	Review Committee meeting organized by National Programme of Prevention and control of Deafness. Participated in the inaugural session, addressed the participants and had interaction with Dr DC Jain, DDG, GOI.	26-04-11 to 27-04-11	Dr. P. Kumar
2	Institutional Animal Ethics Committee Meeting to discuss the progress of the IAEC approved ongoing research studies followed by visited AMRU & open shelter for retired breeders along with the members	27-04-11	Dr. P. Kumar, Director and IAEC members
3	Meeting chaired by DDG-TB and Director. Presentations were made on the Case base electronic recording and reporting and RNTCP Trained Manpower Database	27-09-11	In-charge and Staff of HRD Division.
4	Informal Consultation on Roll-out of X-pert MTB/RIF Diagnostic Test and Expanding Laboratory Services for TB Control	18-10-11 to 20-10-11	Dr. K.M. Shivakumar, Addl. Director Mr. S. Anand, Consultant Microbiologist
5	Meeting with Dr. Niraj Kulshrestha, Addl.DDG, Dr. Kiran Rade, Consultant, CTD for discussion on modalities to undertake Case Based Monitoring, HRD Data Base and Operations Research database,	09-01-12 10-01-12 & 26-03-12	Dr.P. Kumar, Director Mr. R. Jitenera, Computer
6	Regional Review Meeting on National Programme for Prevention and Control of Cancer, diabetes, Cardio-vascular diseases and Stoke & NPHCE organized by Min of Health & FW, and addressed the gathering during the inaugural & concluding sessions.	23-12-11 to 24-12-11	Dr. P. Kumar

Sl. No.	Meetings/CME	Date	Resource person
7	Institutional Animal Ethics Committee Meeting to discuss the progress of the IAEC approved ongoing research studies followed by visited AMRU & open shelter for retired breeders along with the members	11-01-12	Dr. P. Kumar, Director and IAEC members
8	Meeting with Dr. Neeraj Kulshrestha, ADDG, CTD, New Delhi and Dr. Kiran Rade to discuss the modalities to undertake Case Based Monitoring, HRD Data base and Operations Research data base.	09-01-12 10-01-12 & 26-03-12	Dr. P. Kumar, Director Mr. R Jitendra, Computer
9	12th Institutional Ethics Committee Meeting was held to discuss the ethical issues and seeking ethical clearance for each of the following protocols:  - Capture-Recapture to estimate incidence, Period Prevalence and completeness of tuberculosis cases reporting under RNTCP in Tumkur District. - Challenges in Implementation of Diagnostic Algorithm for Patients having Symptoms Suggestive of Pulmonary TB with Smear Negative report on initial sputum examination.	12-01-12	Chairperson and all the members of the IEC.
10	- Comparative evaluation of the Bactec MGIT 960 liquid culture system with conventional solid culture system using Lownstein Jensen medium for detection of <i>Mycobacterium tuberculosis</i> - Results of one year TB operational research training project  The members were also briefed about the completed projects, which were earlier approved by IEC.	12-01-12	Chairperson and all the members of the IEC

Sl. No.	Meetings/CME	Date	Resource person
11	<p>13th Institutional Ethics Committee Meeting was held to discuss the ethical issues and seeking ethical clearance for each of the following protocols:</p> <ul style="list-style-type: none"> <li>- Provider initiated HIV testing and counseling (PITC) of TB suspects in the state of Karnataka</li> <li>- Provider initiated HIV testing and counseling (PITC) of TB suspects in the state of Andhra Pradesh</li> <li>- HIV prevalence among TB suspects in low HIV settings of India</li> <li>- CTD-WHO-FIND Cartridge Based Nucleic Acid Amplification Testing (CB-NAAT)</li> </ul>	03-03-12	

#### Outside NTI

Sl. No.	Meetings	Date	Resource person
1	Meeting to discuss the findings of ARTI and DPS Surveys, held at LRS Institute, New Delhi	05-04-11 to 06-04-11	Mr. R. Jitendra, Computer
2	Meeting to discuss various components of TB control programme and NRLs co-ordination held in Central TB Division, Dte.GHS, New Delhi and made a presentation on the action taken on the work allocated to NTI as National Reference Laboratory.	20-21 <sup>st</sup> April 2011	Dr. P. Kumar, Director Mr. S. Anand, Microbiologist Consultant
3	Expert group meeting on statistical analysis of disease prevalence and ARTI surveys	02-05-11 to 06-05-11	Dr. V.K. Chadha, Public Health Consultant
4	Chaired the scientific session and facilitated group discussion during the STO-RNTCP Consultant national bi-annual review meeting held at Claridges, Surajkund, Faridabad	18-05-11 to 20-05-11	Dr. P. Kumar, Director
5	working group meeting of National Strategic Plan (2012-17) for RNTCP on HRD held at New Delhi	24-05-11 16-06-11 05-07-11 26-07-11	Dr Preetish Vaidyanathan, CMO(NFSG)
6	Working group meeting on Epidemiology, Monitoring, Supervision, MIS & result frame work	24-05-11	Dr. V.K. Chadha, Health Consultant Public

<b>Sl. No.</b>	<b>Meetings</b>	<b>Date</b>	<b>Resource person</b>
7	Meeting with Health Secretary, Government of Karnataka to de-brief the visit to District TB Centre, Tumkur for review; and IRL, Karnataka as a member of the Joint Donor Review Mission team (RNTCP) of Karnataka state accompanied by Dr Ashok Kumar (DDG), TB, CTD, New Delhi and other team members.	01-06-11 & 02-06-11	Dr. P. Kumar
8	Meeting with Dr Behera, Director, LRS Institute, held at LRS Institute, New Delhi for strengthening technical cooperation between NTI and LRS Institute.	09-06-11	Dr. P. Kumar, Director
9	Meeting with DDG (TB) and other team members of CTD on strengthening and planning re-organization of NTI.	10-06-11 to 13-06-11	Dr. P. Kumar, Director
10	Working group meeting for strategic planning of RNTCP (Epidemiology) held at New Delhi	15-06-11	Dr. V.K. Chadha, Public Health Consultant
11	Working group meeting for strategic planning of RNTCP (Research) held at New Delhi	22-06-11	Dr. V.K. Chadha, Public Health Consultant
12	working group meeting of National Strategic Plan (2012-17) for RNTCP on HRD held at New Delhi	16-06-11 05-07-11 26-07-11	Dr Preetish Vaidyanathan, CMO(NFSG)
13	Meeting with Dr N Kulshrestha, CMO (SAG), CTD, Dte.GHS, New Delhi to discuss strengthening of HRD under RNTCP.	04-07-11	Dr. P. Kumar, Director
14	Meeting with Sri Vijay Kumar, Director (Admn.), CTD, Dte.GHS, New Delhi to discuss the progress of various administrative issues pertaining to NTI pending in Dte.GHS.	05-07-11	Dr. P. Kumar, Director
15	7 <sup>th</sup> meeting of the National DOTS Plus Committee held at LRS Institute, New Delhi	11-07-11 to 12-07-11	Dr. P. Kumar, Director
16	working group meeting of National Strategic Plan (2012-17) for RNTCP on HRD held at New Delhi	05-07-11 26-07-11	Dr Preetish Vaidyanathan, CMO(NFSG)
17	20 <sup>th</sup> National Laboratory Committee Meeting held at LRS Institute, New Delhi	13-07-11	Dr. P. Kumar, Director Mr. S. Anand, Microbiologist Consultant
18	7 <sup>th</sup> meeting of the National DOTS Plus Committee and 20 <sup>th</sup> National Laboratory Committee meeting held at LRS Institute, New Delhi	13-07-11	Dr. P. Kumar, Director Mr. S. Anand, Microbiologist Consultant

<b>Sl. No.</b>	<b>Meetings</b>	<b>Date</b>	<b>Resource person</b>
19	Meeting with Dr N Kulshrestha, CMO (SAG), CTD, Dte. GHS, New Delhi to discuss re-organization and strengthening of NTI	14-07-11	Dr. P. Kumar, Director
20	Working group meeting for strategic planning of RNTCP (Epidemiology & Monitoring) held at New Delhi	22-07-11	Dr. V.K. Chadha, Health Consultant                      Public
21	working group meeting of National Strategic Plan (2012-17) for RNTCP on HRD held at New Delhi	26-07-11	Dr Preetish Vaidyanathan, CMO(NFSG)
22	Working group meeting for strategic planning of RNTCP (Research) held at New Delhi	28-07-11	Dr. V.K. Chadha, Public Health Consultant
23	Meeting to present / discuss the final results of the DPS and ARTI Study, held at LRS Institute, New Delhi	07-08-11 & 08-08-11	Mr. R. Jitendra, Computer
24	Was a member of the Interview Board for recruitment of Specialist Medical Officer (Dy. Comdt) and Medical Officer (Asstt. Comdt.), CAPFGs	08-08-11 & 12-08-11	Dr. N. Somashekar, TB Specialist
25	Meeting of “Independent committee of experts for review of recent estimations of TB burden” at Nirman Bhavan, New Delhi to discuss data of DPS and ARTI surveys conducted at various places in India	16-09-11	Dr. P. Kumar, Director Dr. V.K. Chadha, Public Health Consultant
26	Sub-committee to finalize specification of LED Microscope held at New Delhi	28-09-11	Mr. S. Anand, Consultant Microbiologist

<b>Sl. No.</b>	<b>Meetings</b>	<b>Date</b>	<b>Resource person</b>
27	Meeting with the Principal Secretary, Health and Medical Education, Sri Ramdas, Hon'ble Medical Education Minister, Government of Karnataka along with DDG (TB), Dr V.K. Gupta, Dr Sarin, team members from Ministry of Health held at NIMHANS, Bangalore, on the proposal to convert Rajiv Gandhi Institute of Chest Diseases and SDS Sanatorium to Central Institute for TB & Chest Diseases.	02-10-11 & 03-10-11	Dr. P. Kumar, Director
28	DOTS Plus Review Meeting held at Shimla	03-10-11 & 04-10-11	Mr. S. Anand, Consultant Microbiologist
29	Meeting to discuss the protocol "Challenges in Implementation of Diagnostic Algorithm for patients having Symptoms suggestive of Pulmonary TB with Smear Negative report on initial sputum examination".	12-10-11 to 13-10-11	Dr. V.K. Chadha, Public Health Consultant, Dr. S K Tripathy Mrs. Praseeja, Sr. Statistical Officer and, Mr. Hemanth Kumar, Health Visitor
30	Meeting with DDG-TB, CTD, New Delhi and presented the experiences of NTI in Case based electronic recording / reporting monitoring & RNTCP Trained Manpower Database	17-10-11	Mr. R. Jitendra, Computer
31	Bi-annual meeting of STOs & RNTCP Consultants to review the Operations Research undertaken & facilitated the group and delivered talk on "Estimating TB Burden"	31-10-11 to 01-11-11	Dr. V.K. Chadha, Public Health Consultant

Sl. No.	Meetings	Date	Resource person
32	<ul style="list-style-type: none"> <li>- Chaired the scientific session during the “Bi-annual National STO-RNTCP Consultants review meeting” held in New Delhi. Guided &amp; facilitated the discussion made by STOs and addressed the participants in the concluding session.</li> <li>- Meeting with DDG (TB); Dr Soumya Swaminathan, NIRT; Dr Puneet Diwan, WHO Medical Officer; and Dr V.K. Chadha, NTI, regarding documentation of the research carried out in the field of TB in India in coordination with TRC, LRS, JALMA and NDTB and also to coordinate with NTF and ZTF Chairman to collect and compile the data.</li> </ul>	02-11-11 to 05-11-11	Dr. P. Kumar, Director
33	<ul style="list-style-type: none"> <li>- Accompanied DDG (TB) for a meeting with Chief Executive Officer (CEO) of FIND, Dr Phillippe Jacon, regarding partnership with FIND and RNTCP in India.</li> <li>- Meeting with Director, NCDC, New Delhi on extending cooperation of NTI to NCDC PSU situated in NTI campus.</li> </ul>	02-11-11 to 05-11-11	Dr. P. Kumar, Director
34	DOTS Plus Review Meeting held at Pune	17-11-11 & 18-11-11	Mr. S. Anand, Consultant Microbiologist
35	Meeting with Dr Behera, Director, LRS Institute, New Delhi, regarding documentation of the research in the field of TB and settlement of the account of ARTI survey.	03-12-11	Dr. P. Kumar, Director
36	Meeting with DDG (NCD), to discuss the arrangements to be made to organize the review meeting at NTI on 23 & 24 Dec. 2011 at Nirman Bhavan, New Delhi.	20-12-11	Dr. P. Kumar, Director
37	Steering Committee meeting of Operational Research at LRS Institute, New Delhi.	21-12-11 to 22-12-11	Dr. P. Kumar, Director

<b>Sl. No.</b>	<b>Meetings</b>	<b>Date</b>	<b>Resource person</b>
38	Steering Committee meeting for “Evaluation of Cartridge Based Nucleic Acid Amplification Testing (CB-NAAT)” held at LRS Institute, New Delhi. Chaired the scientific session and assisted CTD and FIND team to revise the list of probable Centres for implementation of the project.	04-01-12	Dr. P. Kumar, Director
39	Meeting with team members from CTD, FIND and NTI to discuss the issues pertaining to ICELT, NTI, at LRS Institute, New Delhi.		
40	Meeting with the CTD team members, Chaired by Addl. Chief Secretary, Mumbai and provided information on the observations made by the team during visits to Hinduja Hospital and Sevari TB Hospital in Mumbai.	17-01-12	Dr. P. Kumar, Director
41	Meeting with TB Programme personnel working for various Hospitals and TB Units in Mumbai during Visit to KAL Hospital, Mumbai along with other team members of CTD.		
42	Meeting with Additional Commissioner, Mumbai Corporation, to discuss the strengthening of TB control services in Mumbai	18-01-12	Dr. P. Kumar, Director
43	Meeting chaired by Additional Chief Secretary, Maharashtra and addressed the members on the status of DRS in Mumbai and plan to strengthen TB control in the city.		

<b>Sl. No.</b>	<b>Meetings</b>	<b>Date</b>	<b>Resource person</b>
44	Meeting with Hon'ble Chief Minister of Maharashtra along with the officials from Government of Maharashtra at Chief Minister's residence 'Varsha' in Mumbai and provided information on the issue of DRS raised in the media and plan for strengthening TB control services in the city of Mumbai.	19-01-12	Dr. P. Kumar, Director
45	Meeting with Director General, ICMR Headquarters, New Delhi to discuss creation of database on TB for documentation of research conducted by various Institutions in the country.	20-01-12	Dr. P. Kumar, Director
46	National standing committee Meeting for Operations Research under RNTCP held at LRS Institute, New Delhi.		
47	Meeting with Dr Srinath from The Union, Dr. Ranjani Ramachandran, WHO to discuss the collaborative activities OF THE Union, CTD, WHO and NTI during the months of March & April 2012.	08-02-12 & 9-02-12	Dr. P. Kumar, Director
48	Meeting with Dr Kulshrestha, Dr Ranjani Ramachandran and Dr Sreenivas in the office of Addl. DDG, CTD, to discuss TSA between NTI and WHO in order to strengthen the lab capacity, Operations Research, capacity building in various states, to conduct DRS in Rajasthan, documentation of research and creating a database on HRD in India	08-02-12 & 09-02-12	Dr. P. Kumar, Director
49	Meeting of the National Programmatic Management of Drug Resistant TB (PMDT) committee held at LRS Institute, New Delhi.	10-02-12	Dr. P. Kumar, Director
50	Regional PMDT Review meeting with states North zone held at Srinagar	21-02-12 & 22-02-12	Mr. S. Anand, Consultant Microbiologist

<b>Sl. No.</b>	<b>Meetings</b>	<b>Date</b>	<b>Resource person</b>
51	PMDT review meeting held at Chennai and had discussion with Dr Sachdeva, CTD about presentation of GeneXpert protocol in NTI Ethics committee.	26-02-12	Dr. P. Kumar, Director
52	Regional PMDT Review meeting with states South & West zones held at Chennai	27-02-12 & 28-02-12	Mr S. Anand, Consultant Microbiologist
53	Meeting with Mr Bansal, Director, NRHL, Tamil Nadu to discuss issues related to re-organization and strengthening of DRS in Tamil Nadu.	27-02-12	Dr. P. Kumar, Director
54	<ul style="list-style-type: none"> <li>- PMDT review meeting held at Chennai and addressed the participants during the concluding session.</li> <li>- Meeting with Director, NIRT (TRC) regarding documentation of research on TB and deputing NIRT Librarian to NTI</li> <li>- Meeting with STO Rajasthan to discuss DRS to be conducted in Rajasthan with the support of WHO.</li> </ul>	28-02-12	Dr. P. Kumar, Director
55	<ul style="list-style-type: none"> <li>- Meeting with the Director and other Officers of Desert Medical Research Centre (ICMR) along with STO, Rajasthan, Dr Ranjani Ramachandran, Dr Rahul Thakur from FIND, WHO Consultant and Microbiologist of Rajasthan and had discussions to provide culture and DST support to LPA lab being set up at the Medical College, Jodhpur.</li> <li>- Meeting with the Principal and HOD of Microbiology to identify the area of LPA lab during the visit to SN Medical College lab, Jodhpur</li> </ul>	13-03-12	Dr. P. Kumar, Director

Sl. No.	Meetings	Date	Resource person
56	<ul style="list-style-type: none"> <li>- Meeting with Officers of the Dept of TB and Chest Diseases during the visit to DOTS Plus site of SN Medical College Lab and discussion on rolling out of DOTS Plus in Jodhpur,</li> <li>- Meeting with Dr Patni during the visit to Culture &amp; DST Lab at STDC Ajmer and had discussion on rolling out of DOTS Plus and providing laboratory support from IRL Ajmer to different districts, of Rajasthan.</li> <li>- Meeting with Dr. Bharathi Malhotra, Microbiologist during the visit to SMS Medical College lab and had discussion on providing lab support to various districts in Rajasthan for successful rolling of DOTS Plus in the state of Rajasthan.</li> </ul>	14-03-12	Dr. P. Kumar, Director
57	<ul style="list-style-type: none"> <li>- Meeting with Prof. ML Gupta, DOTS Plus site, Jaipur and had discussion on the status of MDR cases in the state of Rajasthan.</li> <li>- Meeting with DTO, Jaipur regarding estimation of the work load of MDR cases and action plan to meet the challenge of effective management of MDR cases in the city of Jaipur.</li> </ul>	16-03-12	Dr. P. Kumar, Director
58	Meeting with the State TB Control Programme authorities to finalise the work load of MDR TB cases and generate appropriate support by strengthening various labs at Ajmer, Jaipur, Jodhpur, Udaipur and Kota, for creating a model of effective PMDT in the state of Rajasthan.	19-03-12	Dr. P. Kumar, Director
59	Discussion with Swami Japananda and other TB control programme workers in the district of Tumkur and Inaugurated the Project GeneXpert at Swami Vivekananda Integrated Rural Health Centre,Pavagada, Tumkur	30-03-12	Dr. P. Kumar, Director

## 8. VISITORS

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

Sl. No.	Name of visitor	Date	Details of visit
1.	Dr V.G. Rao, ICMR, Jabalpur regarding his	01-04-11	Discussion on the report and data of the prevalence survey carried out by Regional Tribal Research Centre, Jabalpur, for presentation in the DPS and ARTI meeting to be held at New Delhi.
2.	Dr Sharat, WHO Consultant; Director, STDC, Karnataka; Dr H R Ravindra Reddy, WHO Head Quarters Consultant; I/c Lab and Consultant Microbiologist	07-04-11	Discussion on pre-accreditation visit to IRL, Karnataka.
3.	STO and Director, STDC, Karnataka about NTI support.	29-04-11	Discussion on the support of NTI for carrying out culture and DST for the samples brought by STDC staff to initiate DOTS + in the state of Karnataka
4.	Dr. Charalambos Sismanidis, Statistician WHO Geneva.	03-05-11 & 05-05-11	Discussion on the analysis of DPS and ARTI survey data.
5.	Dr Tyagi, MGIMS, Wardha and Mr Gopi, Consultant.	04-05-11	Discussion on issues pertaining to analysis of data of DPS and ARTI surveys
6.	Dr C.N. Paramasivan, Dr Akos Somoskovi, Dr Knut Feldmann, FIND, Geneva	25-05-11	Discussion on various training programmes to be organized at ICELT, NTI.
8.	Dr Ranjani Ramachandran, WHO & Dr. Ajay, CTD.	15-06-11 & 16-06-11	Discussion on updating various modules, guidelines and SOPs of laboratories in National Reference Lab and IRLs and its current status.
9.	Dr. Raman, State TB Officer, Puducherry	23-06-11	Discussion on the status of RNTCP in Puducherry.
10.	Dr Anil, Director, STDC, Karnataka; and Dr.Sangeetha, Sr. Specialist, Government of Karnataka	25-06-11	Discussion on the visit of DOTS + Appraisal team to national reference lab of NTI and to discuss the lab support being provided by NTI for culture and DST to the patients from Karnataka, till IRL of Karnataka is functional.
11.	Sri Siddiah, BBMP Commissioner	18-07-11	Discussion on rain water harvesting in NTI campus.
12.	Mr Avijit Choudhury	16-08.11	Discussion on development of HRD data based and case based electronic monitoring and reporting system to be developed by NTI.

Sl. No.	Name of visitor	Date	Details of visit
13.	Dr Srinath, Union, New Delhi	18-08-11 & 29-08-11	Review the arrangements for OR workshop to be organized jointly by NTI, Union, WHO, CDC Atlanta and CTD, at NTI, Bangalore.
14.	Dr Patrick Moonan, CDC Atlanta.	23-08-11	Discussion on partnership with NTI about disease control in Atlanta, USA
15.	Dr Puneet Divan, WHO-SEARO, New Delhi	27-08-11	Discussion on DRS protocol to be initiated by NTI.
16.	Sri K B Basnet, Admn. Officer, SAARC TB & HIV/AIDS Centre, Kathmandu, Nepal.	31-08-11	Discussion on the Agenda and Inaugural function for the SAARC Regional training scheduled to be held at NTI from 1-7 <sup>th</sup> Sept. 2011
17.	Dr Salhothra, Deputy Director, SAARC TB & HIV/AIDS Centre, Kathmandu, Nepal	06-09-11	Discussion on involvement of SAARC TB Centre in capacity building of Microbiologists in culture and DST trainings.
18.	Dr Akosh & Dr Paramasivan FIND, Geneva	07-09-11	Discussion on support of FIND Geneva office for functioning of Lab network in India.
19.	Dr Ranjani Ramachandran, Lab Focal Point, WHO,	08-09-11	Discussion on the document prepared for Supra Regional Laboratory, NTI.
20.	Dr Srinath, The Union and Dr Paramasivan, FIND, Geneva	17-10-11	Discussion to organize training course on LED microscope being provided to 200 medical colleges.
21.	Dr Hyder, Regional Advisor, WHO-SEARO		Discussion on the Agenda of the meeting to be held from 18 <sup>th</sup> -20 <sup>th</sup> October at NTI.
22.	Dr Sulthana, MPO, Bangladesh		Discussion on various components of TB control programme and possibility of collaboration between NTP, Bangladesh and NTI.
23.	A group of Swedish students related to a project in medicine, concerning Tuberculosis in India,	15-11-11	Discussion about TB and its control in India.
24.	Dr Sharath, WHO Consultant, CTD,	23-12-11	Discussion on updating the EQA document being undertaken by him and Consultant Microbiologists of NTI.
25.	Dr Shivalal, Advisor, NCD, DteGHS, New Delhi	23-12-11	Discussion on the scope of NTI to work on non-TB communicable diseases.
26.	Smt Shankuntala Gamlin, Joint Secretary and Sri Rakesh Kumar, Director, Min of Health & Family Welfare	24-12-11	
27.	Dr Sachdeva, Addl. DDG , CTD, New Delhi,	27-12-11	Discussion on various issues related to programmatic management of drug resistant TB and development of lab in various states.
28.	Dr Kulshrestha, Addl. DDG and Dr Kiran Rade, CTD,	08-01-12	Regarding issues to be discussed with CTD team visiting NTI from 9-12 Jan 2012.

<b>Sl. No.</b>	<b>Name of visitor</b>	<b>Date</b>	<b>Details of visit</b>
29.	Dr ML Gupta, TB & Chest Diseases, Jaipur	16-01-12	Discussion pertaining to drug resistant TB in Rajasthan and utilization of SMS Medical College lab at Jaipur for detection of MDR cases.
30.	Dr RC Meena, CMO, Central Railways.		Discussion on involvement of Railway Hospital in RNTCP
31.	Mr Pandey from Union, New Delhi.	17-02-12	Discussion on the arrangements to be made for capacity building workshop on Operations Research and training on LED microscope for various medical colleges as decided by CTD.
32.	Dr Paramasivan, FIND, Geneva	20-02-12	Discussion on LPA trainings to be organized at ICELT, NTI.
33.	Sri Ravindra Pattar, Director, CCD	20-02-12 & 22-02-12	Discussion on various issues pertaining to ICELET & NTI including court cases, audit report. . He visited various sections of the Institute along with Director, Addl. Director and I/c Admn..
34.	Dr Neeraj Raizada, Medical Officer & Project Leader, CBNAAT India project, FIND, New Delhi	07-03-12	Discussion regarding GeneXpert pilot project being carried out in 18 sites under the supervision of Director, NTI.

<b>Sl. No.</b>	<b>Name of visitor</b>	<b>Date</b>	<b>Details of visit</b>
35.	Dr Neeraj Kulshrestha, Addl. DDG (CTD), DteGHS, New Delhi and Nodal Officer for NTI,	26-03-12	to discuss various administrative and technical issues pertaining to NTI.
36	Dr Navin Wilson, Head of Union SEA New Delhi		Discussion on collaboration between NTI and The Union in various components of TB control.
37.	Dr Patrick Moonan from CDC Atlanta	28-03-12	Discussion on cooperation between CDC Atlanta and NTI on various components of TB control programme.
38	Dr Niraj Raizada, CBNAAT Project, FIND, India,	30-03-12	Discussion on the status of installation of GeneXpert machines in 18 sites across different parts of the country.

## **Acknowledgements**

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