

NATIONAL TUBERCULOSIS INSTITUTE BANGALORE



**ANNUAL REPORT
2008 - 09**

NATIONAL TUBERCULOSIS INSTITUTE
WHO Collaborating Center
For
Tuberculosis Research & Training

ANNUAL REPORT
2008 - 09

Government of India



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LIST OF ABBREVIATIONS

AIIMS	All India Institute of Medical Sciences
AMRU	Animal Model Research Unit
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 Shortcourse
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
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
LAN	Local Area Network
MDR	Multi Drug Resistance
MO-TC	Medical Officer - TB Control
M.TB	<i>Mycobacterium tuberculosis</i>
NACP	National AIDS Control Programme
NICD	National Institute of Communicable Disease

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
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
TRC	Tuberculosis Research Center
TUs	Tuberculosis Units
WHO	World Health Organization

FOREWORD

I am pleased to place before you the Annual Report for the year 2008-09. The Institute has been operating as the technical arm of the Directorate General of Health Services and designated as WHO collaboration center. It has taken pioneering role in training medical and para-medical personnel in the control of tuberculosis. Training is a seamless process aimed at providing trained manpower at the district/state level for implementation of TB control programme. This has assumed great importance in the consolidation phase of the TB control Programme. The ever increasing need for trained manpower is being fulfilled by the persistent efforts of the staff of the institute by conducting unprecedented number of training programmes as indicated in the report. The training curriculum incorporates the fundamental principles of TB control as enunciated in the RNTCP and reinforcing aspects of TB-HIV collaboration activities.

Institute as a WHO collaboration center, has also undertaken training of the personnel from Myanmar and DPR Korea, SEARO region. Apart from this, the institute has imparted training in sputum culture and drug susceptibility testing programme for participants from the SAARC region represented by Afghanistan, Bhutan, India, Maldives and Nepal for training.

Operational research is one of the prime functions of the institute. The research studies undertaken by the institute are in consonance with the priority areas identified by the Central Steering Committee. A study to estimate prevalence of pulmonary TB in adults in the adjoining rural area of Bangalore is in progress. Repeat Zonal level tuberculin surveys for estimating the trends in Annual Risk of Tuberculous Infection are also under progress. NTI being a nodal center is facilitating the study in different zones. It is also worth mentioning that the district level intervention study on routine referral of TB patients to Integrated Counseling and Testing Centers has made substantial progress and has entered the second phase.

It would be of interest to the readers to go through the summary of the research in progress, papers presented in conferences and published which are presented in brief in this report.

In the long run, maintenance of the quality of smear microscopy network and consolidation of high cure rates achieved is essential for the success of RNTCP. In this respect, the institute is striving hard in establishing EQA network in different states under its jurisdiction and in accreditation process. DRS, as an indicator of the programme performance has been also been taken up as one of the priorities in the second phase of the RNTCP. Summary in brief of above research projects and their status has been presented in this report.

The details of participation in technical activities along with the Central TB Division are also reflected in brief in this issue. Involvement in Zonal and National Task Force Meetings of Medical Colleges and participation in Laboratory Committee meetings form important components in this respect.

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

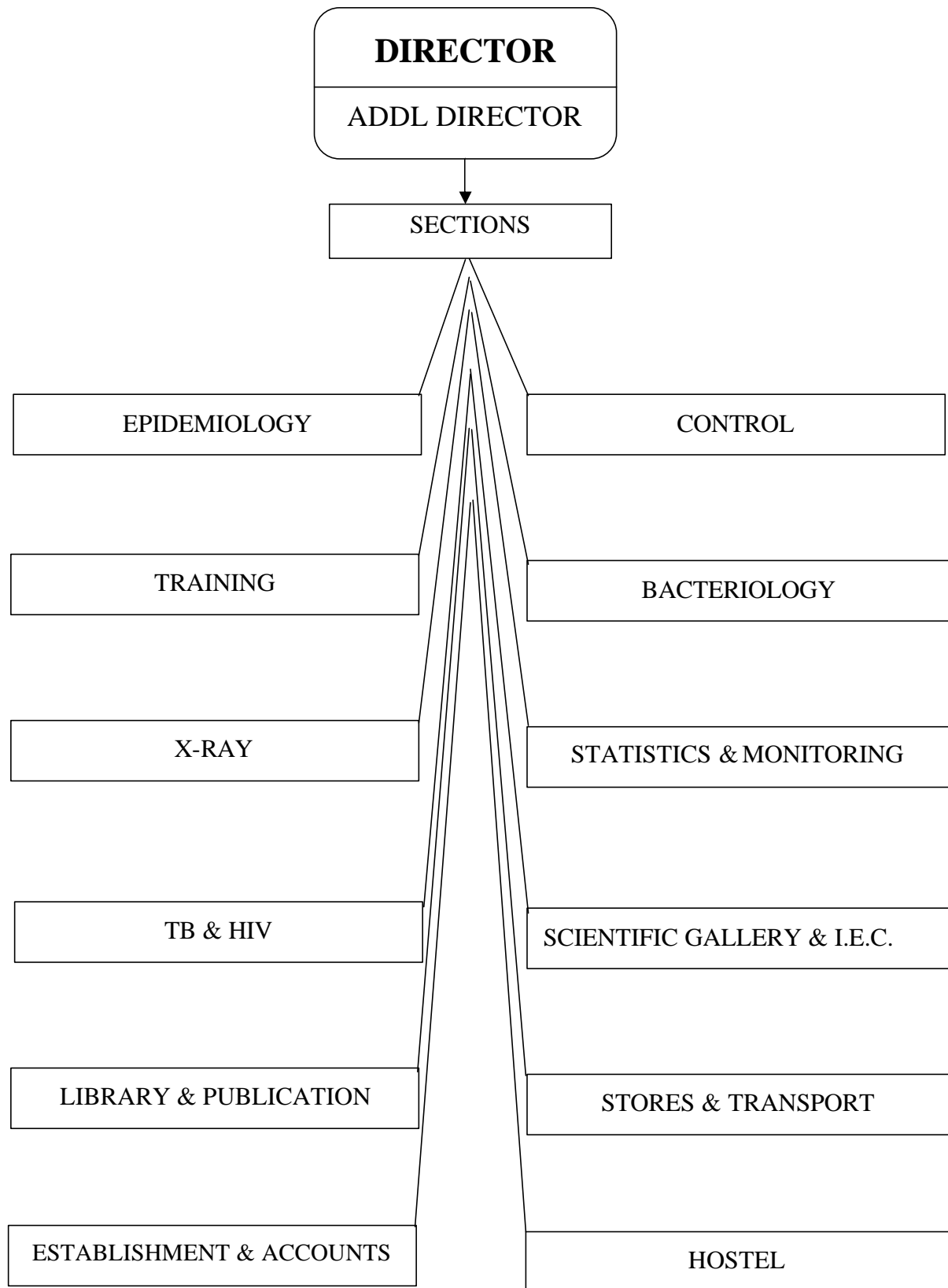
On this occasion, I would like to express my gratitude and appreciation to the faculty and staff of the institute for extending their co-operation and untiring efforts in achieving the objectives set for the institute. I continue to look forward for the same zeal and enthusiasm evinced by the staff of the institute in times to come.

The institute also places on record its gratitude to the Central TB Division and WHO-India for their continuous co-operation, guidance and encouragement in all our endeavors.

Dated: 16-06-09
Place: Bangalore

Dr. Prahlad Kumar
Director

1. ORGANIZATIONAL SET UP



STAFF POSITION

Staff position in terms of posts sanctioned and in working strength is given in the tables below.

GROUP-WISE STAFF POSITION

Sl. No.	Category	Sanctioned	In position	Vacant
1.	Group 'A'	17	13	4
2.	Group 'B'			
	Gazetted	04	1	3
	Non-gazetted	14	5	9
3.	Group 'C'	103*	79	24
4.	Group 'D'	47**	39	8
Total		185	137	48

* Two posts of LDC, One post of Driver, X-Ray Technician, Driver Mechanic, Three posts of Cook have been abolished

** 4 posts of Chowkidar, 1 post of Group D (Peon), 1 post of Safaiwala, 1 post of Animal Attendant and 1 post of DRA have been abolished

POST-WISE STAFF POSITION:

Group A

Sl. No.	Designation	Sanctioned Strength	Position	Vacancy
1.	Director	1	1	-
2.	Additional Director	1	1	-
3.	Senior TB Specialist	1	1	-
4.	Chief Medical Officer	4	4	-
5.	TB Specialist	2	1	1
6.	Chief Statistical Officer	1	1	-
7.	Epidemiologist	1	1	-
8.	Bacteriologist	1	-	1
9.	Senior Statistical Officer	1	1	-

10.	Veterinarian	1	1	-
11.	Statistical Officer	1	1	-
12.	X-Ray Engineer	1	-	1
13.	Sociologist	1	-	1

GROUP 'B' (GAZETTED)

Sl. No.	Designation	Sanctioned Strength	Position	Vacancy
1.	Administrative Officer	1	1	-
2.	Junior Bacteriologist	1	-	1
3.	Asst. Training Officer	1	-	1
4.	Sr. P.A. to Director	1	-	1

GROUP 'B' (NON-GAZETTED)

Sl. No.	Designation	Sanctioned Strength	Position	Vacancy
1.	Senior Public Health Nurse	1	1	-
2.	Assistant Programmer	1	-	1
3.	Jr. Statistical Officer	1	-	1
4.	Sr. Librarian	1	-	1
5.	Sr. Investigator (SOCS)	1	-	1
6.	Senior Investigator (EPS)	1	-	1
7.	Senior Technical Assistant (Lab)	1	-	1
8.	Senior Technical Assistant (X-Ray)	1	-	1
9.	Accountant	1	-	1
10.	Stenographer Gr. I	1	-	1
11.	Investigator	3	3	-
12.	Social Worker	1	1	-

GROUP 'C'

Sl. No.	Designation	Sanctioned Strength	Position	Vacancy
1.	Statistical Assistant	6	5	1
2.	Statistical Assistant (Mach).	1	-	1
3.	Sorter Operator	1	-	1
4.	Punch Operator	2	-	2
5.	Computer	6	4	2
6.	Head Clerk	1	1	-
7.	Stenographer Gr.II	2	2	-
8.	Stenographer Gr.III	3	1	2
9.	Upper Division Clerk	8	8	-
10.	Lower Division Clerk	7	5	2
11.	Field Investigator	7	5	2
12.	Laboratory Assistant	2	2	-
13.	Sister Tutor	2	2	-
14.	Health Visitor	9	3	6
15.	Driver Gr.I	3	3	-
16.	Driver Gr. II	4	4	-
17.	Driver Ordinary Grade	7	6	1
18.	Store Keeper	1	1	-
19.	Telephone Operator	1	1	-
20.	Hostel Warden	1	1	-
21.	Laboratory Technician	12	9	3
22.	Draughtsman	1	1	-
23.	Transport Supervisor	1	-	1
24.	Mechanical Supervisor	1	-	1

Sl. No.	Designation	Sanctioned Strength	Position	Vacancy
25.	X-Ray Technician	5	5	1
26.	Driver Mechanic	1	1	-
27.	Junior Hindi Translator	1	-	1
28.	Hindi Typist	1	1	-
29.	Cooks	7	7	-

* one Lower Division Clerk is on deputation in other department.

GROUP 'D'

Sl. No.	Designation	Sanctioned Strength	Position	Vacancy
1.	Group 'D' (Peons)	20	17	3
2.	Animal Attendant	2	2	-
3.	Field Assistant	1	1	-
4.	Daftry	1	1	-
5.	Dark Room Assistant	1	1	-
6.	Gardener	1	1	-
7.	Helper	1	1	-
8.	Safaiwala	9	6	3
9.	Bearer	1	1	-
10.	Laboratory Attendant	7	6	1
11.	Chowkidar	3	2	1

3. COMMITTEES

Several Institutional and other committees have been constituted under the chairmanships of senior officers for examining the relevant issues, formulate recommendations to facilitate the Director in taking appropriate decisions. The functions of the important committees that existed during the year are described below:

Institutional Ethics Committee

This committee will review the research protocols from the point of view of ethical considerations and give the stamp of approval before implementation.

Institutional Animal Ethics Committee

This committee will review and approve research projects involving animal experimentation.

Technical Co-Ordination Committee

All the faculty members of the Institute are members of this committee. This committee meets frequently to ensure in-depth inter-disciplinary discussions on all technical matters, exchange of information, plan and co-ordinate research activities. Whenever a new research activity is proposed to be undertaken, it is discussed threadbare in the committee meetings. It also reviews progress of fieldwork & analysis of the research protocols. The draft findings of the research projects are discussed before it is either presented in technical conferences or published in the journals.

Committee on Administration and Staff Welfare:

All important service matters of the staff are referred to this committee for examination from the point of view of prevailing rules and formulation of recommendations for action by Director.

Planning Committee for Civil and Electrical Works

This committee is responsible for identification of civil & electrical works to be carried out in the Institute and prioritizing the same within the annual budget under this head. Scrutiny of the estimates received from CPWD, and specifications of the work entrusted are undertaken by the committee before issue of administrative & expenditure sanction. The committee also monitors the progress of the work in close co-ordination with the concerned CPWD officials.

Purchase Committee

This committee is responsible for the scrutiny of the specification of the items sought by different sections, examination of pre-qualification criteria, opening of quotations/tenders and scrutiny of comparative statements with reference to the set specifications and relevant rules of purchase. Finally the recommendations are submitted to the Director for further action.

Rajbhasha Implementation Committee

This committee has been formulated to promote the use of Rajbhasha and encourage the officials to learn and use Hindi language in official correspondences. This committee coordinates the celebration of Hindi week and Hindi Day celebrated every year.

Library Committee

This committee is entrusted with the responsibility of recommending the subscription of periodicals, acquisition of books, user-oriented activities and ways to promote dissemination of information.

Editorial Committee

This committee coordinates the publication activities of the Institute, especially the biannual publication viz., “**NTI Bulletin**”.

Quarters Allotment Committee

The committee is responsible for organizing the preparation and scrutiny of waiting list for allotment of quarters and finalization of recommendations as per the prevailing allotment rules.

Campus Maintenance Committee

This committee has an advisory role in matters pertaining to the general upkeep, maintenance and security of the campus.

Flag Hoisting Committee

The committee is responsible for the supervision of the hoisting of national flag, daily as well as on occasions of national importance as per the guidelines of Government of India.

Committee for prevention of Sexual Harassment

This committee meant to deal with the complaints of sexual harassment faced by the women Government servants. In this connection, Dr. N. Somashekar, Member underwent an Orientation Programme on Prevention of Sexual Harassment at work places held at NIPCCD, Bengaluru from 23rd – 25th September 2009.

Committee for condemnation of obsolete articles

Condemnation Committee has been constituted to process the items recommended for condemnation by different sections. The committee after going through the history sheet consisting date of procurement, duration of its use, the quantum of repairs undertaken, cost incurred for repair and its present working condition decides on the feasibility of its condemnation.

Committee for taking actions on court matters and audit objections

The committee has been constituted under the chairmanship of Additional Director to review and initiate action on pending court matters and audit objections.

Nomination of central public Information officers

Two central public Information officers - One for administrative matters and other for technical matters have been nominated to process the request as and when the information is sought in accordance with the guidelines of RTI act.

Constitution of office Council

Office council has been constituted under the chairmanship of Director and Section Officers as its members with the objective of promoting harmonious relations and securing co-operation from the staff to achieve greater efficiency.

4. TRAINING

Training in TB Control programme is an integral function of the Institute and keeps meeting ever-increasing demand of trained manpower in implementation and maintenance of TB Control Programme. This is an ongoing process due to periodic replacement of key personnel either because of retirements/transfers. The training is undertaken based on the requirement of the states and directives from Central TB Division, New Delhi. Besides regular RNTCP Modular Training, the Institute also shoulders the responsibility of training the Medical & Paramedical personnel from various states in the areas of activities viz., TB-HIV, EQA in smear microscopy & DST, DRS studies and training of tuberculin survey teams in testing and reading. Officials from both government and Non-governmental Organization are participating in the above mentioned Training Programme.

The various training activities carried out by the Institute during the period under report are furnished below in detail.

RNTCP and TB-HIV Modular training

This course of 2 weeks duration comprises of a pre-test, training in RNTCP modules (1-9), Module on TB-HIV and handouts pertaining to updates on RNTCP. The Training methodology is essentially through module reading, group discussions, one to one interaction, work exercises. This is interspersed with power point presentations on important aspects of RNTCP and field visits to health centers in BBMP and ICTC & ART Centres followed by presentation of field reports, post test evaluation and distribution of certificate of completion.

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District sponsoring
1	State and District level programme Managers and faculty from Medical colleges	21-04-08 to 03-05-08	29	Assam , Chhattisgarh, Delhi, Goa, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, West Bengal
2		02-06-08 to 14-06-08	26	Gujarat, Himachal Pradesh, Jammu & Kashmir , Madhya Pradesh, Maharashtra, Uttar Pradesh, West Bengal
3		18-08-08 to 30-08-08	32	Andhra Pradesh, Assam, Arunachal Pradesh, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Orisa, West Bengal
4		13-10-08 to 25-10-09	22	Chattisgarh, Jharkhand, Karnataka, Orisa, Maharashtra, Madhya Pradesh, Rajasthan, Tamil Nadu and Uttar Pradesh

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District sponsoring
5.	State and District level programme	17-11-08 to 29-11-08	28	Goa, Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Orisa, West Bengal
6.	Managers and faculty from Medical colleges	09-02-09 to 21-02-09	22	Chattisgarh, Goa, Gujarat, Jharkhand, Karnataka, Kerela, Madhya Pradesh, Maharashtra, Manipur, West Bengal

Training in TB-HIV

This training is aimed at strengthening the TB-HIV collaborative activities. The duration of the training is 2 days. The methodology of the training is through power point presentations, discussions on the national frame work on joint TB/HIV collaborative activities and field visit to ICTC and ART Centres.

Sl. No.	Category of personnel	Duration	No. of Participants	Organization/State/ District sponsoring
1	State and District level programme Managers and faculty from	20-05-08 to 21-05-08	17	Arunachal Pradesh, Assam, Bihar, Madhya Pradesh, Meghalaya, Sikkim, Uttra Pradesh
2	Medical colleges	27-05-08 to 28-05-08	25	Assam, Bihar, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Meghalaya & Punjab

Training in Management Information For Action (MIFA):

The objective of this 5 days training programme is to establish systems for routine analysis and interpretation of the data emanating from quarterly reports of the programme for effective management of the programme. The training methodology adopted are through power-point presentations, problem solving exercises and group discussions.

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District sponsoring
1	Faculty from Medical Colleges, State and District level programme Managers	15-12-08 to 19-12-08	41	Delhi, Gujarat, Karnataka, Kerala, Mahatashtra, Orisa Tamilnadu and West Bengal

Training in Quality Assurance (QA) aspects of laboratory

The laboratory of the Institute being a NRL under EQA is responsible for training STDC personnel of various states in EQA procedures of smear microscopy and Culture & Drug Susceptibility Testing.

i. Training in Direct smear microscopy

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District sponsoring
1	Microbiologists and Lab. Technicians of STDCs/State laboratories	24-06-08 to 28-06-08	13	Assam, Goa, Karnataka, Maharashtra, Madhya Pradesh, Orisa, West Bengal
2		22-12-08 to 27-12-08	17	Jharkhand, Maharashtra, Madhya Pradesh, Rajasthan, Orisa

ii. Training in Culture & DST

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District
1	Microbiologists and Lab. Technicians of STDCs/State laboratories	28-07-08 to 08-08-08	7	Orisa, Rajasthan and West Bengal
2		05-01-09 to 17-01-09	9	Maharashtra and Jammu & Kashmir.

iii. Training in Preventive Maintenance & Minor Repair of Binocular microscope

Sl. No.	Category of personnel	Duration	No. of Participants	Sponsoring Organization / Country/ State / District
1	State TB Laboratory Supervisors and Lab Technicians	21-04-08 to 25-04-08	10	Uttar Pradesh, Bihar
2		21-07-08 to 25-07-08	8	Goa and Jharkhand

E. Collaborative Activities with WHO

As a WHO collaborative center, the Institute took active role in organizing WHO sponsored training programme. Both in-house and external faculty members facilitated the training. The details of the activities carried out during the period under report are furnished below:

i. WHO

Sl. No.	Type of Training	Duration	No. of Participants	Organization / State / District
1	RNTCP Modular Training for newly recruited RNTCP Medical Consultant	21-09-08 to 07-10-08	14	Andhra Pradesh, Assam, Bihar , Karnataka, Kerala, Maharashtra, Madhya Pradesh , Rajasthan , Orisa, Tamil Nadu & Uttar Pradesh

ii. WHO Fellowship Training

Sl. No.	Type of Training	Duration	No. of Participants	Organization / State / District
1.	Training on DOTS	08-12-08 to 19-12-08	3	WHO Fellows from Myanmar
2.	Training in TB Control and Data Management	02-02-09 to 27-02-09	3	WHO Fellows from DPR Korea

iii. Training programme for participants from SAARC Region

Sl. No.	Type of Training	Duration	No. of Participants	Countries
1.	SAARC Regional Training in Sputum Culture & Drug Susceptibility Testing programme for Microbiologists jointly organized by SAARC TB & HIV/AIDS Centre, Kathmandu, Nepal and Government of India	14-07-08 to 18-07-08	20	Afganistan, Bhutan, India, Maldives and Nepal.

Participation of NTI faculty as resource persons in Training activities**i. At NTI**

Sl. No.	Type of Training	Duration	No. of Participants	Organization / State / District sponsoring
1.	Orientation on RNTCP for Private Practitioners in RNTCP	22-02-09	35	Jointly organized by NTI, Karnataka State TB Association and Family Physicians Association of Karnataka

ii. Outside NTI

Sl. No.	Type of Training	Duration	No. of Participants	Resource Person
1.	One day sensitization programme for DOTS Plus, Sample collection and packaging held at STDC Ajmer	26-12-08	51	Mr. Manjunath G. A

iii. Training of NTI officials:

Sl. No.	Type of Training	Duration	Participants
1	HPLC training held at Agilent, Bangalore	19-08-08 to 22-08-08	Mrs. Hema Sundaram, consultant Microbiologist Ms. Neethu D. C, Sr. Lab. Technician Mrs.N. Vijayalakshmi, Lab. Technician
2	Training in Line Probe Assay - Hain's Test held at Central JALMA Institute, Agra	19-08-08 to 21-08-08	Mr. S. Anand & Ms. Hema Sundaram Consultant Microbiologists
3.	National DOTS Plus Training Programme held at Hyderabad	17-03-09 to 20-03-09	Dr. N. Somashekar, TB Specialist

5. RESEARCH

Research in TB control and related areas is one of the prime functions of the Institute. Technical sections in the Institute pursue research in their respective areas. The Institute has put in place the mechanism of Technical Coordination Committee (TCC) for thorough technical discussion and exchange of information before finalization of the research protocol. The projects are also screened by the Institutional Ethics Committee for addressing the ethical issues. The progress of the project is monitored by the TCC at periodic intervals. The findings of the research studies are also discussed in the TCC before they are either presented in technical conferences or published in journals. The report on various research projects is presented under three headings.

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

1. Prevalence of Pulmonary Tuberculosis among adults in Nelamangala taluk, Bangalore rural district.

The study was initiated during 2007 with the objective of estimating the point prevalence of pulmonary TB among individuals aged 15 years and above. The methodology comprises of registration of the study population by house to house census, screening for presence of pulmonary symptoms and Mass Miniature Radiography (MMR) of the chest, followed by sputum examination and culture (two specimens) of individuals with symptoms or any kind of X-ray abnormality.

The details of the field work performed during the year are as under :

Number of Eligible persons registered	35400
Number screened for symptoms	30269
Number X-rayed (MMR)	2067*
Total number Eligible for sputum collection	2241
Number of sputum specimens collected	
Spot specimen	2128
Overnight specimen	2117
Number of bacteriologically positive TB cases detected	
Smear positive	16
Culture positive smear negative cases	8
Number referred for investigations and further treatment	135

*Screening by MMR was discontinued from 16 May 2008 due to breakdown of X-ray unit.

The methodology for analysis of data was finalized after discussion with TRC Chennai. The interim analysis of the data collected till 31st August 2008 is presented below.

Prevalence of bacteriologically positive pulmonary TB cases per lakh population using X-ray and Symptom Screening

Particulars	Bacteriologically Positive	Culture Positive	Smear positive
Female	138	84	54
Male	523	449	241
Total	339	275	152

Note: The figures in the table are not mutually exclusive

The prevalence of bacteriologically positive pulmonary TB per 100 000 population based on symptom screening alone was estimated as under:-

Particulars	Bacteriologically Positive	Culture Positive	Smear positive
Female	115.1	59.2	55.9
Male	404.9	361.8	226.8
Total	266.9	217.6	145.3

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

These surveys are being carried out with the objective of estimating ARTI among children 1-9 years of age in each of the four zones and to compare them with the estimates obtained during previous zonal level surveys during 2000-03. The study was interrupted earlier due to constraints encountered in procurement of PPD. The study has been resumed with effect from 1.1.2009. The progress of the study is as under:-

A workshop of 'Expert Group' was held at NTI on 10th & 11th Dec 08. The proposal including protocol, work instructions, study formats and budget were revised in line with the recommendations of the Group.

NTI being a nodal centre, facilitated recruitment of personnel, training of 3 teams at TRC, Chennai and procurement of PPD vials from SSI, Copenhagen.

Necessary technical and operational guidelines were provided to the zonal Institutes and relevant communication was sent to the state and district level officers. The survey has been initiated in one district each of southern, northern and eastern zones and is in progress.

3. District level intervention study on routine referral of TB patients to Integrated Counseling and Testing Centers.

The HIV epidemic has increased the global tuberculosis (TB) burden and has focused attention on the necessity to strengthen the linkages between the TB and HIV/AIDS control programmes. In the light of this, reliable HIV surveillance systems among TB patients and large scale access to HIV testing and counseling services are considered corner stone for effective TB-HIV collaboration. WHO suggests that all regions with

generalized and concentrated HIV epidemic, should aim to ensure that HIV counseling and testing are actively promoted and offered to all TB patients preferably, in conjunction with the provision of CPT and ART treatment. This multicentric study was taken up against the background mentioned above. The study proposes to implement routine referral of TB patients for HIV counseling and testing under field conditions. National Tuberculosis Institute has been assigned with the responsibility of conducting this study in Mysore district of Karnataka. The progress of the study during the period under report are furnished below.

The Data on routine referral of TB patients registered from 1st July 07 to 31st June 08 to ICTC centers and to ART center for care and support was abstracted from RNTCP and NACP programme records. The data was entered in the line list prepared for the study purpose and regularly updated by the contractual staff in their respective TUs.

The information extracted from the line list for the cohort of patients from 3rd qtr 2007 to 1st qtr 2008 from Mysore and Thiruchirapalli district was analyzed at NTI. Data on patient referral process and feasibility of referral to ICTC for HIV counselling and testing and further to HIV care and support services was also collected through interview of randomly selected sample of patients from the cohort of patients registered in the 3rd qtr and 4th qtr 2007. A total of 319 (60 HIV positive and 259 HIV negative) TB patients were satisfactorily interviewed excluding dead, migrated and not available. All the interview schedules were scrutinized for consistency and completeness prior to data entry.

A meeting with all the investigators of NTI, TRC, Medical Officer from WHO and representative from CTD, New Delhi was held at NTI on 10th & 11th July 2008 to discuss the progress of the study and interim analysis besides the additional objectives and methodology to be adopted. It was decided to follow up the HIV positive TB patients to study their treatment outcome and their linkage to care and support services through patient interviews and collection of relevant data from treatment card, TB register and ART records.

Schedules were prepared to collect the above information from records and through patient interviews and pilot tested. Following the finalization of the schedule, patient interviews were taken up in Mysore district from 16-02-09 and the work is in progress, the details of which are shown in the table below.

Patient interview status (Numbers)	
Interviewed	58
Interviewed satisfactorily	23
Reported dead	10
Not available	23
Migrated	02

4. Provision of animals for testing in the project on DNA Tuberculosis Vaccine in collaboration with the Dept. of Microbiology & Cell Biology, Indian Institute of Science (IISc), Bangalore.

This project in collaboration with Department of Biotechnology also funded by them under National Jai Vigyan Mission, approved by the IAEC, was undertaken with an objective to evaluate recombinant experimental TB vaccines developed by I.I.Sc., and tested in animal models at NTI. Pre-clinical testing of different coded DNA preparations with Lipo Vac adjuvants was undertaken. This involves immunization, challenge and quantitative analysis of disseminated bacilli from the target organs of albino guinea

pigs. Preliminary findings indicated superior protection in animals immunized with certain DNA combination.

Due to accidental fire in the concerned laboratory at I.I.Sc., inoculations with coded suspensions in the pending groups of albino guinea pigs remains temporarily suspended.

5. Virulence assay of parental, devR mutant and complemented strains of M.tuberculosis in NTI-bred albino guinea pigs in collaboration with the Dept. of Biotechnology AIIMS, Delhi.

The IAEC approved groups of Guinea pigs were used for the ongoing experiments. Weight of guinea pigs were also recorded on weekly basis. Post mortem examinations were conducted on ninety four Guinea pigs to assess the extent of disease. Spleen, liver and lung tissues from each animal were aseptically dissected out. A portion of the above organs was collected for culture and microbial enumeration besides preserving remaining portion in 10% formalin which was sent to TRC Chennai for further investigations. Ninety two Guinea pigs were inoculated during the period under report with coded suspensions of complimented strains developed at AIIMS, New Delhi. The study is under progress.

6. The pathogenetic role of serine threonine kinases of M.tuberculosis in albino guinea pigs- A collaborative study with the Tuberculosis Research Centre (TRC) Chennai.

Necropsy examinations were conducted on six guinea pigs. Besides assessing the extent of disease for virulence assay, spleen, liver & lung tissues, from these animals were aseptically dissected out for further processing at TRC, Chennai. Twelve Guinea pigs were inoculated with H37Rv 1&2 besides other two strains including Erdman strain received from TRC-Chennai, for assessing the Virulence.

B. Research Papers published

1. Health seeking behavior and knowledge about tuberculosis among persons with pulmonary symptoms and TB cases in Bangalore slums. Int J Tuberc Lung Dis. 2008; 12 (11):1268-1272.

A house based survey was carried out in slums of Bangalore city to assess (1) health-seeking pattern of persons with pulmonary symptoms (2) Pathways followed by diagnosed pulmonary tuberculosis (PTB) cases till diagnosis and treatment; and (3) their knowledge regarding TB - symptoms, cause, mode of spread, diagnosis and treatment.

In selected slums, Person with Pulmonary symptoms (PPS) identified during house visits and resident PTB cases were interviewed using pre-tested, semi-structured questionnaires. The respective health centers were visited to obtain information regarding their treatment. About 50% of 124 interviewed Person with Pulmonary symptoms had taken action for relief; of them, three-fourths had first approached private health facilities (PHFs). About 19% were subjected to sputum microscopy and 27% to chest x-ray.

Of 47 interviewed PTB cases, 72% had first approached PHFs. About 50% of them visited two health facilities before diagnosis and 87% visited two or more facilities before initiating treatment. Forty-two initiated treatment at Government Health Facilities (GHFs) and 5 who initiated treatment at PHFs were later referred to GHFs for its continuation. Majority of the PPS and PTB cases had poor knowledge and most PPS

were not aware of the availability of free anti-TB services available at GHFs. The findings suggest educational interventions targeted at slum dwellers and their health providers.

2. Change in risk of tuberculous infection over an 8-year period among school children in Bangalore city.

Int J Tuberc Lung Dis 2008; 12 (10): 1116-1121.

The study was carried out in 60 selected schools of Bangalore city to estimate the trends in transmission of tuberculous infection. Two tuberculin surveys were carried out among children attending grade 1 and 2 at an interval of 8.3 years corresponding to the period of DOTS (Directly Observed Treatment Short-course) expansion. The children were administered tuberculin test using 1TU PPD RT 23 with Tween 80 in the mid-volar aspect of the left forearm and maximum transverse diameter of induration was recorded at about 72 hours after the test. The prevalence of tuberculin reactions of indurations measuring =10 mm, =12 mm and =14 mm were compared between the surveys as the reactions due to infection with tubercle bacilli could not be clearly delineated from cross reactions, on the frequency distributions of tuberculin reaction sizes at either survey. The ARTI was computed from the estimated prevalence of reactions =14 mm in size. The prevalence estimates of reactions at all chosen cut-off points were lower at survey II compared to survey I. These differences were statistically significant. Between the two surveys, ARTI was observed to decline at an average of about 4% per year. The findings suggest further intensification of TB control measures to enhance the rate of decline in transmission of infection.

3. Progress towards Millennium Development Goals in Tuberculosis Control in seven Asian Countries.

Indian J Tuberc, 2009; 56: 30-43.

The World Health Assembly (WHA) in 1991 declared TB as a global emergency and the internationally recommended strategy for TB control (DOTS) was developed. A case detection rate of 70% of new smear positive Pulmonary TB (PTB) cases and 85% treatment success were set to be achieved by the year 2000, which were later revised in 2005. The principal target of MDGs for TB control adopted in the year 2000 is to ensure that the incidence rate of TB is declining by 2015, while the subsidiary targets are to halve the TB prevalence and mortality rates by 2015 as compared to 1990.

This article reviews all the available information on TB situation from 1950s till date in terms of prevalence and incidence of disease, risk of TB infection and TB specific mortality and their trends in seven countries of South East Asia region. These countries are India, Bangladesh, Pakistan, Myanmar, Nepal, Sri Lanka and Bhutan. The DOTS strategy was introduced in these countries during late 1990s and expanded in a phased manner to 100% in all countries of the region by the year 2006. Steady improvements in case notification and case detection rates were observed with cure rates consistently in excess of 80%.

Serial surveys in a few selected areas of India reveal a significant declining trend in prevalence of TB disease and infection, after introduction of RNTCP. Minimal or no changes were seen in pre-RNTCP period. The information on trends is not available from other countries.

However, studies are presently in progress in many of these countries including India to monitor the progress towards MDGs.

**4. Annual Risk of Tuberculous Infection in Kerala.
*Indian J Tuberc, 2009; 56: 10-16.***

There has been paucity of information on epidemiological situation of Tuberculosis (TB) in the State of Kerala. The DOTS strategy under the Revised National Tuberculosis Control Programme (RNTCP) was introduced in the year 1998 to cover the entire State by 2002.

A cluster-sample school-based tuberculin survey was carried out in 70 schools selected in two-stage sampling to estimate the prevalence of tuberculous infection among children attending 1st -4th standard in a sample of selected schools in Kerala.

A total of 4821 children (with and without BCG scar) in the age group of 5-9 years were tuberculin tested using 1 TU PPD RT23 with Tween 80 and the maximum transverse diameter of induration was measured about 72 hours later. About 81% of the children were found to have BCG scars. Mixture model analysis was also undertaken. While 67% of children without BCG scar and 62% with scar did not elicit any induration at the test site. The mode or anti-mode of reactions due to infection with tubercle bacilli could not be identified from the distribution graphs. Analysis by mixture model also did not provide the best fit thus precluding estimation of prevalence of infection. About 5% of children had reactions >10 mm, 3% had reactions >12 mm and 2% had reactions >14 mm. Low proportion of reactors indicated a low level of transmission of infection in Kerala. It may not be feasible to use ARTI as an epidemiological indicator to monitor future trends of TB situation in the state considering the problems in interpretation of tuberculin survey data.

**5. Utilization of RNTCP services in rural areas of Bellary district, Karnataka by gender, age and distance from health centre.
*Indian J Tuberc, 2009; 56: 62-68***

The study was carried out in Sandur TU of Bellary District, Karnataka to find out the utilization of RNTCP services by age, sex and distance from their residence to designated microscopy centers and treating health centers. Information on age, sex and residence of chest symptomatics and the number of new sputum smear positive cases detected from 3rd quarter 2003 to 2nd quarter 2004 and their treatment outcome were obtained from the respective RNTCP records. Age and sex distribution of out-patients were collected from OPD registers of one randomly selected DMC and the PHCs attached to it.

A lesser number of males accessed the health care services. However, larger number of male chest symptomatics and new sputum smear positive cases utilized RNTCP services than females in the ratio of 1:0.62 and 1:0.40 respectively. This was due to higher prevalence of chest symptomatics and sputum positivity rate among males. Sputum positivity rates were also lower among the elderly cases. Male symptomatics and cases on an average were older than females. About 70% symptomatics and 53% cases resided at a distance of more than 4 kilometers from DMC and treating health centre respectively. Treatment outcome was poorer among males with higher proportion of initial defaulters and among those residing at a distance of more than 20 kms.

The study findings suggest the need to make health services available to the male working population at convenient hours and to be more vigilant to screen chest symptomatics among the elderly. Collection of sputum specimen and preparation of smears may be undertaken at PHCs and later transported to DMC. Motivation and supervision of treatment for male TB cases and those residing at a distance of more than 20 Kms from the treating health centers requires to be strengthened.

6. NATIONAL REFERENCE LABORATORY

The laboratory of NTI is designated as one of the National Reference laboratories (NRL) for the purpose of quality assurance of the sputum smear microscopy and Culture & Drug Sensitivity Testing (C&DST) laboratory network under the RNTCP. As an NRL, NTI supervises and monitors the quality sputum smear microscopy network in the following states viz., Bihar, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and West Bengal.

The functions of NRL comprises - training laboratory personnel and accreditation of state level IRLs, Medical Colleges and other private laboratories for the Culture and Drug Sensitivity testing to detect Multi- Drug Resistant Tuberculosis (MDR-TB) and support the projects such as Drug Resistance Surveillance (DRS) and DOTS Plus at the state level and is also responsible for Human Resource Development and capacity building of IRLs of the states for the management of MDR-TB. The laboratory also participates in the annual proficiency testing for culture and DST with Prince Leopold Institute of Tropical Medicine, its supra-national reference laboratory (SNRL) located at Antwerp, Belgium. The NRL is suited for DST for both first and second line drugs and also carries out liquid culture techniques.

Besides, laboratory support is provided for research projects such as the Disease Prevalence Survey (DPS) undertaken by NTL. It is also involved in building a spectral library of the chromatographic profiles of the Mycolic acids of pathogenic Non-Tuberculous Mycobacteria (NTM) using HPLC. The laboratory has entered into a collaborative research project with the Institute of Bioinformatics (IOB) with the objective of studying the proteomics of *M. tuberculosis*

A. Quality Assurance:

Quality Assurance (QA) system in RNTCP is a total system consisting of Internal Quality Control (QC), assessment of performance using External Quality Assessment (EQA) methods and continuous Quality Improvement (QI) of laboratory services. It involves classification of errors in sputum smear microscopy and assessment of laboratories based on Lot Quality Assurance Sampling (LQAS).

External Quality Assessment:

The External Quality assessment is done through an On-Site Evaluation (OSE). The components of EQA-OSE include assessment of infrastructure, panel testing of the Microbiologist and LTs apart from analyzing the RBRC data of the districts.

The details of EQA-OSE visits undertaken are as follows:

Sl. No.	States visited	Date	Team members
1	Madhya Pradesh	26-05-08 to 30-05-08	Mr. S. Anand, Consultant Microbiologist Ms. Reena K, Jr. Bacteriologist Ms. Shilpa S, Sr. Lab. Technicians Ms. Neethu D.C, Sr. Lab. Technicians
2	Jharkhand	21-07-08 to 25-07-08	Mr. S. Anand, Consultant Microbiologist Ms. Reena K, Jr. Bacteriologist Mr. Ranganatham A, Sr. Lab. Technician

Sl. No.	States visited	Date	Team members
3	Orissa	23-09-08 to 27-09-08	Mrs. R. Bhagirathi, Lab. Technician
4	Rajasthan	19-11-08 to 24-11-08	Dr. P. Kumar, Director Mr. S. Anand, Consultant Microbiologist Mrs. Hema Sundaram, Consultant Microbiologist Ms. Reena K, Jr. Bacteriologist Mr. Ranganatham A, Sr. Lab. Technician
5	Pondicherry	15-12-08 to 18-12-08	Mr. S. Anand, Consultant Microbiologist Ms. Reena K, Jr. Bacteriologist Mr. Ranganatham A, Sr. Lab. Technician
6	Nagpur, Maharashtra	27-01-09 to 28-01-09	Mr. S. Anand, Consultant Microbiologist Ms. Reena K, Jr. Bacteriologist Mr. Manjunath G. A. Lab. Technician
7	Pune, Maharashtra	29-01-09 to 31-01-09	
8	Bihar	24-02-09 to 27-02-09	Mr. S. Anand, Consultant Microbiologist Ms. Reena K, Jr. Bacteriologist Mr. Ranganatham A, Sr. Lab. Technician

The EQA-OSE Team assisted the states laboratories (IRL/STDCs) in the following:

- (a) Imparting On-site training to the staff of STDC/IRL in conducting the EQA lab supervision at selected DTCs and orienting the STLS in EQA work.
- (b) Supporting STOs in representing the problems to the Director/Commissioner public health/Principal secretary (health) of respective states requiring their intervention.

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.

B. NATIONAL LAB COMMITTEE MEETINGS:

Director and the faculty from the Bacteriology section participated in the Laboratory Committee Meetings held on 05-06-08 at Central TB Division, New Delhi and on 18-10-08 and 07-03-09 at New Delhi TB Centre. The agenda of the meetings included an update on the status of the strengthening of C&DST laboratories in various states, capacity building of NRLs and IRLs, discussions on the new International technical guidelines, progress of Second Line-DST at the NRLs and an update of the EQA activities, accreditation proceedings of IRLs and Medical Colleges.

Several important decisions were taken which included reduction in the duration of cough from 3 weeks to 2 weeks for definition of a chest symptomatic for the diagnostic purposes and number of sputum samples to be collected for diagnosis reduced to 2 samples in place of 3 sputum samples earlier.

ACCREDITATION OF LABORATORIES

An accredited mycobacteriology laboratory is the pre-requisite for diagnosis and follow up of MDR-TB patients. Towards this purpose, an IRL is being established at each state. Provision has also been made to include laboratories of Medical Colleges and Private Sector those interested to participate. The Microbiologist and Laboratory technicians are trained in Culture and DST at the NRL. A pre-assessment visit is undertaken by the central team to assess the suitability of the laboratory infrastructure and installation of equipments. Panel cultures are exchanged between the NRL and IRL for proficiency testing and retesting. The satisfactory performance is determined in terms of concordance of more the 90% for Isoniazid (H) & Rifampicin (R) and more than 80% for Streptomycin (S) & Ethambutol (E). The laboratory shall carry out investigation for unsatisfactory performance in proficiency testing and inform NRL for necessary corrective action taken.

A pre accreditation visit is then undertaken to assess the technical performance of the laboratory before formal accreditation. The accreditation shall be initially for a period of two years. The accredited laboratory shall regularly and satisfactorily participate in the proficiency testing programme being conducted by NRL. Scope of the accreditation, at present is limited to primary culture, identification of *Mycobacterium tuberculosis* and standardized drug sensitivity testing for the first line anti TB drugs on LJ media using the proportion method. The minimum stipulated participation is once prior to gaining accreditation and twice within the first two years of accreditation and subsequently at least once in every two years.

An on site - evaluation is undertaken within one year of grant of accreditation in the first cycle of accreditation and a re-assessment before the end of two years for which the laboratory shall apply six months before the expiry of accreditation. Thereafter, re-assessment shall be conducted every two years.

Following pre-assessment visits were undertaken during the year under report:

Sl. No	State	Dates	Team members
1	Jharkhand	23-07-08	Mr. S. Anand, Consultant Microbiologist
2	Pondicherry	15-12-08	Ms. Reena K, Jr. Bacteriologist

Status of accreditation

The IRL at **Nagpur, Maharashtra** and **Ajmer, Rajasthan** were accredited on **11th April 2008** and **23rd March 2009** respectively on complying with the above procedures.

Repeat proficiency testing is in progress at SMS Medical College, Jaipur and Proficiency of the DST testing is in progress at KEM Hospital Mumbai and BJ Medical College, Pune.

ASSESSMENT VISIT OF TB LABORATORIES IN MUMBAI:

Considering the concentration of large number of hospitals, their laboratories and large number of clientele being served by them, a preliminary visit to assess the infrastructure required for carrying out Culture and DST for detection of MDR-TB was undertaken by the Central Team, the details of which are given below.

Sl. No	State	Dates	Team members
1	Ranbaxy Laboratories, Andheri Mumbai (Private)	30-12-08 & 31-12-08	Mr. S. Anand , Consultant Microbiologist
2	KEM Hospital Mumbai (BMC)		
3	Metropolis Laboratories, Mumbai		
4	Group of TB Hospitals, Sewri Mumbai		
5	JJ Hospital Mumbai. (State Govt)		
6	Hinduja Hospitals, Mahim, Mumbai		
7	PCR lab Kasturba Hospital Mumbai		

7. LIBRARY & INFORMATION SERVICES AND PUBLICATIONS

Library & Information Services

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. Its resources and services are focused on TB and allied disciplines. 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 shoulders the responsibility by building up the appropriate collection, its progressive development, and organization of information services to provide increased access to its resources. Its major role is Selective Dissemination of Information to all stake holders: viz., Policy makers, Administrators, National Data on Tuberculosis hosted on to NTI website, periodical up-dating, creation of Digital Library, Digitization of monitoring reports on TB for archival value stands as a testimony for its efficiency. The information resource on Indian Data on TB available on the electronic media has drawn the attention of various Research workers/Scientists Globally.

The library caters to 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 Section. It plays active role in publication programme of the Institute. The Library has procured 30 books on different subjects.

Publications

Publication section 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.

A) Documents published:

1. NTI Annual Report for the year 2007-08 (150 copies).
2. NTI Bulletin Vol. 43/1&2, 2007 and Vol. 43/3&4, 2007; are under printing process.

Besides, the printing section assisted in printing various research forms and administrative requirements in addition to Reprographic services to the laboratory, Animal Model Research Unit, Training & library.

B) Updating of NTI website

The NTI website was updated with the latest information available.

8. OTHER TECHNICAL ACTIVITIES

The Institute, apart from its routine training and research activities, also carries out other technical activities viz., involvement of Medical Colleges in TB Control activities. The Institute also has an Animal Model Research Unit which is responsible maintaining homogenous stock of Guinea Pigs required for experimental purposes. The details of technical activities carried out by the Institute are as under:

(A) Involvement in task force meetings of Medical Colleges

The faculty of NTI actively participated in the task force meetings of Medical Colleges at State, Zonal & National levels and involvement of NGOs for the successful implementation of RNTCP. This was aimed at enhancing their extent and depth of involvement in the TB Control Programme. The details of the workshop in which the faculty of NTI participated are furnished in chapter 10 of the report.

(B) Status of laboratory animals

Homogenous stock of 316 NTI-bred albino guinea pigs was raised in healthy condition. Appropriate preventative measures were taken to check outbreak of diseases among breeding stock. Fresh homogenous stock of 108 animals were utilized for the ongoing collaborative research projects during the period under report.

(C) Scientific Gallery

As part of the IEC activity, the Institute has developed a scientific gallery. The scientific gallery 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 IEC 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 target group for the scientific gallery are the visitors comprising medical, the paramedical personnel working in teaching & and non-teaching institutions and graduates & post graduates from other live science subjects.

This facility is available free of cost during the working days of the week (Monday to Friday). The gallery could be visited by the interested visitors / institution on a mutually agreed date with a prior formal communication with the Director, NTI.

(D) 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, paramedicals and graduates / postgraduates pursuing life sciences and Nursing. This consists of briefing on TB, its magnitude, salient features of RNTCP, management of TB cases and wherever relevant, the bacteriological aspects of TB viz., Primary isolation, identification & sensitivity tests, role of animal experimentation in TB control

programme followed by a journey through the Scientific Gallery. The session at the scientific gallery ends with an oath taking ceremony on commitment of their role in the control of TB. The scientific gallery had a total 1,697 visitors in 51 batches from 37 educational institutions during the year under report. The details of the visits are furnished below:

Sl. No.	Date	No. of participants	Organization
1	04-04-08	20	East west first grade college for science, Bangalore.
2	10-04-08	45	Athena college of Nursing, Mangalore.
3	15-04-08	40	Administrative Management College, Bangalore
4	17-04-08	05	Bangalore university, Bangalore
5	22-04-08	37	Father Muller college of nursing, Mangalore.
6	23-04-08	40	St.Philominas school of nursing, Bangalore
7	28-04-08	54	Ikon school of Nursing, Bidadi
8	30-04-08	36	Eben Ezer college of Nursing, Bangalore
9	02-05-08	50	Oxford college of science, Bangalore
10	06-05-08	45	PES Inst. of applied science, Bangalore
11	09-05-09	15	Maharani Ammani college for women, Bangalore
12	14-05-08	40	Indian academy degree/PG college, Bangalore
13	03-06-08	30	St.Philominas college of nursing, Bangalore
14	10-06-08	59	Father Muller college of nursing, Mangalore
15	12-06-08	51	Nehru nursing college, Vallioor, Tamil Nadu
16	16-06-08	52	Farhan school of nursing, Bangalore
17	18-06-08	51	
18	20-06-08	16	INSA ,Bangalore
19	24-06-08	30	St.Johns Hospital college of nursing, Bangalore
20	01-07-08	58	Krupanidhi college of nursing, Bangalore
21	10-07-08	54	Pondichery inst. Of medical science, Pondicherry
22	21-07-08	40	KS Rangaswamy school of Bio-tech, Tamil Nadu
23	22-07-08	18	St.Johns Hosp.nursing college, Bangalore
24	24-07-08	59	K.Pandiyaraj Ballal nursing college, Mangalore
25	28-07-08	43	St.Marys Inst. Of nursing, Bangalore
26	06-08-09	02	DBT Project Team, NTI, Bangalore
27	08-08-08	38	Narayana Hrudayalaya, Bangalore
28	12-08-08	25	Smt.Nagrathnamma college of Nursing, Bangalore
29	08-09-08	40	Hosmat college of nursing, Bangalore
30	24-09-08	40	Dr.GRd college of science, Coimbr, Tamil Nadu
31	24-10-08	09	VHD Central institute of science, Bangalore
32	04-11-08	41	St.Philominas school of Nursing, Bangalore
33	15-12-08	45	Eben-Ezer college of Nursing, Bangalore
34	17-12-08	45	
35	19-12-08	33	
36	16-01-09	38	St.Marthas Nursing college, Bangalore
37	21-01-09	27	Father Muller college of nursing, Mangalore
38	21-01-09	16	Smt.KW College, Maharastra

Sl. No.	Date	No. of participants	Organization
39	27-01-09	40	East west school of nursing, Bangalore
40	28-01-09	22	T.John college of nursing, Bangalore
41	31-01-09	33	City college of nursing, Bangalore
42	02-02-09	21	TJPS College, Guntur, Andhra Pradesh
43	04-02-09	42	Smt.Nagratnamma Nursing college, Bangalore
44	16-02-09	22	NMKRV Women's college, Bangalore
45	18-02-09	12	Sambram college, Bangalore
46	20-02-09	30	Mathru college of nursing, Bangalore
47	09-03-09	02	St.Johns Hospital Nursing college, Bangalore
48	23-03-09	42	Reva institute of science & Education, Bangalore
49	25-03-09	18	NRI Institute, Bangalore.
50	31-03-09	26	Father Muller college of nursing, Mangalore

(E) Consultancy Services

Dr. V.K. Chadha, Sr. Epidemiologist provided Technical Assistance to Bhutan from 27th August to 7th September 2008, in conducting tuberculin surveys. He also served as the Technical International Professional to Indonesia in Tuberculin Surveys, Mortality study and Hospital DOTS from 19th January – 8th February 2009.

(F) Academic sessions

The Institute has a strong technical arm to support the research activities of the Institute. Periodic technical session involving the faculty and technical staff of the Institute were held for updating their knowledge in the field of tuberculosis. The faculty and technical staff made presentation on various aspects of TB Control and with special reference to the areas of the research activities carried out by different technical sections. The details of presentations made are furnished below:

Sl. No.	Topic Presented	Presented by
1	Laboratory Standard Operating Procedures in the Disease Prevalence Survey	Dr. Alpana Misra, Bacteriologist
2	Presentation of case studies on TB	Dr. Subramanyam, President, Family Physicians Association, Bangalore
3	Scientific Report Writing	Dr. V.K. Chadha, Sr. Epidemiologist

(G) Review of 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 TB Association of India, Dy. Director General (TB), Central TB Division and other research institutions for its suitability of publishing in various journals / periodicals. During the year, eleven scientific papers and 20 research proposals were reviewed by the faculty members of the institute and comments submitted.

(F) Revision of RNTCP Training Modules

Following certain policy and procedural changes in strategies in TB Control under RNTCP, the existing modules 1-4 & 5-9 were revised. Retaining the basic theme of the module intact, it was recommended to change the nomenclature of the existing programme i.e., RNTCP to National Tuberculosis Control Programme. The revision of modules comprised of change in titles and provision of sub-titles, sequencing of the contents, merging of modules, reduction in the number of work exercises, incorporation of learning objectives for each chapter, methodologies etc.

The titles of the modules were appropriately revised. Modules 2 & 3 dealing with laboratory aspects of TB were merged into one and numbered as Module 2 and the total number of modules reduced to 8. The policy changes with respect to the definition of Chest Symptomatics and number of sputum samples to be collected for diagnosis were also incorporated. The revised modules have been submitted to the Central TB Division, New Delhi.

(H) Repair and servicing of MMR Units

The X-ray Section of the Institute, since its inception is engaged in repair and replacement of parts of MMR Units installed in Districts under the TB Control programme. During the year four RFCs and six magazines were repaired, serviced and sent back to the respective districts.

(I) TB Net Project in collaboration with Department of Biotechnology

The Department of Biotechnology, Government of India has established an extensive bioinformatics network across the country between research institutes to enable sharing and further development of domain expertise. In this direction, a bioinformatics pilot study was initiated through various organizations and premiere research institutes associated in the field of tuberculosis. The project is being undertaken with the objective of creation of National level '**TB-Net database**', in which NTI, Bangalore played a major role in developing database on the epidemiological, operational, sociological and monitoring aspects of TB Control. The other collaborative partners in this endeavor include Central JALMA Institute, Agra, TRC Chennai and MANIT Bhopal, IISc, Bangalore, JNU New Delhi and Institute Bioinformatics Bangalore. Further, NTI has digitized and uploaded the scientific articles onto the local TB-Net database successfully.

9. STATISTICAL SERVICES FOR RESEARCH ACTIVITIES AND HARDWARE FACILITIES

Statistical Services

The statistical section of the Institute plays a vital role and forms a supportive unit of the research activities. This wing caters to the statistical needs of all the research activities in terms of planning studies or surveys, protocol development, designing study schedules/forms, collection and validation of data, collation, compilation, analysis of data generating tables and results and interpretation of the results of various research studies.

The section has well qualified, trained, experienced and committed subordinate level manpower to maintain the standards of the statistical support for the research activities supervised by officers belonging Indian Statistical Service (ISS) cadre.

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

Besides, this wing has also been entrusted with the responsibility of training the key personnel in computer literacy and application of software viz., epi-info related to TB Control Programme.

During the year 2008-09, SPSS Statistical software was procured. In order to cater to the needs of both national and international trainings, an exclusive computer laboratory consisting of 18 computers with LAN connectivity and other basic requirement was established.

Hardware facilities

The year 2008-09 witnessed the establishment of an exclusive computer laboratory with LAN connectivity and other basic requirements including internet connectivity, thus providing a state of art ambience to cater to the needs of national/ international trainings.

The details of the hardware facilities available in the Institute are furnished below:

Sl.No	Sections	Ext. CD Rom	Computers		Printers	Scanner	LCD Projector	Pen Drive	Server	Switches	WIFI Accessories	Zip Drive	Total
			Lap top	PCs									
1	Directors office	1	1	4	4		1	2	1	1		1	16
2	Addl. Director's office												
3	Statistics	1	1	13	10	1		7	2	3	1		39
4	DBT			2		1							3
5	Epidemiology	1	2	4	5	1		2	1				16
6	Control		1	2	2			1					6

Sl.No	Sections	Ext. CD Rom	Computers		Printers	Scanner	LCD Projector	Pen Drive	Server	Switches	WIFI Accessories	Zip Drive	Total
			Lap top	PCs									
7.	Laboratory	1	2	7	7			1					18
	Training		4	2	3		7	1		3	2		22
9	TB&HIV			1	1								2
10	Library	1		2	3			1					7
11	Establishment		1	5	3			2					11
12	Transport			1	1								2
13	X-Ray			1	1								2
14	Stores			1	2								3
15	Accounts			5	5			2					12
16	Accts Mgt. Unit			2	2			1					5
17	AMRU			2	1								3
18	Scientific Gallery			3	1		1	1		1			7
19	Draughtsman			1	1								2
20	TB Specialist			1	1								2
21	Computer Training Hall			18			1				1		20
Total		5	12	77	53	3	10	21	4	8	4	1	198

Intranet facility

During the year, a separate domain name “ntiindia.org” is registered and is 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 conservation of paper but also enhancing the efficiency.

10. PARTICIPATION IN CONFERENCES, WORKSHOPS, CONTINUING MEDICAL EDUCATION, TRAINING PROGRAMMES, MEETINGS ETC.

The faculty and Technical Staff of NTI participated as Facilitators, Resource person/delegate in Conference /workshops/continuing medical education, 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 presented
1	2 nd North East India Regional TB & Chest Diseases Conference held at Tawang, Arunachal Pradesh	24-04-08 to 26-04-08	Dr. P. Kumar Dr. V.K. Challu	Current Status of RNTCP in India Role of BCG vaccination in TB control
2	South East Asia Regional & National Conference on TB and Chest disease organized by TB Association of India held at New Delhi	08-09-08 to 10-09-08	Dr. P. Kumar Dr. V.K. Chadha Mr. S. Anand	Chaired the technical sessions. Delivered TAI oration titled "Progress towards millennium development goals for TB in South East Asian Countries" and received TAI oration gold medal award. Effect of External Quality Assessment of sputum smear microscopy in states allocated to NTI, Bangalore (2006-2007)
3	Annual Conference of Indian Orthopaedic Association held at Bangalore	03-12-08	Dr. B. Mahadev	Current concept in Chemotherapy of Osteo-articular tuberculosis
4	Round Table Conference on MDR-XDR TB	13-12-08	Dr. V.K. Chadha	Annual Risk of Tuberculosis in India
5	53 rd National conference of Indian Public Health Association held at KIMS, Bangalore	08-01-09 to 11-01-09	Dr. B. Mahadev Dr. V.K. Chadha & Dr. N. Somasheker	Chaired the session on Stop TB strategy and Recent updates in RNTCP Participants

**Workshops
At NTI**

Sl. No.	Particulars	Date	Resource person
1	<p>Research Dissemination workshop for officials from Government of Karnataka inaugurated by former Chief Justice V.S. Malimath. Presentations were made by the faculty on the topics mentioned below.</p> <p>ARTI in India</p> <p>Disease Prevalence Survey</p> <p>Repeat Zonal level ARTI Survey</p> <p>Health seeking & Knowledge about TB among persons with pulmonary symptoms & TB cases in Bangalore slums</p> <p>Utilization of RNTCP services in rural areas of Bellary district by gender, age and distance from the Health Centres</p> <p>Study on defaults and patients retrieval among new smear positive patients treated under DOTS (RNTCP) in different geographical and demographical settings</p> <p>How effective are shop keepers as DOT providers? A study under RNTCP in BMP Karnataka</p> <p>Current status of functioning of TB sanatorium in Karnataka</p> <p>District level intervention study on routine referral of TB patients to integrated counseling and testing centers</p> <p>Surveillance of Drug Resistance in the districts of Mayurbhanj (Orissa), Hoogly (West Bengal) and the State of Maharashtra</p> <p>Multi-centric Universal Sample Process study</p> <p>Update on External Quality Assessment and accreditation of IRL</p> <p>Health Assessment of captive Asian elephants in India with special reference to TB</p>	14-11-08	<p>Dr.V.K. Chadha</p> <p>Mr. Sanjay Singh</p> <p>Mr. Joydev Gupta</p> <p>Mrs. Suganthi P</p> <p>Mr. Jameel Ahmed</p> <p>Mrs. V.N. Saroja,</p> <p>Mr. O. Srinivasalu,</p> <p>Mr. N. Nagendra,</p> <p>Mr. B.A. Shivashankara</p> <p>Mr. S. Anand, (Consultant Microbiologist)</p> <p>Dr. Alpana Misra, Bacteriologist</p> <p>Ms. Reena K, Jr. Bacteriologist</p> <p>Mrs. R. Bhagirathi, Lab. Technician</p>

Sl. No.	Particulars	Date	Resource person
2	WHO-India supported Workshop on "Monitoring progress towards millennium development goals for TB in India"	10-12-08 to 11-12-08	Dr. P. Kumar, Director, Dr. V.K. Chadha, faculty members & Officials involved in Repeat ARTI Survey and Disease Prevalence Survey

Outside NTI

Sl. No.	Particulars	Date	Resource person
1	Workshop on Randomized Control Trials organized by International Clinical Sciences Support Centre held at New Delhi	30-04-08 to 02-05-08	Dr. V.K. Chadha
2	Medical college Zonal Task Force Workshop held at Raipur Presentation on "RNTCP - Update & Challenges"	18-08-08 to 19-08-08	Dr. P. Kumar, Director
3	Medical college Zonal Task Force Workshop held at Trivandrum. Presentation on "RNTCP - Update & Challenges"	28-08-08 to 29-08-08	
4	Chairing of technical session in the workshop on "Management of MDR/XDR-TB" held at LRS Institute, New Delhi	07-09-08	Dr. P. Kumar
5	Workshop on Liquid Culture systems organized by Becton Dickenson held at LRS Institute, New Delhi	11-09-08	Mr. S. Anand and Ms. Reena K
6	West Zone medical college Zonal Task Force Workshop Presentation on "RNTCP - Update & Challenges".	12-09-08 to 13-09-08	Dr. P. Kumar, Director
7	Workshop on Fundamentals in Biostatistics for Randomized Clinical Trials organized by Family Health International held at New Delhi	15-09-08 to 17-09-08	Dr. V.K. Chadha
8	Participation as an invitee in the inaugural session of - WHO/NICD training cum workshop for state IHR focal points on IHR (2005) implementation and - Training cum workshop on surveillance and control of plague, organized by NICD held at Karnataka Veterinary Council conference hall, Veterinary college campus, Bangalore and addressed the delegates	18-09-08 29-09-08	Dr. P. Kumar, Director

Sl. No.	Particulars	Date	Resource person
9	National CME and National Task Force workshop for enhancing the involvement of medical colleges under RNTCP for the year 2008 held at AIIMS, New Delhi.	22-10-08 to 24-10-08	Dr. P. Kumar, Director Mr. S. Anand, Consultant Microbiologist

Meetings

At NTI

Sl. No.	Meetings/CME	Date	Particulars
1	DPC meeting	23-04-08	Departmental Promotion Committee meeting for considering confirmation / promotion / ACP I & II for Group C & D Staff of the Institute.
2	Institutional Ethics Committee	21-08-08	Institutional Ethics Committee to discuss the progress of the following studies: 1. Repeat zonal level tuberculin surveys for estimating annual risk of tuberculosis infection (ARTI). 2. Prevalence of pulmonary tuberculosis among adults in Nelamangala taluk, Bangalore rural district. 3. District level intervention study on routine referral of TB patients to voluntary counseling and testing centres. 4. Default and patient retrieval among new smear positive patients treated in RNTCP under different geographic and demographic settings
3	Meeting of NRL Microbiologists held at NTI, Bangalore	16-09-08	Discussion and review accreditation process and proficiency testing of 1 st line and 2 nd line drugs and training methods Resource persons - Mr. S. Anand, Mrs. Hema Sundaram, Ms. Reena K
4	Zonal Operational Research Committee meeting and CME	13-03-09 & 14-03-09	Faculty members from Medical Colleges, Officials from Central TB Division, NTI, Bangalore, LRS, New Delhi and TRC, Chennai participated Dr. V.K. Chadha made a presentation on 'Writing Research articles in a peer reviewed journal'.

Outside NTI

Sl. No.	Meetings	Date	Particulars
1	Expert technical committee meeting to review the progress of the work of MDR TB wards and BSL-3 lab	11-04-08	The meeting was held at LRS Institute, New Delhi and attended by Dr. P Kumar, Director, NTI
2	DOTS Plus committee meeting	02-08-08	The meeting was held at New Delhi TB Centre and attended by Dr. P Kumar, Director, NTI
3	First Meeting of the National Airborne Infection Control Committee	18-09-08 to 19-09-08	The meeting held at LRS Institute, New Delhi and attended by Mr. S. Anand, Consultant Microbiologist
4	Meeting of the State TB Officers and WHO Consultants	26-11-08	The Meeting was held at Agra and attended by Mr. S. Anand, Consultant Microbiologist . The findings of EQA in respect of states visited by NTI during the year was presented.
5.	Meeting on Infectious Diseases based on work done by Dr. John Porter and team.	18-11-08 to 19-11-08	The Meeting was organized by Centre for Public Health and Equity and St. John's Medical college, Koramangala, Bangalore and attended by Dr. Sophia Vijay, Sr. TB Specialist, Dr. V.K. Chadha, Sr. Epidemiologist and Dr. N. Somashekar, TB
6	Joint Scientific Advisory Committee meeting	19-12-08 to 22-12-08	The Meeting was organized by Central JALMA Institute, Agra and TRC, Chennai held at Agra and attended by Dr. P. Kumar, Director
7	Meeting to explore the possibility of availability of PPD for various studies and surveys	05-01-09	The Meeting was held at Serum Institute, Pune and attended by Dr. P. Kumar, Director NTI
8	Meeting with STO and officers of State TB Cell and WHO Consultants	06-01-09	The Meeting was held at Pune to discuss development of IRL and attended by Dr. P. Kumar, Director
9	Third meeting of TB-Net Coordinators	22-01-09	The Meeting was held at MANIT, Bhopal and attended by Dr. P. Kumar, Director and Mr. Jitendra, Computer. The activities undertaken so far presented and discussed.
10	Meeting of the Vigilance officers	03-02-09	The Meeting was held at New Delhi and attended by Dr. B. Mahadev
11	Meeting to discuss collaboration between WHO and NTI	02-03-09	The Meeting was held at office of the WHO, New Delhi and attended by Dr. P. Kumar, Director

Sl. No.	Meetings	Date	Particulars
12	Review Meeting on progress of accreditation of Laboratory of SMS Medical College, Jaipur.	24-03-09	The meeting was held at STOs office, Jaipur and attended by Dr. P. Kumar, Director
13.	Meeting on involvement of medical colleges in RNTCP progress	25-03-09	The Meeting was held at SMS Medical College, Jaipur, and attended by Dr. P. Kumar, Director
14	Meeting on involvement of Nurses in RNTCP and DOTS Plus	27-03-09	The Meeting was held at LRS Institute, New Delhi and attended by Dr. P. Kumar, Director

11. 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.	Director, Deputy Director and Microbiologist, SAARC TB Centre, Kathmandu, Nepal	01-04-08	Discussion on the collaborative activities between NTI and SAARC TB Centre. Presentations on the activities of the Institute was made.
2.	Dr Hussain and Dr Vishnuvardhan, IUATLD, Paris	02-05-08	Collaborative activities between NTI & IUATLD on various components of TB-HIV and tobacco control were discussed.
3.	Dr Deepankar Das, Department of Malaria Control, NICD, New Delhi.	06-05-08	Discussion on various issues on disease control including TB
4.	Dr. N. Selvakumar and Dr. Vanaja Kumar, TRC, Chennai	09-05-08	Visited in connection with the certification of HPLC installation
5.	Dr Vishnuvardhan, IUATLD	14-05-08	Discussion on the joint project between IUATLD and NTI.
6.	Dr Nirmal Gurbani, TB Alliance and MSH	19-05-08	Discussion on new TB drug development and trial in India.
7.	Dr Selvakumar, Deputy Director, TRC, Chennai	02-06-08	Discussion regarding collaboration between TRC and NTI laboratories.
8.	Dr Doris Hilleman, International laboratory expert, Borstel laboratory in Germany (a WHO supranational laboratory), Dr Fraser, WHO India New Delhi Dr Ranjani from TRC, Chennai,	19-06-08 & 20-06-08	Discussion on strengthening of NTI lab as a National reference laboratory for culture and DST for 1st and 2nd line of anti-TB drugs.
9.	Prof. ML Gupta, Department of TB & Chest Diseases, SMS Medical College, Jaipur	19-06-08	Discussion on the collaborative activities between Medical Colleges and NTI.
10.	Dr Bharti Malhotra, incharge Microbiology Lab, SMS Medical College, Jaipur	21-06-08	Discussion on the status of accreditation of Microbiology Lab, SMS Medical College, Jaipur
11.	Dr Debabar Banerji, Professor Emeritus, JNU, New Delhi,	31-07-08	Discussion on various components of NTP and RNTCP.

Sl. No.	Name of visitor	Date	Details of visit
12.	Dr Deniel, Canada, Dr Govind & Mr Madhav Reddy. Vivekananda Rural Health Centre, Pavgada,	06-08-08	Discussion on collaboration with NGOs in TB control programme
13.	Dr Nagraj from Indian Institute of Science, Bangalore	22-08-08	Discussion on the collaborative project between IISc., and AMRU.
14.	Dr. V.M. Katoch, Director, Central JALMA Institute, Agra	16-09-08	Discussion on second line DST
15.	Director, Karnataka State AIDS Prevention Society, Joint Director (TB), Karnataka, Mr Arun Monga, Donor Coordination, NACO & Ms Julia, World Bank Aid, Geneva,	17-09-08	Discussion regarding the GFATM funded programmes.
16.	Dr Chandramohan, Head, Pre-clinical safety evaluation, Avasthagen Limited, Bangalore	23-09-08	Discussion regarding collaborative project with NTI on TB control.
17.	Dr C Nyamrunda, Permanent Secretary, Ministry of Livestock Development and Fisheries (MLDF), Tanzania	31-10-08	Discussion on various components of TB control in India and Tanzania.
18.	Dr Ramanathan, Deputy Director, TRC, Chennai	26-11-08	Discussion regarding collaborative project between NTI and TRC.
19.	A Team of Rajbhasha Committee from New Delhi	01-12-08	Discussion on promoting the use of Rajbhasha in day-to-day activities of the Institute.
20.	Dr Nagaraj, Professor, Community Medicine	16-01-09	Discussion with Director about collaboration between Medical Colleges and RNTCP.
21.	Mr Ajay Aggarwala, Director (Admn & Vig), DteGHS, New Delhi and Mr Gupta, Under Secretary, Min of H&FW, GOI, New Delhi,	19-1-09	Inspection of administration and vigilance records of the Institute.
22.	Smt Panabaaka Lakshmi, Hon'ble Union Minister of State for Health & FW, GOI, New Delhi	24-01-09	The activities carried out by the Institute were briefed and she visited different sections of the Institute.
23.	Dr Ramanathan from TRC, Chennai	28-01-09	Discussion regarding collaboration in research in animal experimentation.

Sl. No.	Name of visitor	Date	Details of visit
24.	Dr Vishnuvardhan and Dr Naveen Wilson, IUATLD, New Delhi	30-01-09	Discussion on the collaborative activities between NTI and IUATLD.
25.	Mr Keshav, Institute of Bio-Informatics, Bangalore	04-02-09	Discussion regarding collaborative projects between NTI and IOB.
26.	Dr Rajender from Rajasthan	12-02-09	Discussion regarding progress of RNTCP in their district.
27.	Shri T.J.S. Chawla, Deputy Director Administration & Shri P Bhattacharya	17-02-09 to 20-02-09	Discussion on various pending administrative issues and monitoring of court cases of the Institute.
28.	Secretary, Karnataka State TB Association, Dr Ravindra, WHO Consultant	19-02-09	Regarding organizing of orientation programme for Family Physicians and Private Practitioners at NTI
29.	Dr Ranjani Ramachandran from WHO-SEARO,	09-03-09 to 10-03-09	Discussion on NRL capacity building.
30.	Dr Vishnuvardhan, IUATLD,	09-03-09	Regarding collaboration in TB control activities
31.	Dr LS Chauhan, DDG (TB) & Team from IUATLD	14-03-09	Discuss on various components of collaboration between NTI and IUATLD.
32.	Dr Keshav from Institute of Bioinformatics,	20-03-09	Collaboration between NTI and Institute of Bioinformatics.

12. EVENTS CELEBRATED / ORGANIZED

15 th August 2008	: Independence Day was celebrated in the Institute. The staff along with family members, trainees, staff from other offices situated within the campus and students from neighboring Bethesda School participated in the celebrations. The Director hoisted the National Flag. Patriotic songs were sung by the faculty, staff and trainees. The Director addressed the gathering.
8 th -16 th September 2008	Hindi week was observed from 8 th – 16 th September 2008 and Hindi Divas was celebrated on 16 th September 2008. Prof. Gangaram B.G was the chief guest on the Hindi Day. As part of the observance of the Hindi week, Anthakashri, Hindi translation, Letter writing, Essay, Quiz competition, Ek Sham Bachchonke Naam (cultural programme for the children of NTI staff) and Hindi Jokes / Songs were organized. Prizes were distributed to the winners of the events.
16 th September 2008	NTI Foundation Day was celebrated.
19 th & 26 th November 2008	As part of the Inter Organizational Competitions organized by the Town Official Language Implementation Committee, the staff of the Institute participated in written and oral quiz competitions.
26 th January 2009	Republic Day was celebrated in the Institute. The faculty and staff of NTI participated. Director hoisted the National Flag. Patriotic songs were sung by the faculty and staff. Hoops display / cultural programmes were presented by Bethesda School children, Bangalore. The Director addressed the gathering.
24 th March 2009	Dr. P. Kumar, Director along with Principal Secretary, Ministry of Health & Family Welfare participated in the World TB Day held at Jaipur. World TB Day was observed in the

	<p>Institute in which the faculty and the staff of the Institute participated. Dr. N. Somashekar, TB Specialist made a presentation on “Overview of DOTS-PLUS” and Dr. V.K. Chadha, Sr. Epidemiologists delivered a talk on TB Epidemiology & Hospital DOTS in Indonesia.</p> <p>Dr. B. Mahadev, CMO (NFSG) participated in the commensuration held at Town Hall, Bangalore under the sponsorship of Directorate of Health Services, Government of Karnataka.</p>
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13. FINANCIAL OUTLAY & EXPENDITURE

The Plan & Non-plan budget allocation and expenditure incurred for the financial years 2006-07, 2007-08 & 2008-09 are furnished below:

PLAN		(Rs. in lakhs)
Year	Budget allocated (Rs.)	Expenditure (Rs.)
2006 - 2007	213.00	152.75
2007 - 2008	195.00	181.59
2008 - 2009	195.00	192.74

NON PLAN		(Rs. in Lakhs)
Year	Budget allocated (Rs.)	Expenditure (Rs.)
2006 - 2007	280.00	274.27
2007 - 2008	325.00	291.14
2008 - 2009	566.00	549.01

Revenue generated by the Institute for the year 2008-09 was credited to the consolidated fund of Government of India as given in the table below:

REVENUE GENERATED	
Year	Amount (Rs.)
2008 - 09	2,79,462

14. ADMINISTRATIVE SECTIONS

ESTABLISHMENT

- The section is responsible for administrative activities and general upkeep of the Institute. The various types of activities undertaken during the year under report are as under:
 - i. Routine administrative matters.
 - ii. The details of recruitment, promotions, transfers, retirements (both superannuation and Voluntary Retirement), Termination from service and other related service matters etc., are furnished in the table given below:

Sl. No	Name	Designation	Date
Recruitment			
1.	Sri. Rajeev Kumar Jha	Lower Division Clerk	22-12-2008
Promotions			
1	Sri. S. Shivaraju	To the post of Daftry from Gr. 'D' (Peon)	01-05-2008
2	Dr. L. Suryanarayana	To the post of CMO - Super time Administrative Grade	28-11-2008
3	Dr. V. K. Challu	First ACP w.e.f 9.8.99 II ACP	01-06-2008
Retirement on VRS			
1	Mrs. Shanthiraman	Safaiwala	01-01-2009
Retirement on Superannuation			
1	Dr. M. Hari	Veterinarian	31-07-2008
2	Mr. D. Yesupadam	Laboratory Technician	31-12-2008
3	Mrs. Rajammal	Safaiwala	28-02-2009
Termination from service			
1	Mr. Anjini	Group 'D' Peon	19-02-2009
Death while in service			
1	Sri. Patelappa	Chowkidar	02-04-2008
2	Sri. T. Lokesh	Group 'D' (Peon)	26-04-2008
3	Sri. Mallesha	Safaiwala	08-12-2008

Transferred in
1. Smt. N. Sangeetha assumed the charge as Chief Statistical Officer w.e.f. 30-06-2008 on transfer from National Sample Survey Organization, Field Operations Division, Bangalore.
2. Dr. Devinder Tewani, assumed charge as CMO (NFSG) w.e.f. 01-08-2008 on transfer from GNCT, New Delhi
3. Sri. Sayee Prasad assumed the charge as Administrative Officer w.e.f. 10-11-2008 on transfer from Ministry of Health & Family Welfare, New Delhi.
4. Dr. K. M. Shivakumar, assumed charge as Additional Director w.e.f.13-01-2009 on transfer from CGHS, Bangalore
Transferred out
1. Sri. R. Kiran Kumar, Chief Statistical Officer was transferred to National Sample Survey Organization, field operations division, Nagpur on 28-07-2008.
2. Sri. Samuel Alexander, Administrative Officer was transferred to Cabinet Secretariat, New Delhi.

- iii. Provision of manpower to various sections.
- iv. Processing of legal issues pertaining to service matters coming under the purview of Central Administrative Tribunals and higher institutions.
- v. Correspondence with Directorate General of Health Services (DGHS) & other agencies on administrative matters.
- vi. Implementation of VI Central Pay Commission and fixation of pay to the officers and staff of the Institute in accordance with the orders of the government of India.
- vii. Grant of Patient Care Allowance to the Group C & D non-ministerial staff.
- viii. Upkeep of office campus including buildings, hostel facilities.

ACCOUNTS

This section is responsible for the financial matters related to the Institute. The activities carried out during the period under report are:

- i. Preparation of annual budget proposal and performance budget.
- ii. Drawing and disbursement of Salaries, Traveling Allowances, Medical reimbursement & other claims and advances by staff & officers.
- iii. Calculation and disbursement of arrears of VI CPC and Patient Care Allowance and crediting the same to the employee's account in the respective banks
- iv. Effecting scheduled and non-scheduled deductions and its remission to concerned authorities.
- v. Processing of payments pertaining to procurements made by stores and annual maintenance contracts services.

STORES

The Stores caters to the logistic requirement 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.

TRANSPORT

The Institute has fleet of 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.

HOSTEL

The Institute has two hostel blocks viz., Krishna Nivas and Cauvery Nivas which caters to the boarding and lodging needs for medical & paramedical trainees attending various training programmes and officials visiting from head quarters and other Institutions/Offices. Boarding facility is being provided to the Trainees / delegates in the Mess attached to the Hostel which is responsible for providing quality and hygienic food.

15. CIVIL & ELECTRICAL WORKS AND MAINTENANCE

CIVIL & ELECTRICAL WORKS

The Civil and Electrical works of the Institute are 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. 70/- lakhs under the head of account PLAN-Capital- Major works and Rs. 75/- lakhs under machinery and equipment was allocated to the Institute during the financial year 2008-09 for carrying out new and maintenance works. Out of the funds allocated under these heads of account, the following Civil, Electrical and Horticultural works were executed during the period under report.

Civil works

1. Landscaping works in front of Animal Model Research Unit building.
2. Laying of pre-mix carpet surfacing and new GI pipe lines to pump water from bore wells to the sump.
3. Construction of eight four wheeler parking sheds and twelve two wheeler garages, compound wall on the northern side of the Type IV quarters adjacent to the compound wall of Director's residence and providing separate entrance to type IV quarters on the eastern side of the quarters main gate.
4. Fixing Aluminum partitions and water proofing treatment to the roof of AMRU, and Kitchen & Dining hall of Krishna Nivas building.
5. Horticultural Development works at the entrance area, adjoining Eastern side compound wall of the Institute.
6. Providing Chain link mesh near Director's residence quarter and stainless steel mesh for windows of Director's residence quarter.

Electrical Works

1. Replacement of defective service connection cable and rewiring in Krishna Nivas building.
2. Installation of six additional street light poles in various locations near the parking sheds including UG cable from the existing feeder pillar. One additional feeder pillar for connecting pump set and other street lights in the old quarters area and eight gate lights.
3. Wiring with PVC insulated copper conductor cable for garages, toilet, etc. including one outdoor feeder pillar for distribution of supply to the garages and street lights.
4. Providing 5 KVA UPS and LAN points to the computer laboratory in III floor of PV Benjamin Block.
5. Providing service connection to 21 quarters including SITC of 250/433 volts distribution transformer and related works.
6. Providing conference system in Computer Laboratory.

In addition to the above, Civil works costing less than rupees one lakh were taken-up directly by NTI and the same were executed by registered contractors of CPWD to meet the urgent requirements of the Institute.

MAINTENANCE WORKS

In addition to the above, as part of the routine maintenance operation, few Civil, Electrical, Horticultural maintenance works were undertaken by the CPWD besides maintenance of the existing Air-conditioners.

Acknowledgements

The Director acknowledges the efforts of the Annual Report preparation committee under the Chairmanship of Dr. L. Suryanarayana, CMO (SAG), Dr. Devinder Tewani, CMO (NFSG), Dr. N. Somashekar, TB Specialist and Mr. N. Suseendra Babu, Statistical Officer in compiling, editing and organizing the publication of this report. The untiring secretarial assistance provided by Shri. R. Ravi, Stenographer Gr.II and Smt. R. Shantha Kumari, Stenographer Gr.III deserve deep appreciation. The co-ordination extended by Mr. Govindanarayanawamy in collection of requisite information is also acknowledged with thanks.