

**NATIONAL TUBERCULOSIS INSTITUTE**  
**WHO Collaborating Center**  
**For**  
**Tuberculosis Research & Training**

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## **LIST OF ABBREVIATIONS**

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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
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
IAEC	Institutional Animals Ethics Committee
ICTC	Integrated Counseling and Testing Centre
IEC	Information Education Communication
IRL	Intermediate Reference Laboratory
IUAT&LD	International Union Against Tuberculosis & Lung Diseases
LAN	Local Area Network
MDR	Multi Drug Resistance
MO-TC	Medical Officer - TB Control
<i>M. tuberculosis</i>	<i>Mycobacterium Tuberculosis</i>
NACP	National AIDS Control Programme
NICD	National Institute of Communicable Diseases

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

## प्राक्कथन

आपके सम्मुख वर्ष 2007-08 की वार्षिक रिपोर्ट मैं सहर्ष पेश करता हूँ । संस्थान अपने प्रवर्तन समय से स्वास्थ्य सेवाएँ महानिदेशालय की तकनीकी भुजा के तौर पर कार्यरत है तथा क्षयरोग नियंत्रण कार्यक्रम एवं प्रकार्यात्मक शोध से जुड़े बहु संख्यक स्वास्थ्य कर्मियों के प्रशिक्षण में अग्रणी रहा है । जिला/राज्य स्तरों पर समस्त देश को जन शक्ति उपलब्ध कराना शीर्ष महत्व का कार्य बना है और यह संस्थान की प्रधान जिम्मेदारियों में से एक है । इस आवश्यकता की पूर्ति में संस्थान प्रयासरत है।

प्रशिक्षित जनशक्ति के लिए बढ़ती माँग की पूर्ति संस्थान के स्टाफ द्वारा अभूतपूर्व संख्या में प्रशिक्षण कार्यक्रमों के आयोजन के द्वारा की जा रही है। रिपोर्ट के आगामी अध्यायों में सूचीबद्ध प्रशिक्षण कार्यक्रमों की संख्या से यह स्पष्ट है। एच आई वी सह-संक्रमण की उभरते जोखिम को ध्यान में रखते हुए, क्षय रोग एवं एच आई वी नियंत्रण कार्यक्रमों में आर एन टी सी पी और क्षय रोग- एच आई वी माड्यूलों का प्रयोग करते हुए प्रशिक्षण प्रदान करने पर जोर है।

संस्थान द्वारा सम्पन्न शोध अध्ययन केंद्रीय विषय संचालन समिति द्वारा पहचाने गए प्राथमिकता वाले क्षेत्रों के अनुसरण में है। तदनुसार, बेंगलूर के समीपस्थ ग्रामीण क्षेत्रों में वयस्कों में क्षय रोग की व्यापकता पर अध्ययन प्रारंभ किया गया है। इस अध्ययन से आर एन टी सी पी के क्रियान्वयन के असर पर भी प्रकाश पड़ेगा और साथ ही साठवें दशक के अध्ययनों के निष्कर्षों के साथ तुलना भी उपलब्ध होगी। बेंगलूर शहर के स्कूली बच्चों के बीच दोहराए गए ट्यूबरकुलिन सर्वेक्षण का पठन पाठक के लिए दिलचस्पी का विषय होगा। डिफाल्ट का अध्ययन, अभी तक चुनौती का मामला होने के कारण, राष्ट्रीय स्तर पर विभिन्न भौगोलिक परिस्थितियों में किया गया है तथा स्वास्थ्य सेवाएँ महानिदेशालय को विस्तृत रिपोर्ट पेश की गई है।

क्षय रोग सेवाओं को प्राप्त करने और उनका उपयोग करने में समाज के सुविधा रहित लोगों को सेवा उपलब्ध कराने का विषय अकसर नीति निर्माताओं एवं कार्यक्रम आयोजकों का ध्यान आकृषित करता है। बेंगलूर शहर की झोपडपट्टियों के निवासियों तक प्रति- क्षयरोग सेवाओं की पहुँच एवं उपयोग के क्रम पर अध्ययन के निष्कर्ष बेहतर सेवाओं को उपलब्ध कराने में स्वास्थ्य उपलब्धकर्ताओं को पुनर्निवेशी जानकारी उपलब्ध कराता है। क्षय- रोग में गिनी-पिग को प्रायोगिक मोडल के तौर पर लेकर सम्पन्न पशु प्रयोगों पर अध्ययन के निष्कर्ष पाठकों के लिए रोचक रहेगा।

कालांतर में, लेपन सूक्ष्मदर्शिकी नेटवर्क की गुणता एवं प्राप्त की गई रोगमुक्ति दर को बनाए रखना आर एन टी सी पी की सफलता के सुदृढीकरण के लिए अनिवार्य है। इस संदर्भ में, अपने अधिकार क्षेत्र के अंतर्गत आने वाले विभिन्न राज्यों में ई क्यू ए (EQA) नेटवर्क को स्थापित करने में संस्थान ने कड़ी मेहनत की है। कार्यक्रम निष्पादन के संसूचक के तौर पर, डी आर एस, को भी आर एन टी सी पी के द्वितीय चरण में प्राथमिकता पर लिया गया है। मौलिक जानकारी उपलब्ध कराने के अलावा, इसने डी ओ टी एस प्लस (DOTS PLUS) कार्यक्रम के लिए संभार तंत्र के विकास के लिए निवेश उपलब्ध कराया है। उपरोक्त शोध परियोजना और उसकी स्थिति का संक्षेप में सार इस रिपोर्ट में पेश है।

डब्लु एच ओ (WHO) सहयोग केंद्र के तौर पर संस्थान ने एस ई ए आर ओ (SEARO) क्षेत्र के कर्मियों के प्रशिक्षण को भी स्वीकारा है। म्याँमार और नेपाल के प्रतिनिधियों को क्षयरोग नियंत्रण पहलुओं पर प्रशिक्षित किया गया।

ब्लूमबर्ग ग्लोबल इनिशिएटिव के लिए संघ के साथ सहयोग में तम्बाकू के उपयोग को घटाने में नेतृत्व और सामान्य प्रबंधन में प्रशिक्षण वर्ष के दौरान सम्पन्न महत्वपूर्ण कार्यक्रमों में से एक था।

केंद्रीय क्षयरोग प्रभाग के साथ तकनीकी क्रियाकलापों में प्रतिभागिता के ब्यौरे भी इस अंक में पेश है। इस संदर्भ में केंद्रीय आंतरिक मूल्यांकन, चिकित्सा महाविद्यालयों की आंचलिक कार्य बल बैठकों में भागिता तथा प्रयोगशाला समिति बैठकों में प्रतिभागिता महत्वपूर्ण घटक बनते हैं।

संस्थान की पुस्तकालय एवं सूचना सेवाएँ, जिसका वर्गीकरण पुस्तकालय समीक्षा समिति, भारत सरकार, नई दिल्ली की रिपोर्ट के मार्गदर्शी सिद्धांतों के अनुसरण में श्रेणी II में किया गया है, संस्थान की एक बड़ी संपत्ति है। पुस्तकालय में उपलब्ध सुविधाएँ इस खंड में निरूपित हैं।

विभिन्न बैठकों, प्रशिक्षण कार्यक्रमों, संगोष्ठियों, सम्मेलनों, कार्यशालाओं और अनुवर्तन चिकित्सा शिक्षा में संकाय तथा तकनीकी स्टाफ की प्रतिभागिता को इस रिपोर्ट में उजागर किया गया है।

इस समय, मैं संस्थान के संकाय और स्टाफ के प्रति अपनी गहन प्रशंसा और आभार व्यक्त करना चाहता हूँ, जिन्होंने संस्थान के लिए निर्धारित कार्यों को पूर्ण करने में अपना सहयोग और अथक प्रयासों को प्रदान किया है। आने वाले वर्षों में भी मैं संस्थान के स्टाफ द्वारा उसी उत्साह और जोश की आशा करूँगा।

अपनी सभी उपलब्धियों में केंद्रीय क्षयरोग प्रभाग तथा डब्लु एच ओ-इण्डिया के निरंतर सहयोग, मार्गदर्शन एवं प्रोत्साहन के लिए संस्थान उनके प्रति आभार व्यक्त करता है।

दिनांक: 21 जुलाई 2008

स्थान: बेंगलूर

डॉ प्रहलाद कुमार

निदेशक



## FOREWORD

I am glad to place before you the Annual Report for the year 2007-08. The Institute has been operating as the technical arm of the Directorate General of Health Services since its inception and is taking the lead in training large number of health personnel involved in TB Control Programme and operational research. To provide trained manpower to the entire country at the district/state level assumes paramount importance and is one of the major responsibility of the institute. The institute is striving hard in meeting this requirement.

The increasing requirement for trained manpower is being met by the persistent efforts of the staff of the institute by conducting unprecedented number of training programmes. This is evident from the number of training programmes listed in the ensuing chapters of the report. Keeping in view the emerging threat of HIV co-infection, the emphasis is on imparting training in TB & HIV Control Programmes using RNTCP and TB-HIV modules.

The research studies undertaken by the institute are in consonance with the priority areas identified by the Central Steering Committee. Accordingly, a study on prevalence of TB in adults has been taken up in the adjoining rural area of Bangalore. The study would throw light on the impact of implementation of RNTCP and also gives a comparison with that of the findings of the studies in sixties. It is also of interest for the reader to go through the repeat tuberculin survey done among school children in Bangalore city. Default, still being a challenge, has been studied on a national scale in different geographical settings and detailed report has been submitted to the Directorate General of Health Services.

The subject of service delivery to the underprivileged segment of the society in accessing and utilizing TB services often calls the attention of the policy makers and the programmers. The findings of the study on the accessibility and utilization pattern of anti-TB services by slum dwellers of Bangalore city provides the feedback information for the health providers to provide better services. The findings of the studies on animal experimentation in tuberculosis with guinea pig as experimental model will be of interest to the readers.

In the long run, maintenance of the quality of smear microscopy network and high cure rates achieved is essential for the consolidation of success of RNTCP. In this respect, the institute has strived hard in establishing EQA network in different states under its jurisdiction. DRS, as an indicator of the programme performance has also been taken up as one of the priorities in the second phase of the RNTCP. Besides providing the baseline information, this has provided an input for the development of logistics for DOTS PLUS programme. Summary in brief of above research project and its status has been presented in this report.

Institute as a WHO collaboration center, has also undertaken training of the personnel from SEARO region. Participants from Myanmar and Nepal were trained in TB Control aspects.

Training in Leadership & General Management for Bloomberg Global Initiative to reduce tobacco use in collaboration with The Union was one of the important programmes undertaken during the year.

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

Library and information services of the institute, classified as Category II as per the guidelines of the Library Review Committee report, Government of India, New Delhi is a great asset of the institution. The facilities available in the library are depicted in this section.

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

At this point of time, I would like to express my deep appreciation and gratitude to the faculty and staff of the institute who extended their co-operation and untiring efforts in achieving the tasks set for the institute. I continue to look forward for the same zeal and enthusiasm evinced by the staff of the institute in the years to come.

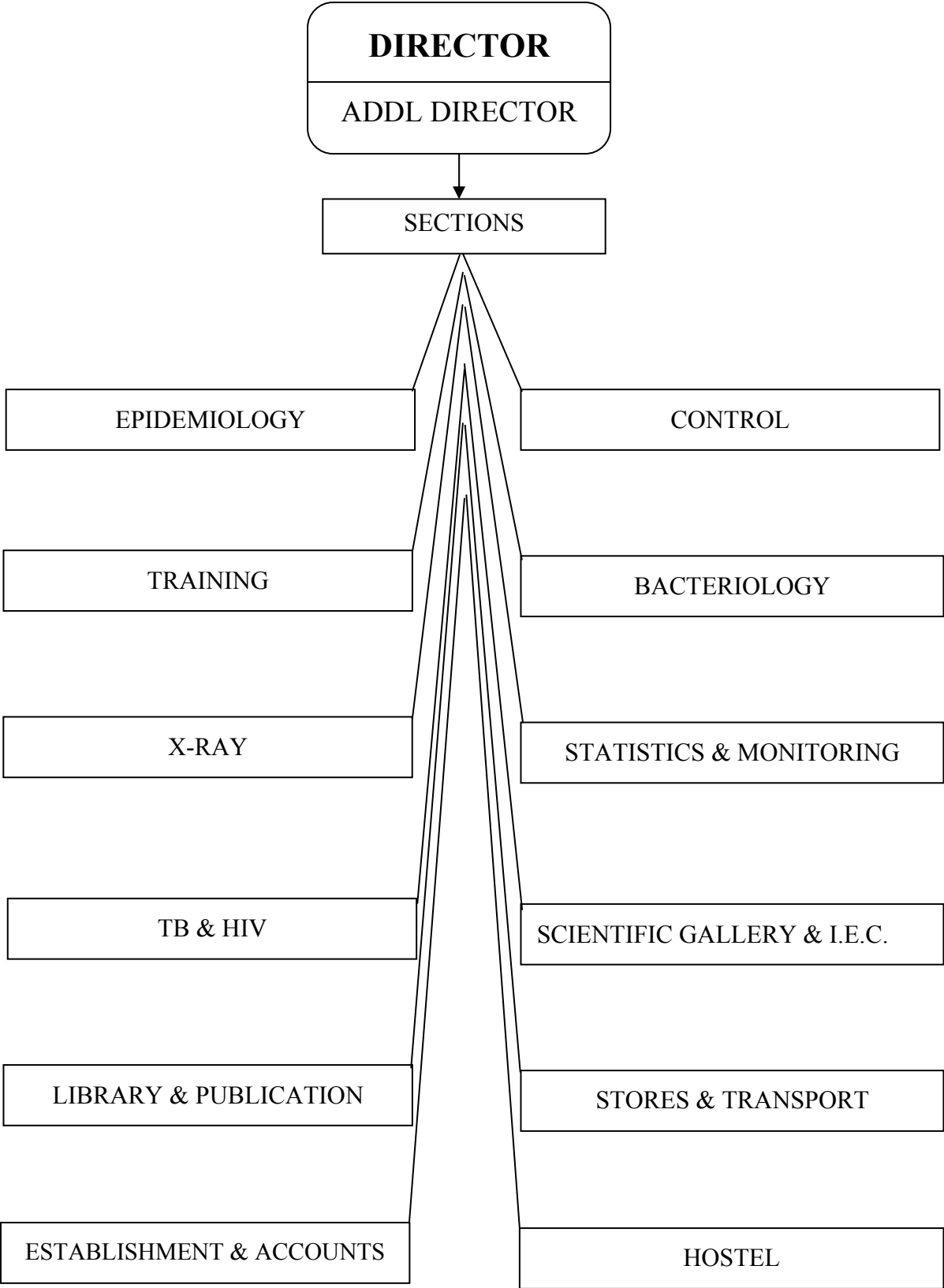
The institute also expresses its gratitude to the Central TB Division and WHO-India for their continuous co-operation, guidance and encouragement in all our accomplishments.

Dated: 21<sup>st</sup> July 2008  
Place: Bangalore

Dr. Prahlad Kumar  
Director

# 1. ORGANIZATIONAL SET UP

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## 2. 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'	18	12	6
2.	Group 'B'			
	Gazetted	04	1	3
	Non-gazetted	16	5	11
3.	Group 'C'	111	79	32
4.	Group 'D'	48	44	4
<b>Total</b>		<b>197</b>	<b>141</b>	<b>56</b>

### 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	3	1
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	2	2	-
11.	Statistical Officer	1	1	-
12.	X-Ray Engineer	1	-	1
13.	Sociologist	1	-	1

**GROUP 'B' (GAZETTED)**

<b>Sl. No.</b>	<b>Designation</b>	<b>Sanctioned Strength</b>	<b>Position</b>	<b>Vacancy</b>
1.	Administrative Officer	1	1	-
2.	Jr. Bacteriologist	1	-	1
3.	Asst. Training Officer	1	-	1
4.	Sr. P.A. to Director	1	-	1

**GROUP 'B' (NON-GAZETTED)**

<b>Sl. No.</b>	<b>Designation</b>	<b>Sanctioned Strength</b>	<b>Position</b>	<b>Vacancy</b>
1.	Sr. Public Health Nurse	1	1	-
2.	Asst. Programmer	1	-	1
3.	Jr. Statistical Officer	1	-	1
4.	Sr. Librarian	1	-	1
5.	Sr. Investigator (SOCS)	3	-	3
6.	Sr. Investigator (EPS)	1	-	1
7.	Sr. Tech. Asst. (Lab)	1	-	1
8.	Sr. Tech. Asst. (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'**

<b>Sl. No.</b>	<b>Designation</b>	<b>Sanctioned Strength</b>	<b>Position</b>	<b>Vacancy</b>
1.	Statistical Assistant	6	5	1
2.	Statistical Asst. (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	-

<b>Sl. No.</b>	<b>Designation</b>	<b>Sanctioned Strength</b>	<b>Position</b>	<b>Vacancy</b>
16.	Driver Gr. II	4	4	-
17.	Driver Ordinary Grade	8	6	2
18.	Store Keeper	1	1	-
19.	Telephone Operator	1	1	-
20.	Hostel Warden	1	1	-
21.	Gestetner Operator	1	-	1
22.	Laboratory Technician	12	10	2
23.	Draughtsman	1	1	-
24.	Transport Supervisor	1	-	1
25.	Mechanical Supervisor	1	-	1
26.	X-Ray Technician	6	5	1
27.	Driver Mechanic	2	1	1
28.	Junior Hindi Translator	1	-	1
29.	Hindi Typist	1	1	-
30.	Cooks	10	7	3

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

#### **GROUP 'D'**

<b>Sl. No.</b>	<b>Designation</b>	<b>Sanctioned Strength</b>	<b>Position</b>	<b>Vacancy</b>
1.	Group 'D' (Peons)	20	19	01
2.	Animal Attendant	3	2	1
3.	Field Assistant	1	1	-
4.	Daftry	1	-	1
5.	Dark Room Attender	1	1	-
6.	Gardener	1	1	-
7.	Helper (TPT)	1	1	-
8.	Safaiwala	9	9	-
9.	Bearer	1	1	-
10.	Laboratory Attendant	7	6	1
11.	Chowkidar	3	3	-

### **3. COMMITTEES**

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Several committees have been constituted under the chairmanship of senior officers for examining the relevant issues; formulate recommendations to facilitate the Director in taking appropriate decisions. The details of the committees that existed during the year under report and its functions are described below:

#### ***Institutional Ethics Committee***

Review the research protocols from the point of view of ethical considerations and to give the stamp of approval before implementation.

#### ***Institutional Animal Ethics Committee***

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 any 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 again discussed before they are either presented in technical conferences or published in the National/International journals.

#### ***Committee on Administration and Staff Welfare***

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

#### ***Committee for planning and scrutiny of 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 coordination 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 also coordinates the celebration of Hindi week and Hindi Day.

### ***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 half-yearly 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 deals with the complaints of sexual harassment faced by the female Government servants.

### ***Condemnation Committee***

Condemnation Committee has been constituted to process the items recommended for condemnation by different sections. The committee after going through the history sheet (viz., date of procurement, duration of its use, the quantum of repairs undertaken 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 another for technical matters have been nominated to process the information as and when sought for in accordance with the guidelines of RTI act.

### ***Constitution of office Council***

Office council has been constituted under the chairmanship of Director, Administrative Officer as Member Secretary, Section Officers as its members from the office side, Executive members of the Staff Association, with the objective to promote harmonious relations and securing co-operation from the Staff Association to achieve greater work efficiency.

## 4. TRAINING

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Training in TB Control programme is one of the essential functions of the institute and keeps meeting ever-increasing demand of trained manpower in implementation and maintenance of TB Control Programme. This is a continuous process due to periodic turnover of key personnel either because of retirements/transfers. The training is undertaken in response to the requirement at the states and directives from Central TB Division, New Delhi. Apart from the regular RNTCP Modular Training, the institute also shoulders the responsibility of training the Medical & Paramedical personnel from various states in activities like 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 participated in the Training Programme.

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

### A. RNTCP and TB-HIV Modular training

This course of 12 days duration comprises of a pre test, training in RNTCP modules (1-9), Module on TB-HIV through reading, group discussions, one to one interaction, work exercises, lecture classes on important aspects of RNTCP, question and answers session on the modules covered, field visits to the RNTCP areas in Bruhat Bangalore Mahanagara Palike 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
1	District TB Officer, State TB Officers, Medical College Teachers	09-04-07 to 21-04-07	24	Andhra Pradesh, Chattisgarh, Gujarat, Karnataka, Maharashtra, New Delhi, Uttar Pradesh
2		14-05-07 to 26-05-07	23	Gujarat, Maharashtra, Manipur, West Bengal, Mumbai & Orissa
3		25-06-07 to 27-06-07	19	Dadar & Nagar Haveli, Goa, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tamilnadu
4	Induction Training Program for Newly Appointed RNTCP Consultants	02-07-07 to 17-07-07	12	Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa, Tamilnadu, Manipur, Chattisgarh, Uttranchal

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Duration</b>	<b>No. of Participants</b>	<b>Organization / State / District</b>
5.	District TB Officer, State TB Officers, Medical College Teachers	23-07-07 to 04-08-07	30	Andhra Pradesh, , Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, West Bengal
6.	District TB Officer, State TB Officers, Medical College Teachers	10-09-07 to 21-09-07	28	Andhra Pradesh, Bihar, Chattisgarh, Karnataka, Kerala, West Bengal
7	RNTCP IMA-PPM consultants	15-10-07 to 29-10-07	8	Maharashtra,. Uttar Pradesh, Punjab, Delhi, Andhra Pradesh
8	District TB Officer, State TB Officers, Medical College Teachers and representatives from German Leprosy Relief Association	12-11-07 to 24-11-07	18	Andhrapradesh, Karnataka, Delhi, Kerala, Orissa, Punjab, West Bengal
9		10-12-07 to 22-12-07	9	Karnataka, Kerala, West Bengal
10		11-01-08 to 23-02-08	19	Andhra Pradesh, Goa, Himachal Pradesh, Jharkhand, Kerala, Mizoram, West Bengal

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

This training is aimed at strengthening TB-HIV co-ordination. The course of five days duration consists of a pre-test, training in RNTCP Modules (1-4) and TB-HIV Module through reading, discussions, work exercises, field visits to DMCs, ICTCs, ART Centres, post-test, presentation of field visits and distribution of certificate of completion.

<b>Sl. No.</b>	<b>Category of personnel</b>	<b>Duration</b>	<b>No. of Participants</b>	<b>Organization/State/ District</b>
1	District TB & Leprosy Assistants	10-09-07 to 18-09 -07	10	Nepal
2	Medical Officers of ART Centres	12-03-08 to 14-03-08	23	Andhra Pradesh, Assam, Delhi, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Manipur, Nagaland, Tamilnadu, Uttarakhand & West Bengal.

### C. Training of Trainers

This training course of two weeks duration emphasizes on imparting training methodologies and skills to facilitate the training programme for their subordinate staff in their respective states. It comprises brief introduction of the modules, learning objective, brief presentation on the contents of the modules, discussion on presentations, evaluation of the training course and summing up of the contents of the respective modules (modules 1-9 and TB-HIV modules) at the end. The course also includes lectures on important aspects of RNTCP, field visits to RNTCP areas of BBMP, ICTCs & ART Centres, presentation of the field reports.

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District
1	Trainers of State Level	07-01-08 to 19-01-08	15	Andhra Pradesh, Goa, Karnataka, Himachal Pradesh, West Bengal, Jharkhand, Kerala, Mizoram, Punjab

### D. Quality Assurance Programme

The institute being a NRL under EQA is responsible for training STDC personnel of various states in EQA procedures, Culture & Drug Sensitivity Testing and smear microscopy.

#### i. Training in EQA

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District
1	Microbiologists and Lab. Technicians of STDCs	25-02-08 to 29-02-08	26	Andhra Pradesh, Assam, Chattisgarh, Goa, Jammu, Karnataka, Kerala, Mizoram, Orissa, Pondicherry, Punjab, Maharashtra, Uttar Pradesh and Uttarakhand. .

#### ii. Training in Culture & DST

Sl. No.	Category of personnel	Duration	No. of Participants	Organization / State / District
1	Microbiologists & Laboratory Technicians	14-05-07 to 25-05-07	7	New Delhi, Rajasthan
2		24-09-07 to 06-10-07	5	Jharkand & West Bengal
3.	Senior Specialist, Microbiologists and Lab. Technicians	26-11-07 to 07-12-07	7	Karnataka

### iii. Smear Microscopy

Sl. No.	Category of personnel	Duration	No. of Participants	Sponsoring Organization / Country/ State / District
1	Lab Technicians from Karnataka	15-10-07 to 26-10-07	6	Karnataka
2	Health Promotion Trust	26-11-07 to 07-12-07	8	Karnataka
3	Microbiologists & Laboratory Technicians	03-01-08 to 11-01-08	5	Nepal

### G. Collaborative Activities

As a WHO collaborative center, the institute took active role in conducting 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:

#### WHO

##### i. Training in TB control activities

Sl. No.	Type of Training	Duration	No. of Participants	Organization / State / District
1	Training on TB Control	07-05-07 to 18-05-07	02	WHO participant from Myanmar
2	Training on TB Bacteriology	21-05-07 to 29-06-07	02	WHO participant from Myanmar

##### ii. Fellowship Training

Sl. No.	Type of Training	Duration	No. of Participants	Organization / State / District
1.	In-country fellowship Training	02-07-07 to 11-08-07	2	West Bengal & Meghalaya
2.	Training in TB-HIV for DTLAs	10-09-07 to 18-09-07	10	Nepal
3.		03-01-08 to 11-01-08	05	Nepal

**iii. NTI and IUATLD activity**

<b>Sl. No.</b>	<b>Type of Training</b>	<b>Duration</b>	<b>No. of Participants</b>	<b>Organization / State / District</b>
1.	Training in Leadership & General Management for Bloomberg Global Initiative to reduce tobacco use	13-06-07 to 21-06-07	22	Chandigarh, Goa, Gujarat, Karnataka, Kerala, Maharashtra, New Delhi, Rajasthan, Tamilnadu, UP.

**SAARC REGIONAL WORKSHOP ON TB/HIV CO-INFECTION**  
**5<sup>th</sup> – 6<sup>th</sup> September 2007**



**RNTCP MODULAR TRAINING**  
**12<sup>th</sup> – 24<sup>th</sup> November 2007**



**OPERATIONAL RESEARCH WORKSHOP**  
**18<sup>th</sup> – 19<sup>th</sup> March 2008**





## 5. RESEARCH

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Research on TB control and related areas is one of the prime functions of the Institute. Several 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 scrutinized by the Institutional Ethics Committee for addressing the ethical issues. The progress of the project is monitored by the TCC at periodic intervals. The conclusions of the research projects are also reported 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 sub headings.

### ***A. The status of the research projects undertaken during the year are given in brief 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 PTB– both bacteriologically positive and smear negative X-ray positive cases among adults. Adults in the age group 15 years and above and residing for a period of more than six months in the rural areas of Nelamangala Taluk of Bangalore rural district constitute the study population. Study formats and work instructions were prepared. The contractual medical and Para- medical staff were recruited. Both contractual and the regular staff of the institute were trained at National Tuberculosis Institute, Bangalore and in field practice area of Tuberculosis Research Center, Chennai. The pilot phase of the study was completed during September – October 2007. As per the study protocol, house to house registration is being carried out in the population. Individuals aged 15 years and above are being screened for the presence of symptoms suggestive of tuberculosis and are subjected to Mass Miniature Radiography. Subsequently 2 sputum specimens are collected from individuals having chest symptoms and those with abnormal shadows on X-ray as decided by at least one of the two independent readers. The sputum specimens are being subjected to smear and culture examination.

The details of the field work carried out up to 31<sup>st</sup> March 2008 is as under:-

Number of eligible persons registered	:	9425
Number of persons Screened for pulmonary symptoms	:	7994
Number of persons X-rayed	:	7724
Number of persons eligible for sputum collection	:	0951
Number of persons from whom sputum was collected	:	0843
Number of bacteriologically confirmed cases	:	0013
Number of smear negative X-ray positive cases	:	0033

Both smear positive and smear negative cases (X-ray positive) detected during the study are being referred for treatment to the jurisdictional TB units. The study is in progress.

## ***2. Repeat tuberculin survey among school children of Bangalore city to estimate the impact of RNTCP on Annual Risk of Tuberculous Infection (ARTI).***

A repeat tuberculin survey was carried out among children attending Class I & II of sixty selected schools in Bangalore city during the year 2006. The previous survey was undertaken during 1996-99. In these schools, 4936 children aged 5-8 years were test read during survey I and 3354 during survey II. Tuberculin testing was carried out using 1TU PPD RT 23 with Tween 80 and maximum transverse diameter of induration was recorded about 72 hours later. The height and weight of children were also recorded during survey II.

Data analysis was undertaken to estimate the trend in ARTI during the period between the two surveys. Besides, prevalence of under nutrition among children investigated at survey II and the relationship of nutritional status with tuberculin sensitivity was also investigated.

The prevalence of tuberculin infection with  $\geq 10$  mm,  $\geq 12$  mm and  $\geq 14$  mm in size as demarcation were compared between the two surveys. ARTI was computed from the estimated prevalence of infections with  $\geq 14$  mm in size as cut off point. Estimates of prevalence of infections at three cut-off points mentioned above were found to be lower at survey II compared to survey I. The average decline per annum in ARTI between the two surveys was observed at 4.2% (CI: 3.7-4.7).

During survey II, depending upon the method for classifying nutritional status, the prevalence of under-nutrition (including mild and severe under-nutrition) varied between 14.9-29.8%. The prevalence of severe under-nutrition varied from 2.9-6.7%. Tuberculin sensitivity was not influenced by nutritional status among apparently healthy school children.

## ***3. Accessibility and utilization of anti-TB services by slum dwellers of Bangalore City.***

This community based study was undertaken during 2003-2005 among 3485 households of twelve selected slums in Bangalore with the objectives of ascertaining (1) the awareness regarding symptoms of pulmonary tuberculosis, mode of diagnosis and availability of diagnostic treatment services, (2) action taking behaviour of persons with pulmonary symptoms and PTB cases and (3) constraints faced by patients in accessing RNTCP services in slum areas. Analysis of the study completed during this year is presented below:-

Eleven thousand six hundred and fifty one persons aged  $\geq 15$  years (Females-5854, Males-5797) were registered in the study. Ninety two percent of the females and seventy four percent of males were screened for presence of pulmonary symptoms by trained investigators during house visits. PTB cases residing in the slums were identified through three methods: viz (1) sputum examination of Patients with

Pulmonary Symptoms (PTPS) identified through house visits, (2) history of anti-TB treatment as revealed by the patients during the house visit and (3) Reconciliatory visits to respective TB Units to enlist additional cases missed during house visits but registered under RNTCP. Persons with pulmonary symptoms and PTB cases were interviewed using pre-tested, semi-structured questionnaires. Visits to respective health centers were made to obtain information regarding their treatment.

About 1% of the registered adult females and 2.5% of the males were found to have pulmonary symptoms. Of them, about 50% of PTPS had taken action for relief of symptoms; Three-fourths of PTPS had first approached Private Health Facilities (PHFs). Of them, about 19% were subjected to sputum microscopy and 27% to chest X-ray examination. Of the 47 PTB cases interviewed, 72% had first approached PHFs. About 50% of them visited two health facilities before diagnosis and 87% visited two or more facilities before initiation of treatment. Forty-two were initiated on treatment at Government Health Facilities (GHFs) and 5 of those who were initiated on treatment at PHFs were later referred to GHFs for its continuation. Majority of the PTPS and PTB cases had poor knowledge regarding symptoms of PTB, mode of diagnosis and availability of diagnostic and treatment services. Most of the PTPS were unaware of the availability of free anti-TB services at GHFs.

All PTB cases received treatment under Direct Observed Treatment (DOT) - 46 at GHFs and one at PHF. However, DOT workers were not assigned by name to individual cases and DOT was undertaken by any of the category of health center staffs available on a given day -TB visitor, pharmacist, staff nurse, laboratory technician, student nurse, and sweeper. Thirty-six (77%) cases consumed drugs on regular basis while 11 (23%) had one or more interruptions during the course of treatment. Common reasons for interruptions were inconvenient timings of GHFs, adverse symptoms viz., nausea & vomiting, disappearance of symptoms, alcoholism, visit to native place and inability to collect drugs due to domestic problems and work pressure.

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

During the year under report, preparatory work viz., revision of the proposed protocol, preparation of study formats & work instructions, recruitment of the contractual staff at nodal centres and their training were accomplished. Meetings were held with the Principal Investigators of Southern and Eastern zones to discuss the operational modalities of the survey. Sampling of clusters was undertaken for all the four zones. This repeat tuberculin survey is to be conducted in all 26 districts from all the four zones surveyed previously during the nation wide tuberculin survey (2000-03) among children aged 1-9 years with the following objectives:

- i. To estimate the point prevalence of tuberculous infection among children 1-9 years of age & to compute the ARTI in each of the four zones of India - North, West, East and South.
- ii. To estimate ARTI at the national level from the zonal estimates.
- iii. To compare the latest estimates of ARTI with that of 2000-03.

The fieldwork proposed to be taken up during 2007-2008 could not be initiated due to unforeseen interruption in the supply of tuberculin. It will be resumed on receipt of tuberculin supplies.

**5. 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 IISc and tested in animal models at NTI. Currently, pre-clinical testing of different coded DNA preparations with Lipo Vac adjuvants is being 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. Study is in progress.

**6. 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.**

First phase of the study has been completed. The devR $\nabla$ C- complemented strain expressed DevR at low levels from its native constitutive promoter leading to a significant attenuation of virulence in guinea pigs. This suggested that the level of DevR expression was critical for determining *M .tuberculosis* virulence. In the second phase of IAEC approved groups, time-to-death experiments were started. During the period under report various stains of *M .tuberculosis* constructed at AIIMS were inoculated in guinea pigs to assess their virulence status. The preliminary findings revealed that complemented strain was not affected at all, making it ideal candidate for development of better vaccine & newer drugs active against dormant tubercle bacilli. The study is in progress.

**7. 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 twenty two guinea pigs, which were given coded suspension of *M.tuberculosis* (with disrupted genes). 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. Six Guinea pigs were inoculated with H37Rv. Strain for assessing its Virulence. The study is under progress.

**8. Health assessment of captive Asian elephants in India, with special reference to Tuberculosis.**

The above study was taken up in collaboration with Asian Nature Conservation Foundation, Bangalore to isolate the Mycobacteria from the trunkal wash samples of elephants. 311 trunk washings from 172 elephants were processed for the isolation of *M.tuberculosis* and/or *M. bovis*. None of the samples yielded *M.tuberculosis* and/or *M. bovis*.

### **9. Study on defaults & patient retrieval among new smear positive patients treated in RNTCP under different geographic and demographic settings.**

The study was conducted with the objective of analyzing the situation regarding organization of Directly Observed Treatment, insight into the constraints encountered in implementing the DOTS services and problems faced by the patients in utilizing the same. Accordingly, six strata were identified viz., hilly, coastal, plain, desert, tribal and Municipal Corporation based on the predominant physical and demographic features. Three districts were selected from each coastal, plain, desert, Municipal Corporation and two districts from tribal and six districts from hilly region. In all, 20 districts fully implemented under RNTCP as on first quarter of 2003 were identified from six states in the country. The study was completed in a phased manner on January 2007.

Study data was collected through interviews of selected patients, service providers and review of treatment related records.

In all, 1274 new smear positive patients from twenty districts- 687 each in defaulted and completed group selected from two quarterly cohorts of each district were interviewed. Besides, 738 health providers comprising 20 DTOs, 76 MO-TCs, 102 STSs, 540 DOT providers were also interviewed using semi-structured questionnaire.

Data entry related to provider interview schedules was done using Epi-info (V.3.32) and that of patient interview schedules using Fox pro (V.6.2). Analysis of the data was undertaken using SPSS statistical package.

The retrospective study cohort of selected quarters from all the six strata comprised 10,639 new smear positive patients aged 15 years and above. Among these, 687 defaulted and equal numbers of treatment completed patients formed the study group. The overall interview coverage was 72% in defaulted and 83% for the completed group.

This study provides an insight into the various issues involved in delivery of DOT services by the providers and its utilization by patients keeping in view the treatment adherence which is the theme of DOTS to achieve the desired cure rate. Despite the existence of vast and diversified health infrastructure within the country, DOT is being followed in a considerable proportion of cases which is being translated to high treatment success rates. A detailed report of the study has been submitted to Central TB Division, Dte.GHS.

### **10. 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 with conjunction with the provision of antiretroviral (ART) treatment.

This multicentric study taken up against the background mentioned above proposes to implement routine referral of TB patients for HIV counseling and testing as a pilot test under field conditions in two HIV high prevalence districts. It is proposed to evaluate the feasibility, acceptability and impact of routine referrals in national programmes. National Tuberculosis Institute has been assigned the responsibility to implement the routine referrals in Mysore district of Karnataka.

Faculty from NTI associated with the research project have visited the study area Mysore district and have arrived at the situational analysis of the organizational structure and performance of the RNTCP, NACP and collaborative activities in the district.

Recruitment of contractual staff namely three contractual field investigators and one contractual senior field investigator was done in April 07.

Field staff from NTI and four contractual staff recruited for the study have been trained in RNTCP & NACP programme activities and study procedures at TRC, Chennai. Besides, training of Medical Officers and ICTC counselors of study area (Mysore district) on procedures of routine referrals was also undertaken. The field work for the study was initiated in five TUs of Mysore district from 15<sup>th</sup> June 07. Data on routine referral of patients of all the six TB units on Mysore district has been collected up to March 2008. Sixty reactive and 259 non reactive patients have been satisfactorily interviewed. The data analysis is in progress.

### ***11. Drug Resistance Surveillance of the state of Maharashtra.***

NTI has been taking a leading role in the development of methodology for selection of sample size for state wide DRS under RNTCP, along with the TRC and other members of the National Laboratory Committee. In continuation of the this effort, NTI along with STDC, Nagpur (Maharashtra) initiated drug resistance surveillance for the new smear positive and re-treatment cases of the states adopting "Population proportion clusters sampling technique. A sample size of 1680 for the 'resistance among new patients' and 990 for the resistance among previously treated patients were determined for the study period of one year. Accordingly, 3360 samples from among new patients and 1980 samples among the previously treated patients have been collected from the DRS centres. These samples were processed at NTI for culture and sensitivity and analysis has been completed. Preliminary data reveals that 2.70% among new smear positive patients and 13.70% among previously treated patients were found to be multi-drug resistant. Report in detail would be presented in the next annual report.

### ***B. Research Papers published***

Abstracts of the papers published during the year are presented below

1. *Chadha VK, Kumar P, Satyanaryana AVV, Chauhan LS, Gupta.J, Singh.S, Magesh.V, Lakshminarayana, Ahmed.J , Srivastava. RK, Suganthi. P, Umadevi.G : Annual risk of Tuberculous infection (ARTI) in the state of Andhra Pradesh, India: IJTB, 2007, 54: 177-183.*

A tuberculin survey among the households selected on a cluster sample basis was carried out in a representative sample of children aged 5-9 years to estimate the prevalence of tuberculous infection and compute the ARTI from the estimated prevalence. The clusters were selected by a two stage sampling procedure. At first stage, five districts were selected by probability proportional to population size (PPS) method. Depending upon children population ratio, 32 clusters allocated to each district were further sub-divided into rural and urban clusters selected by simple random sampling. A total of 3636 children irrespective of their BCG scar status were tuberculin tested using 1 TU PPD RT23 with Tween 80. The maximum transverse diameter of induration was measured about 72 hours later.

The prevalence of infection estimated by mirror-image technique using the observed mode of reactions attributable to infection with tubercle bacilli at 20mm was 9.6% (95% CI:8.0-11.2). The ARTI was computed at 1.4% (95% CI:1.1-1.6). Survey findings indicate a fairly high rate of transmission of tuberculous infection in the population studied.

2. *Chadha VK: Sample size determination in health studies. NTI Bulletin 2006, 42/3&4,55-62*

One of the most important factors to consider in the design of health studies is the choice of an appropriate sample size. Studies that are based on samples which are too small may fail to detect important effects on the outcomes of interest, or may estimate those effects imprecisely. Studies that are larger than necessary are a waste of resources. Statistical method for estimation of appropriate sample size depends upon study design, type of outcome measure, predictable results, required level of significance & precision/power. This article presents these concepts along with the methods of estimating sample size in varied situations.

3. *Singh. S, Chadha VK, Gupta J, Magesh V, Lakshminarayana, Ahmed J, Srivastava RK, Suganthi P, Umadevi G : Prevalence & annual risk of tuberculous infection among school children in Bangalore rural district. NTI Bulletin 2006, 42/ 3&4,68-73*

A total of 2459 children in the age group of 5-14 years from 25 schools in Devanahalli Taluk of Bangalore rural district were tuberculin tested during 2005-06 using 1 TU PPD RT23 with Tween 80, on the mid-volar aspect of left forearm. Maximum transverse diameter of indurations was measured at about 72-96 hours later. The proportion of children with BCG scar was 64%. The prevalence of tuberculous infection estimated by mirror image technique was 5.8% and the ARTI was computed at 0.6% from the estimated prevalence. When compared with the findings of an earlier survey in peri-urban villages of Bangalore during 1990-94, the average rate of decline in ARTI per annum was 3%. This trend may not be wholly attributable to implementation of RNTCP since it was similar to the decline observed earlier in rural areas of Bangalore district during 1961-1986 during NTP era.

## 6. NATIONAL REFERENCE LABORATORY

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With the implementation of the RNTCP across the country, due emphasis has been laid on the Quality Assurance programme of the laboratories engaged in sputum smear microscopy. In this direction, the Institute is recognized as one of the NRL for purposes of quality assurance under RNTCP both for sputum smear microscopy laboratory network and culture sensitivity testing of *Mycobacterium tuberculosis*. Ten states have been covered under NTI jurisdiction, viz., Bihar, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Pondicherry, Rajasthan and West Bengal.

### A. Quality Assurance System (QAS)

Quality Assurance Programme covers Internal Quality Control (QC) and External Quality Assurance (EQA) and Quality Improvement (QI). It involves classification of errors in sputum smear microscopy and assessment of laboratories based on Lot Quality Assurance Sampling (LQAS).

#### i) Training of STDC Personnel

##### a) External Quality Assurance of sputum smear microscopy

During the year, the institute took a leading role in imparting training to 26 Laboratory personnel consisting of 10 Microbiologists and 16 Laboratory Technicians. from the states of Andhrapradesh, Assam, Goa, Chattisgarh, Jammu Kashmir, Karnataka, Kerala, Mizoram, Orissa, Puducherry, Punjab, Maharashtra, Uttar Pradesh and Uttarakhand (14 states). The duration of training was for a period of 5 days which included EQA guidelines, panel testing and conducting Onsite Evaluation (OSE) to a District TB Centre.

##### b) Training in Culture & Drug Sensitivity

Three batches comprising 8 Microbiologists, 11 Lab Technicians from the states of Delhi, Rajasthan, West Bengal, Jarkhand and Karnataka were trained in culture and drug sensitivity testing. The training was for a period of 10 working days.

#### ii) On Site Evaluation (OSE) of the STDC laboratories:

EQA-OSE of four states were conducted during the year 2007-08 which included assessment of laboratory infrastructure, IRL-On Site Evaluation of DTCs, Panel testing of STLS, and RBRC responsibilities of STDCs (see table below).

Sl. No.	State	Dates	Team
1	Madhya Pradesh	13-08-07 to 16-08-07	Mr. S. Anand, Ms. Reena K, Ms. Shilpa S., Ms. Shyni San
2	Rajasthan	22-10-07 to 25-10-07	Mr. S. Anand, Ms. Reena K, Ms. Shyni San



Sl. No.	State	Dates	Team
3	Pondicherry	03-12-07 to 05-12-07	Mr. S. Anand, Ms. Reena K, Ms. Shilpa S.
4	West Bengal	21-01-08 to 25-01-08	Mr. S. Anand, Ms. Reena K, Ms. Shyni San

The following are the observations pertaining to the STDCs supervised.

**STDC at Bhopal-Madhya Pradesh:** The STDC which was previously functioning as a defacto DTC has now been segregated and now functioning as an independent unit in the renovated TB Hospital. STDC has discontinued its clinical activities and assumed the responsibilities of IRL.

**STDC Puducherry:** The dedicated team has completed the onsite evaluation visits of all the districts expected in the year. Panel slides of different grades are being prepared at IRL. However, validation of the slides needs to be completed.

**STDC Ajmer-Rajasthan :** All equipments required for starting culture and sensitivity testing have been commissioned and bio-safety certificate has been obtained. The required manpower has been trained at NTI in Culture and DST. STDC has completed 22 onsite visits of the districts out of 32 expected.

**STDC Kolkata-West Bengal:** The IRL team has completed the OSE visits of all the districts expected in a year. Panel testing for STLS was carried out and found effective enough to detect errors. Laboratory infrastructure is found to be adequate.

***iii) Pre Assessment visits conducted by the EQA-DRS team:***

Pre assessment visits were undertaken to the STDCs of Rajasthan, West Bengal and Orissa for assessing the infrastructure of the laboratories, installation and working conditions of the equipments like bio-safety cabinets, incubators, autoclave, hot air oven, Fluorescent Microscope and other equipments received from CTD as per the guidelines.

Sl. No	State	Dates	Team
1	Rajasthan	22-10-07	Mr. S. Anand, Ms. Reena K.
2	West Bengal	24-01-08	Mr. S. Anand, Ms. Reena K., Dr. Sheena S. George (CTD)
3	Orissa	18-02-08 to 20-02-08	Mr. S. Anand, Dr. Sheena S. George (CTD), Dr. Ranjini Ramachandran (TRC)

## **B. National Laboratory Committee Meeting**

Director and the faculty from the Bacteriology section participated in the Laboratory Committee Meeting held at CTD New Delhi on 06-06-07, 16-02-2008 and 28-09-07 to 29-09-07 at NTI, Bangalore. The agenda of the meetings consisted of discussion on EQA updates, Capacity building at IRL level, accreditation proceedings of IRLs and Medical Colleges.

## **C. Training of laboratory staff**

i) **Hands on training in EQA and DRS** : Jr. Bacteriologist Ms. Reena K and Consultant Microbiologists Mr. S. Anand and Ms. Hemasundaram were trained at NTI in EQA and Culture and sensitivity aspects during the year under report.

ii) **Training in DST for second line drugs:** Mrs. Bhagirathy and Mrs. Shivashankari were trained in DST for second line drugs at TRC, Chennai.

iii) **Training in operation of High Performance Liquid Chromatography (HPLC):** Ms. Reena K, Jr. Bacteriologist, Mr. S Anand, Consultant Microbiologist, Mr. H.V Surendra and Mrs. Vijayalakshmi, Lab Technicians were trained at TRC, Chennai in operating HPLC.

## **7. LIBRARY & INFORMATION SERVICES AND PUBLICATIONS**

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### ***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 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.

### ***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 other specialized publications. The faculty and the staff of the institute contribute the articles for publication.

#### ***A) Documents published :***

The following documents were published during the year:

1. NTI bulletin Vol. 42/3&4 - Five Hundred (500) copies
2. NTI Annual Report of the year 2006-07 - One hundred and fifty (150) copies

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 website of NTI was updated with an addition of NTI Bulletin Vol 42/3&4.

## **8. OTHER TECHNICAL ACTIVITIES**

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The institute, apart from its routine training and research activities, also carries out other technical activities viz., participation in the Central Internal Evaluation, Task Force activities of Medical Colleges and involvement of NGOs 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. Besides, the institute also undertakes processing of specimen for culture & drug susceptibility tests with respect to patients referred by both governmental & non-governmental sectors through programme channels.

### **(A) Central Internal evaluation**

The faculty of the institute assisted the Central TB division in Internal Evaluation of the Belgaum district of Karnataka from 2<sup>nd</sup> – 5<sup>th</sup> July 2007 with the objective of assessing the achievements and the constraints encountered during the implementation of RNTCP and to provide recommendations for necessary corrective actions. The evaluation culminated with briefing the Principal Secretary, Health, Government of Karnataka on the findings of the evaluation.

### **(B) 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 to enhance 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 11 of the report.

### **(C) Scientific Gallery**

As part of the IEC activity, the institute has made an innovative approach in developing 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 others who visit the institute on Education Tour.

The target group for the scientific gallery are the visitors comprising medical, the para-medical 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 on a mutually agreed date with a prior formal communication with the Director, NTI.

During the period under report, the scientific gallery has a total of 1768 visitors to its credit from 50 Medical and Para-medical Educational institutions across the country.

#### **(D) Status of laboratory animals**

Fresh stock of 340 NTI-bred albino guinea pigs was raised in healthy condition. Appropriate preventative measures were taken to check outbreak of diseases among breeding stock. 126 (one hundred twenty six) homogenous stock of animals were utilized for the ongoing collaborative research projects during the period under report.

#### **(E) Specimens processed**

The details of specimens processed in the Bacteriology section during the period under report are furnished below:

1	Total Number of sputum samples registered	1491
2	Total number of sputum samples from Disease Prevalence Survey registered	743
3	Total number of out patient samples referred from programme channels registered	577
4	Number of out patient results reported	409
5	Number of samples received from DOTS Plus centres registered	171
6	Number of results reported	96
7	Number of positives	60
8	Number reported as MDR	28

#### **(F) Consultancy services**

Dr. V.K. Chadha was deputed on short term consultancy for assistance in Tuberculin survey at DPR Korea from 6<sup>th</sup> – 20<sup>th</sup> May 2007 and DFID, Indonesia from 29<sup>th</sup> January to 23<sup>rd</sup> Feb, 2008

#### **(G) 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 (DGNM, Medical Assistants from Air Force & ANMs) and graduates / postgraduates (B.Sc & M.Sc – 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 and 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. A Total 2152 visitors in 61 batches from 44 educational institutions visited the scientific gallery during the year under report. The details of the visits are furnished below:

<b>Sl. No.</b>	<b>Date</b>	<b>No. of participants</b>	<b>Organization</b>
1	03-04-07	19	Acharya college of nursing,B'lore.
2	05-04-07	53	NMKRV Womens college.B'lore
3	09-04-07	27	St John's college of nursing.B'lore
4	12-04-07	09	MVJ Medical college, Bangalore.
5	19-04-07	28	Chinai school of nursing, Bangalore
6	23-04-07	39	Father muller college of nursing, Mangalore.
7	27-04-07	48	Shanmuga Inst. of Paramedical Sciences,Salem,T.N
8	03-05-07	41	St Philomena's school of nursing, Bangalore.
9	07-05-07	19	HOSMAT College of nursing Bangalore.
10	11-05-07	18	Bhagawan Mahaveer Jain school of college, Bangalore
11	15-05-07	20	Command Hosp .school of nursing, Bangalore
12	16-05-07	23	St Martha's college of nursing, Bangalore
13	17-05-07	43	Capitol college of nursing, Bangalore
14		05	
15	21-05-07	60	Trivandrum Medical College,Kerala
16	28-05-07	40	SSS School of nursing, Bangalore
17	29-05-07	46	The Karnataka college of nursing Bangalore
18	04-06-07	21	St Philominas college of nursing, Bangalore.
19	06-06-07	25	Navodaya institute of nursing, Bangalore.
20	12-06-07	13	MVJ Medical college, Bangalore
21	21-06-07	13	Krupanidhi college of nursing, B'lore
22	25-06-07	21	Sanjay Gandhi college of nursing, Bangalore
23	05-07-07	50	Bangalore city college of nursing,Bangalore.
24	09-07-07	51	T.John college of nursing, Bangalore.
25	10-07-07	49	Air force Medical Training centre, Bangalore
26	13-07-07	31	St.John's college of nursing, B'lore
27	17-07-07	47	Faran school of nursing, Bangalore
28	23-07-07	20	T.John college of nursing, Bangalore
29	26-07-07	37	Unity college of nursing, Mangalore
30	31-07-07	28	Narayana Hrudayalaya college of nursing, Bangalore
31	02-08-07	53	K.Pandiya Rajaha Ballal college of nursing, Mangalore.
32	06-08-07	48	Farhan college of nursing Bangalore.
33	08-08-07	67	Harsha college of nursing Bangalore
34	10-08-07	43	Harsha college of nursing Bangalore
35	16-08-07	15	MVM Suma inst. of nursing, Bangalore
36	17-08-07	36	ICON college of nursing, Bidadi, Bangalore
37	23-08-07	54	CMR college of nursing. Bangalore
38	11-09-07	25	G.R.Damodaran College of science, Coimbatore,TN.
39		16	
40	24-09-07	26	INSA, Bangalore

Sl. No.	Date	No. of participants	Organization
41	26-09-07	23	G.R.Damodaran College of science, Coimbatore, TN
42	10-10-07	14	MVJ Medical college, Bngalore
43	06-11-07	9	Holy College of Nursing, Kerala
44	15-11-07	50	Goutham College of Nursing, Bangalore
45	30-11-07	19	INSA, Bangalore
46	17-01-08	27	St.Martha's college of nursing, Bangalore.
47	18-01-08	19	MBSK Kanya mahavidyalaya, Kadegaon, Maharastra
48	22-01-08	44	Acharya college of MLT,, Bngalore
49	29-01-08	39	Bhagavan mahaveer college of nursing, Bangalore
50	31-01-08	24	Mathru college of Nursing, Bangalore
51	01-02-08	36	Dr.Reddy's inst. of nursing, Bangalore.
52	06-02-08	52	Air Force medical Trg. Centre, Bangalore.
53	08-02-08	10	INSA, Bngalore
54	13-02-08	30	Jawahar navodaya vidyalaya, Doddaballapura, Karnataka.
55	19-02-08	46	Smt.Nagaratnamma college of Nursing, Bangalore
56	21-02-08	42	
57	29-02-08	42	Hill side school/college of nursing, Bangalore.
58	04-03-08	45	
59	06-03-08	46	
60	10-03-08	45	Global college of nursing, Bangalore.
61	12-03-08	44	
62	14-03-08	51	
63	20-03-08	39	Oxford college of science, B'lore
64	28-03-08	30	Dayananda sagar college of biological science, Bangalore.

### (H) Miscellaneous

Dr. P. Kumar, Director participated in the Brain storming session on bioinformatics in Rice and TB, held at Department of Bio Technology, New Delhi on 05-06-07.

Dr. P. Kumar, Director participated as external examiner for the evaluation of thesis entitled "Avium specific secretory protein(s) diagnostic potential and role in host pathogen interactions" and conduct of viva voce examination for award of Ph.D degree of PGIMER, Chandigarh held at PGIMER, Chandigarh. 20.07.07

Dr. P. Kumar, Director participated as member of the selection committee for selection of a candidate for the post of Consultant Microbiologist, at TRC, Chennai on 31-03-08

## 9. OVERVIEW OF COMPUTER FACILITIES

The year 2007-08 witnessed the completion of upgrading facilities in training hall in terms of Wi-fi projection and internet facility, thus providing a state of art ambience to cater to the needs of international / national conference.

The Silver Jubilee hall was also furnished with LAN networking, Wi-fi projection and Internet facility to cater to the needs of concurrent training programmes at NTI.

In addition, it is proposed to expand and upgrade the Computer Centre to sustain and support the higher level of computing requirement and training activities in future.

An overview of the distribution of IT hardware in the Institute is 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	15
2	Addl. Director's office	-	-	1	1	-	-	-	-	-	-	-	2
3	Statistics	1	1	14	8	1	-	6	2	2	-	-	35
4	Epidemiology	1	1	4	4	1	-	2	1	-	-	-	14
5	Control	-	1	2	1	-	-	8	-	-	-	-	12
6	Laboratory	1	1	6	5	1	-	-	-	-	-	-	14
7.	Training	-	3	3	3	-	7	1	-	3	2	-	22
9	Library	1	-	2	3	1	-	1	-	1	-	-	9
10	Establishment	-	-	4	4	-	-	2	-	-	-	-	10
11	Transport	-	-	1	1	-	-	-	-	-	-	-	2
12	X-Ray	-	-	1	1	-	-	-	-	-	-	-	2
13	Stores	-	-	1	1	-	-	-	-	-	-	-	2
14	Accounts	-	-	4	4	-	-	2	-	-	-	9	19
15	Accounts Mgt. Unit	-	-	2	2	-	-	-	-	-	-	-	4
16	HIV &TB	-	-	1	1	-	-	1	-	-	-	-	3
17	AMRU	-	-	2	1	-	-	1	-	-	-	-	4
18	Scientific Gallery	-	-	3	1	-	1	1	-	-	-	-	6
19	Draughtsman	-	-	1	1	-	-	-	-	-	-	-	2
20	TB Specialist	-	-	1	1	-	-	1	-	-	-	-	3
<b>Total</b>													<b>180</b>



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

The faculty and Technical Staff of NTI took part as Resource person/delegate in Conference /workshops/continuing medical education, Training programmes conducted in different hospitals and medical colleges etc. both at NTI and outside, the details of which are furnished below.

### **Conference:**

The faculty and technical staff of the institute participated in the 62<sup>nd</sup> National Conference on TB and Chest disease held at Maulana Azad Medical College Auditorium, New Delhi from 14<sup>th</sup> – 16<sup>th</sup> December 2007. The details of papers presented are furnished below:

<b>Sl. No.</b>	<b>Title of the paper presented</b>	<b>Resource person</b>
1	Oration on "status and future role of medical colleges for TB control". "LUPIN-TAI ORATION" award was bestowed for the oration. Also participated as judge for presentation of other papers.	Dr. Prahlad Kumar, Director
2	<i>ARTI in Andhra Pradesh</i>	Mr. Magesh V.
3	<i>Prevalence of TB infection among school children in Kerala</i>	Mr. Kirankumar R.
4	<i>Relationship of under-nutrition with Tuberculin reactivity</i>	Poster presentation by Mrs. Umadevi G.
5	<i>Prevalence of TB infection among school children in Kerala</i>	Poster presentation by Mrs. Umadevi G
6.	<i>Drug Resistance Surveillance in the state of Maharashtra</i>	S. Anand

### **Workshops held at NTI**

<b>Sl. No.</b>	<b>Title</b>	<b>Date</b>	<b>Resource person</b>
1	National Consultation workshop for review of RNTCP recording and reporting	29-06-07 to 30-06-07	WHO Consultants, STOs, DTOs, representatives from CTD & NTI.
2	Third SAARC Regional Workshop on TB/HIV Co-infection	05-09-07 to 06-09-07	Sri Lanka, Nepal, India & Maldives

<b>Sl. No.</b>	<b>Title</b>	<b>Date</b>	<b>Resource person</b>
3	Measurement of Epidemiological impact of RNTCP in India	11-10-07 to 13-10-07	Dr. V.K. Chadha
4	'Operational Research in RNTCP' held at NTI, Bangalore.	18-03-08 to 19-03-08	Dr. V.K Chadha, Dr. L. Suryanarayana, Sri. S. Anand

### **Workshops held outside NTI**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Date</b>	<b>Resource person</b>
1	Workshop on measurement of Epidemiological impact of RNTCP in India held at New Delhi TB Centre, New Delhi	07-09-07 to 08-09-07	Dr. V.K. Chadha
2	Workshop on 'Monitoring progress towards millennium development goals in TB' held at Geneva,	05-12-07 to 09-12-07	Dr. V. K Chadha.
3	South Zonal Task Force workshop at St. John's Medical College, Bangalore	10-08-07 to 11-08-07	Dr. P. Kumar, Director Dr. Preetish S. Vaidyanathan Dr. N. Somashekhar
4	Represented CTD and NTI in the West Zonal Task Force workshop held at Central Institute of Road Technology, Bhosari, Pune	23-08-07 to 24-08-07	Dr. Prahlad Kumar, Director Dr. Preetish S. Vaidyanathan
5	Represented CTD and NTI in the East Zonal Task Force workshop at Patna	31-08-07 to 01-09-07	Dr. Prahlad Kumar, Director Dr. Preetish S. Vaidyanathan
6	National taskforce workshop held at Delhi	29-10-07 to 31-10-07	Dr. Preetish Vaidyanathan, Dr. N. Somashekhar
7	Workshop on "Evaluation of RNTCP Training Methodology" at TRC, Chennai	04-02-08 to 06-02-08	Dr. Prahlad Kumar, Director Dr. Preetish S. Vaidyanathan
8	RNTCP Reporting & Recording workshop held at New Delhi	16-08-07 to 17-08-07	Dr. B. Mahadev
9	Workshop to Review Current RNTCP Training methodology held at Chennai	04-02-08 to 06-02-08	Dr. P. Kumar, Director Dr.Preetish S. Vaidyanathan Dr. N. Somashekar Mr. S. Anand

## Continuing Medical Education

Sl. No.	Particulars	Date	Resource person
1	Delivered a talk on Tuberculosis and HIV during CME on HIV at ESI Hospital, Indiranagar, Bangalore.	23-05-07	Dr. Preetish S. Vaidyanathan

## Meetings

### At NTI

Sl. No.	Name of the participant	Date	Particulars
1	Dr. Sophia Vijay, Sr. TB Specialist, Dr. Preetish S. Vaidyanathan, CMO, Dr. N. Somashekar, TB Specialist and Representatives from CTD, TRC and WHO	02-04-07	Meeting to finalize the procedures for the study titled "Routine referral of TB patients to Integrated Counseling and Testing Centers"
2	Dr. P. Kumar, Director and Faculty members	14-11-07	Institutional Animal Ethics Committee meeting to review the progress of IAEC approved ongoing collaborative studies and confirmation of minutes of previous IAEC meeting. The members visited AMRU and open shelter for retired breeders.

### Outside NTI

Sl. No.	Name of the participant	Date	Particulars
1	Dr. P. Kumar, Director	01-05-07	Meeting With Principal Secretary (Health), Government of Rajasthan, at Jaipur regarding the status of RNTCP, EQA, DST & human resource development in Rajasthan supported by NTI.
2		04-08-07	a. Pre-SAC Consultative meeting organized by TRC, Chennai, to review and discuss the progress of research activities, in connection with 35 <sup>th</sup> Annual Scientific Advisory Committee (SAC) meeting to be held in November 2007 b. Inauguration of International Centre for Excellence in Research (ICER), opening of the new ICER laboratories and the dedication of ICMR-NIH library network at TRC, Chennai.

<b>Sl. No.</b>	<b>Name of the participant</b>	<b>Date</b>	<b>Particulars</b>
3	Dr. P. Kumar, Director	29-08-07	Meeting of RNTCP Standing Committee for Operational Research held at Nirman Bhavan, New Delhi
4		07-09-07 to 08-09-07	National meeting on epidemiological impact held at New Delhi TB Centre, New Delhi
5.		14-09-07 to 15-09-07	"Consultative meeting - India Response, Plan for diagnosis and management of MDR/XDR TB" at TRC, Chennai & Chairing the 1 <sup>st</sup> Scientific session on 14 <sup>th</sup> September 07.
6.	Dr. P. Kumar, Director Dr. V.K. Chadha, Sr. Epidemiologist Sri. R. Jitendra, Computer	11-10-07 to 13-10-07	Epidemiological Impact assessment Meeting
7	Dr. P. Kumar, Director	28-11-07	Meeting with the officials of WHO-SEARO at the office of WHO-SEARO, New Delhi for debriefing the visit to Dhaka, Bangladesh and discussion with DDG (TB) on pending administrative matters of NTI.
8		29-11-07	"2 <sup>nd</sup> meeting of the tuberculosis bioinformatics" at the Department of Biotechnology, New Delhi and presentation on the activities undertaken by NTI.
9		03-12-07 to 06-12-07	Participation as Temporary Advisor to WHO-SEARO, in the 12 <sup>th</sup> Meeting of the National TB Programme Managers, organized by WHO, at Dhaka, Bangladesh.
10	Dr. Prahlad Kumar, Director  Dr. Preetish S. Vaidyanathan	17-01-08 to 18-01-08	National DOTS Plus Committee meeting at LRS Institute, New Delhi
11	Dr. Prahlad Kumar Director	29-01-08 to 31-01-08	National Consultation on revision of NGO/PP guidelines at LRS Institute, New Delhi
12		08-03-08	Review meeting of TB-HIV chaired by DDG. Meeting with Principal Secretary (Health) and Director, Rural Health Mission, Government of Karnataka at State Training Centre, Karnataka regarding the technical support to be provided by NTI for TB-HIV co-ordination in Karnataka.

<b>Sl. No.</b>	<b>Name of the participant</b>	<b>Date</b>	<b>Particulars</b>
13	Dr. Prahlad Kumar Director	31-03-08	Participated as member of the selection committee to select suitable candidates for the post of Consultant Microbiologist, at TRC, Chennai

### **Training Programmes**

<b>Sl. No.</b>	<b>Name of the participant</b>	<b>Date</b>	<b>Details</b>
1	Dr. L.Suryanarayana Dr. N. Somashekar	23-04-07 to 25-04-07	Training on Updating the Revised aspects of RNTCP, TB-HIV, EQA Modules and revised formats for the Key trainers of the faculty of Medical colleges from North Eastern zone held at Kolkata
2	Dr. L.Suryanarayana Dr. B. Mahadev	06-05-07 to 12-05-07	Training in Data management Programme held at Mount Abu, Rajasthan
3	Dr. L.Suryanarayana Dr. N. Somashekar	18-06-07 to 2-06-07	Training in Data Management held at Hyderabad. Dr. L. Suryanarayana participated as Resource Person for the training.
4.	Dr. L.Suryanarayana Dr. N. Somashekar	02-08-07 to 03-08-07	Training in Drug Procurement and Logistics held at LRS Institute of TB & Chest Diseases, New Delhi

## 11. VISITORS

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

<b>Sl. No.</b>	<b>Name of visitor</b>	<b>Date</b>	<b>Details of visit</b>
1.	Dr S R Agarwal, CMO, Dte. GHS, New Delhi	09-04-07	Discussion on administrative issues related to NTI
2.	Mr Gursharan Singh, Office of WHO Representative, New Delhi	11-04-07	Discussion on WHO fellowship training at NTI for the participants from SEARO Region.
3.	Joint Director (TB), Karnataka	19-04-07	Discussion on workshop to be organized by the World Lung Foundation of India on Public Health Aspects of lung diseases.
4.	Dr Somil Nagpaul, RNTCP Medical Consultant, CTD, Dte. GHS, New Delhi	20-04-07	Discussion on update training of revised RNTCP Modules.
5.	Dr VK Arora, former Dean of Indian Institute of Research and Management, Jaipur	23-04-07	Discussion on the proposed workshop at NTI
6.	Dr Vishnuvardhan, IUATLD, New Delhi	07-06-07 12-06-07 & 20-06-07	Discussion on the proposed training on "Leadership and general management for Bloomberg global initiative to reduce tobacco use (LGMC)", at NTI in collaboration with IUATLD.
7.	Dr Manish Sinha from Ocoee Regional Health Corporation, USA and Dr (Mrs) Naina Sharma from South Side Clinic, Ehrlange Health Systems, USA	12-06-07 & 13-06-07	Interaction with Director and faculty members of the Institute on various components of National tuberculosis control programme.
8.	Dr Thomas Bocher and Ms Katrin Steigner from Carl Zeiss, Germany and Mr Sankaranarayanan, Asst. Sales Manager, Technical & Dealer Operations, Microscopy Products Division, Carl Zeiss India Pvt Ltd., Bangalore,	15-06-07	Discussion regarding diagnostic tools developed for detection of TB.
9.	Dr Somil Nagpaul, RNTCP Medical Consultant, Central TB Division, New Delhi.	23-06-07	Finalization of arrangements for update training on revised RNTCP Modules to be held from 25.6.2007

<b>Sl. No.</b>	<b>Name of visitor</b>	<b>Date</b>	<b>Details of visit</b>
10.	Dr VK Arora, formerly Dean of Indian Institute of Health Management Research, Jaipur	02-07-07	Discussion on the proposed "leadership and the strategic management course".
11.	Dr Kalpesh, RNTCP Medical Consultant	05-07-07	Discussion on accreditation of lab of STDC, Nagpur, Maharashtra.
12.	Mrs Shameema Hussain, Director, National Tuberculosis Programme, Maldives	12-07-07	Discussion on fellowship training to their staff.
13.	Dr Sahu, National Professional Officer, WHO-India.	16-07-07	Discussion on collaborative activities in TB-HIV
14.	Joint Director (TB), Karnataka, Dr. Raveendra, Dr. Yamuna Mundade and Dr. Srinath, RNTCP Medical Consultants ,	08-08-07	Finalization of arrangements for ZTF (South zone) workshop scheduled on 10th & 11th Aug 07 in Bangalore.
15.	Mrs Radha Swaminathan, from WHO-SEARO	15-08-07	Discussion on Collaborative activities with NTI.
16.	Executives from Span Diagnostic Centre, Bangalore	17-08-07	Discussion on evaluation of PPM project.
17.	Dr Nagraj, Head, Dept. of Microbiology, Indian Institute of Science, Bangalore	10-09-07 & 20-09-07	Discussion on the proposed collaborative project
18.	State Tuberculosis Officer, Rajasthan	20-09-07	Review on progress in Establishment of IRL at Ajmer
19.	Dr. K. R. John, Professor of Community Medicine from CMC, Vellore and his team	09-10-07	Discussion on the modalities to initiate ARTI survey in south zone.
20.	Dr Behra & Dr Sarine from LRS Institute and Dr Chopra from New Delhi TB Centre, New Delhi	12-10-07	Discussion on the modalities for ARTI survey in east and north zone.
21.	Deputy Director General (TB) and Dr Sahu, National Professional Officer, WHO, India.	13-10-07	Discussion on appointment of Consultants to NTI.
22.	Dr Beena Thomas, TRC, Chennai	24-10-07	Discussion on TB-HIV project at Mysore.
23.	Dr Ramakumari, Project Coordinator (RNTCP), BMP	02-11-07	Discussion on the joint project on involving family physicians in RNTCP.
24.	Dr S.N. Rai, RNTCP Medical Consultant, CTD, New Delhi	08-11-07	Discussion on the progress of RNTCP in the state of Karnataka and the modalities to support the programme for appropriate improvement in case-finding and cure rate.

<b>Sl. No.</b>	<b>Name of visitor</b>	<b>Date</b>	<b>Details of visit</b>
25.	Dr Deepak Joshi, In-charge Chest & Health Clinic, Bangalore	14-01-08	Discussion on development of partnership in RNTCP activities
26.	Dr Rick Obrian and Dr Paramasivan, FIND, Geneva	25-01-08	Discussion on partnership of FIND with RNTCP to strengthen the laboratory network
27.	State Tuberculosis Officer, Karnataka	20-02-08	Discussion on providing technical support by NTI to State TB Cell in development of IRL, supervision, training, research, etc under RNTCP.
28.	Dr RK Sharma, Medical Specialist and In-charge DMC, Rajasthan	26-02-08	Discussion on the progress of RNTCP in the district Karauli, Rajasthan.
29.	Dr Jannet from Australia	11-03-08	Discussion on TB control programme in India and contribution of NTI for RNTCP.
30.	Mr Bhattacharya from CTD, New Delhi.	12-03-08 & 14-03-08	Discussion on the pending administrative issues
31.	Joint Director (TB), Karnataka,	20-03-08	Discussion on observance of World TB Day in Bangalore.
32.	Dr Ganesh, Department of Bio-chemistry, IISc., Bangalore	25-03-08	Discussion on collaborative project between IISc and NTI.



## 12. EVENTS CELEBRATED

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15<sup>th</sup> August 2007

: **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 neighbouring 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.

7<sup>th</sup> -14<sup>th</sup> September 2007

**Hindi week** was observed from 7<sup>th</sup> – 14<sup>th</sup> September 2007 and Hindi Divas was celebrated on 14<sup>th</sup> September 2007. Shri B.A. Eshwara, Ex-servicemen was the chief guest. As part of the observance of the Hindi week, Anthakashri, Hindi translation, Letter writing, Essay, Quiz competition, Ek Shyam Bachonke Naam (cultural programme for the children of NTI staff) and Hindi Jokes / Songs were organized. Prizes were distributed to the winners of the events.

26<sup>th</sup> January 2008

**Republic Day** was celebrated in the Institute. The faculty and staff of NTI and students from neighbouring Bethesda School participated. Director hoisted the National Flag. Patriotic songs were sung by the faculty and staff. Cultural programmes were presented by School children. The Director addressed the gathering.

24<sup>th</sup> March 2008

The faculty and Technical staff of the institute observed the **World TB day**. On this occasion, Dr. V.K. Chadha, Epidemiologist, NTI delivered a talk on 'Tobacco and Tuberculosis'

### 13. FINANCIAL OUTLAY & EXPENDITURE

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The Plan & Non-plan budget allocation and expenditure incurred for the financial years 2005-06, 2006-07 & 2007-08 are presented in tables below.

#### PLAN

Year	Budget allocated (Rs.)	Expenditure (Rs.)
2005 - 2006	2,10,00,000	1,16,09,000
2006 - 2007	2,13,00,000	1,52,75,000
2007 - 2008	1,95,00,000	1,81,59,000

#### NON PLAN

Year	Budget allocated (Rs.)	Expenditure (Rs.)
2005 - 2006	2,56,00,000	2,53,76,000
2006 - 2007	2,80,00,000	2,74,27,000
2007-2008	3,25,00,000	2,91,14,000

Revenue generated by the Institute for the year 2004-05 was credited to the consolidated fund of Government of India is given in the table below.

#### REVENUE GENERATED

Year	Amount (Rs.)
2007-08	4,30,110

## 14. ADMINISTRATIVE SECTIONS

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### ESTABLISHMENT

- The section is responsible for general upkeep of the office. The various types of activities undertaken in the section include :
  - i. Attending to routine administrative matters of the Institute.
  - ii. Recruitment, posting, transfers, retirements and all other service matters.
  - iii. Provision of manpower to all the sections.
  - iv. Processing of legal issues in service matters under Central Administrative Tribunals and higher institutions.
  - v. Correspondence with Directorate General of Health Services (Dte.GHS) & other agencies on administrative matters.
  - vi. Provision of secretarial assistance to all the sections.
  - vii. Maintenance of office buildings, hostel facilities and campus.
- The retirement and repatriation details of staff of the Institute during the year is given in the table below.

Sl. No	Name	Designation	Date
<b>Retirement on Superannuation</b>			
1	Smt. Victoria Lalitha	Sister Tutor	30-04-07
2	Smt. Ambujamma	Group 'D' (Peon)	31-05-07
3	Dr. R Vatsala	Additional Director	31-10-07
4	Sri. G.S. Iyengar	Transport Supervisor	31-10-07
5	Sri. V. Siddarthan	Sr. Investigator (SOCS)	31-01-08
6	Sri. M.E. Babu	Daftry	29-02-08
<b>Transferred out</b>			
Dr. G.V. Ramesh, CMO(NFSG) was transferred to CGHS Bangalore w.e.f. 29 <sup>th</sup> June 2007			
<b>Transferred in</b>			
1. Shri. R. Kiran Kumar assumed charge as Chief Statistical Officer w.e.f. 02.07.07 on transfer from National Sample Survey Organization, Field Operations Division, Bhopal.			
2. Dr. N. Hari assumed charge as Veterinarian w.e.f from 01-04-2007 on transfer from BCG Laboratory, Guindy. Chennai.			

## **ACCOUNTS**

This section deals with all the financial matters related to the institute. The major responsibilities of the section are:

- i. Preparation of annual budget proposal and performance budget.
- ii. Drawing and disbursement of Salaries, Travelling Allowances, Medical reimbursement & other claims and advances by staff & officers.
- iii. Processing of payments pertaining to procurements made by stores and annual maintenance contracts services.
- iv. Effecting scheduled and non-scheduled deductions and its remission to concerned authorities.

## **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 & 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 equipment 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 administrative and research facilities. The section also handles maintenance of all documents regarding registration, insurance and condemnation. The section is also equipped to undertake minor repairs of vehicles. During the year under report, three vehicles condemned by following the prescribed procedures and disposed off.

## **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. The hostel rooms have been renovated with provision of attached bath facilities. The rooms have been refurnished with new furniture, television and air-conditioner. 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**

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### **CIVIL & ELECTRICAL WORKS**

The Institute gets the Civil and Electrical works executed through Central Public Works Department (CPWD), under the Ministry of Urban Development and Poverty Alleviation, Government of India, out of the budget allocated to NTI during the financial year.

The Institute was provided with the budget of Rs.58.5 lakhs under the head of account PLAN – OC, Rs.35 Lakhs under PLAN – CAPITAL Memorandum & ER and Rs.15 Lakhs under CAPITAL 4210 during the financial year 2007-08. The following Civil and Electrical works have been executed during the year under report.

#### **Civil works**

1. Construction of two & four wheeler parking sheds.
2. Renovation of two rooms for establishment of computer lab. in PV Benjamin Block
3. Provision of wall paneling with aluminum extrusions in the training block of PV Benjamin Block.
4. Laying of pre-mix carpet surfacing of roads within the campus.
5. Provision of delivery and distribution pipelines for water supply connections for office and residential quarters.
6. Security enhancement of the campus by heightening of the compound wall and providing barbed wire.
7. Renovation of Kalaniketan auditorium with provision of false ceiling, and fixing of rain water drains on the terrace.
8. Drilling of two bore wells for ensuring uninterrupted water supply both for office and residential quarters.

#### **Electrical Works**

1. Provision of split air conditioners to the class rooms in PV Benjamin Block. And the hostel.
2. Provision of 5 HP pump to open well, 100 KvA Transformer for new quarters block and replacement of HT cable & repairs to 250/315 KvA Transformers.

### **MAINTENANCE WORKS**

In addition to the above, maintenance of Civil & Electrical works were also taken-up through CPWD as part of their routine Annual Repair and Maintenance Operation.

## **Acknowledgements**

The Director acknowledges the efforts of the Annual Report compilation committee under the Chairmanship of Dr. L. Suryanarayana, CMO (NFSG) 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 in processing and compiling this report deserves deep appreciation. The secretarial assistants provided by Kum. Sridevi, Contractual Stenographer is also acknowledged with thanks.