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## FOREWORD

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Even after more than half a century of independence, we have not been very successful in reducing the burden of TB in the community. Realizing the gravity of the situation, top priority is given by Government of India for implementation of RNTCP. Rapid expansion is taking place for full coverage of the country under RNTCP to meet the target by end of the year 2005. This involves strengthening and increasing the number of training programmes and sensitization workshops on RNTCP at NTI. Besides, NTI faculty in addition to their research work have under taken supervision/appraisal visits to RNTCP districts to increase the efficiency. An important highlight of this report is about the Government of India & World Health Organization sponsored **National Workshop on RNTCP for Professors of Medical Colleges** held at NTI from 14-15 September 2001. Details given else where in this issue.

Fieldwork for the “National sample survey to estimate annual risk of tuberculous infection in different parts of India” is completed in three of the four zones. Analysis of all districts of south zone and few districts of the north & west zones is completed. Currently the fieldwork is in progress in east zone and expected to be completed by end of the year 2002. The survey is expected to give us much needed information on the prevailing epidemiological situation of TB in the country.

Surveillance of Drug Resistance in the central zone of the country is under progress. Few operational studies on DOTS and RNTCP have also been undertaken during the current year.

In view of the need for evaluation of research proposals with emphasis on precaution and risk minimization, the Institutional Ethics Committee was constituted on 6<sup>th</sup> June, 2001. The committee became operational with its first meeting on 12<sup>th</sup> July, 2001, wherein the purpose and formulation of the guidelines as per the ethics review procedures were discussed.

Ten papers were published in various journals and six papers were

presented at various conferences. Dr (Ms) P Jagota was the recipient of **Lupin TAI-Oration** for the paper titled “Revised National Tuberculosis Control Programme : A success story” at the 56<sup>th</sup> National Conference on TB & Chest Diseases held at Chennai from 9-12 October 2001. She was also the recipient of the first **Dr K Nagappa Alva Oration** for the paper “Genesis of Directly Observed Treatment Short course” at the Karnataka State TB & Chest Diseases Conference held at Bidar, Karnataka from 4-6 January 2002.

The important highlight of the year has been the development and launching of the **website on NTI**. Through this, the research & training activities; papers published; publications brought out & programme information on NTP that can be retrieved by country, district, year and each quarter is made available globally on the net. Details given elsewhere in this issue

The **SAARC Trainers Training** was also held at the Institute. Members from SAARC countries got first hand training in the implementation of TB control programme.

Lot of effort has been put in to maintain this majestic heritage building and also for the establishment of the P-3 level laboratory which will become functional shortly.

I have taken over the charge as Director on 20<sup>th</sup> May 2002 after the retirement of Dr (Ms) P Jagota on 31<sup>st</sup> January 2002. The Institute will continue to exert itself in achieving the goals of TB control. I appreciate the hard work and support extended by my colleagues and staff in sincerely carrying out the activities of the Institute. I congratulate the team for bringing out the Annual Report for the year 2001-2002. I hope this will be a useful reference document for all those involved in TB control.

**August 2002**  
**Bangalore**

**Dr Prahlad Kumar**  
**Director**

## **GLOSSARY**

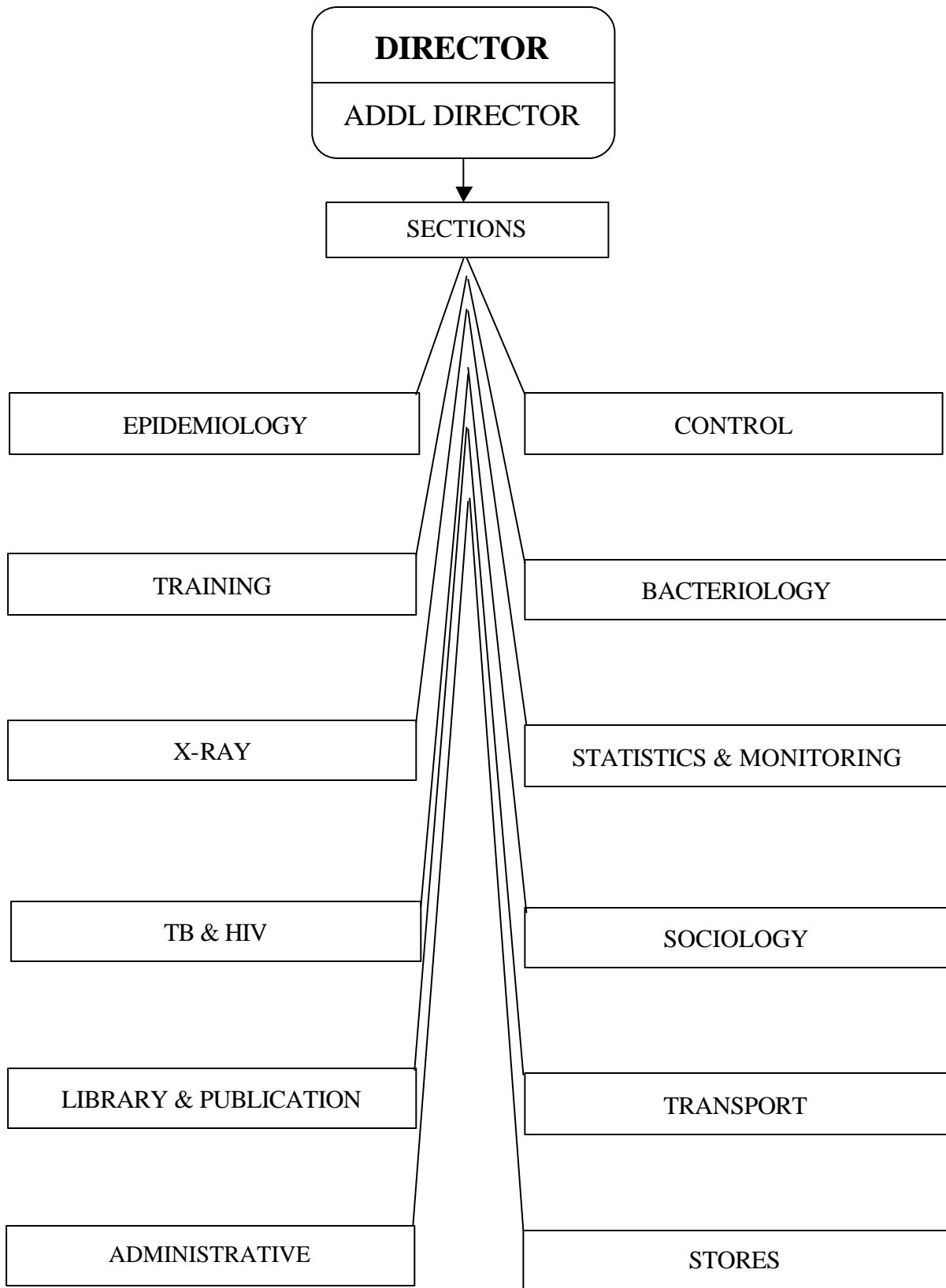
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|  |        |
|--|--------|
| • Acquired Immunodeficiency Syndrome             | AIDS   |
| • Animal Model Research Unit                     | AMRU   |
| • Annual Risk of Tuberculous Infection           | ARI    |
| • Annual Repair & Maintenance                    | AR & M |
| • Bangalore Mahanagara Palike                    | BMP    |
| • Central Public Works Department                | CPWD   |
| • Centre for Genetic Engineering                 | CGE    |
| • Chief Medical Officer                          | CMO    |
| • Co-Investigator                                | CI     |
| • Compact Disc                                   | CD     |
| • Compassion Unlimited Plus Action               | CUPA   |
| • Continuing Medical Education                   | CME    |
| • Danish International Development Agency        | DANIDA |
| • Department for International Development       | DFID   |
| • Directly Observed Treatment Short Course       | DOTS   |
| • Directorate General of Health Services         | DGHS   |
| • Disability Adjusted Life Years                 | DALY's |
| • District Tuberculosis Centre                   | DTC    |
| • District Tuberculosis Officer                  | DTO    |
| • District Tuberculosis Programme                | DTP    |
| • Ethambutol                                     | E      |
| • Field Investigator                             | FI     |
| • Government of India                            | GOI    |
| • Human Immunodeficiency Virus                   | HIV    |
| • Health Visitor                                 | HV     |
| • International Union Against TB & Lung Diseases | IUATLD |
| • Isoniazid                                      | INH    |
| • Indian Institute of Science                    | IISc   |
| • Lady Willingdon State Tuberculosis Centre      | LWSTC  |
| • Mahatma Gandhi Institute of Medical Sciences   | MGIMS  |
| • Minimum Inhibitory Concentration               | MIC    |
| • Management Information System                  | MIS    |
| • Medical Officer                                | MO     |
| • Microscopy Centre                              | MC     |
| • Multi-Drug Resistant Tuberculosis              | MDR-TB |

|   |                       |
|---|-----------------------|
| • Mycobacterium tuberculosis                              | <i>M.tuberculosis</i> |
| • National AIDS Control Organization                      | NACO                  |
| • National Dairy Development Board                        | NDDB                  |
| • Non Functioning Selection Grade                         | NFSG                  |
| • National Institute of Mental Health and Neuro Sciences  | NIMHANS               |
| • National Sample Survey                                  | NSS                   |
| • National Tuberculosis Institute                         | NTI                   |
| • National Tuberculosis Programme                         | NTP                   |
| • National Workshop for Professors of Medical Colleges    | NWMC                  |
| • Non Governmental Organization                           | NGO                   |
| • Overhead Projector                                      | OHP                   |
| • Post Graduate Institute of Medical Education & Research | PGIMER                |
| • Peripheral Health Institutions                          | PHIs                  |
| • Principal Investigator                                  | PI                    |
| • Public Health Nurse                                     | PHN                   |
| • Rifampicin  | R                     |
| • Revised National Tuberculosis Control Programme         | RNTCP                 |
| • Sweedish International Development Agency               | SIDA                  |
| • Short Course Chemotherapy                               | SCC                   |
| • Streptomycin  | SM                    |
| • Senior Medical Officer                                  | SMO                   |
| • South Asian Association for Regional Cooperation        | SAARC                 |
| • South East Asian Regional Organisation                  | SEARO                 |
| • Standard Regimen  | SR                    |
| • State Tuberculosis Centre                               | STC                   |
| • State Tuberculosis Officer                              | STO                   |
| • Statistical Assistant                                   | SA                    |
| • Technical Coordination Committee                        | TCC                   |
| • Treatment After Default                                 | TAD                   |
| • Treatment Organizer                                     | TO                    |
| • Tuberculosis  | TB                    |
| • Tuberculosis Association of India                       | TAI                   |
| • Tuberculosis Research Centre                            | TRC                   |
| • United States of America                                | USA                   |
| • World Health Organization                               | WHO                   |
| • X-ray Technician  | XT                    |

# 1. ORGANIZATIONAL SET UP

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## 2. STAFF STRUCTURE

|                      | <u>Sanctioned (S)</u> | <u>Positioned (P)</u> | <u>Vacant (V)</u> |
|----------------------|-----------------------|-----------------------|-------------------|
| <b>DIRECTOR</b>      | 1                     | 1                     | Nil               |
| <b>ADDL DIRECTOR</b> | 1                     | 1                     | Nil               |



| <b>OFFICERS (GROUP 'A')</b>                              |          |          |          |
|--|----------|----------|----------|
|  | <b>S</b> | <b>P</b> | <b>V</b> |
| Sr. TB Specialist  | 1        | 1        | Nil      |
| Sr. Epidemiologist                                       | 1        | 1        | Nil      |
| General Duty Medical Officers<br>( All Grades )          | 4        | 4        | Nil      |
| TB Specialist  | 2        | Nil      | 2        |
| Chief Statistical Officer                                | 1        | 1        | Nil      |
| Bacteriologist   | 1        | Nil      | 1        |
| Sr. Statistical Officer                                  | 1        | 1        | Nil      |
| Veterinarian   | 1        | 1        | Nil      |
| Statistical Officer                                      | 1        | 1        | Nil      |
| Sociologist  | 1        | Nil      | 1        |
| X-ray Engineer   | 1        | Nil      | 1        |
| Chief Medical Officer on Deputation<br>from CGHS Chennai | -        | 1        | -        |



| <b>GROUP 'B' GAZETTED</b> |          |          |          |
|---------------------------|----------|----------|----------|
|                           | <b>S</b> | <b>P</b> | <b>V</b> |
| Administrative Officer    | 1        | Nil      | 1        |
| Jr. Bacteriologist        | 1        | 1*       | Nil      |
| Asst. Training Officer    | 1        | Nil      | 1        |
| Sr. PA to Director        | 1        | Nil      | 1        |



| <b>GROUP 'B' NON-GAZETTED</b>  |          |          |          |
|--------------------------------|----------|----------|----------|
|                                | <b>S</b> | <b>P</b> | <b>V</b> |
| Sr. Public Health Nurse        | 1        | 1        | Nil      |
| Asst. Programmer               | 1        | Nil      | 1        |
| Jr. Statistical Officer        | 1        | Nil      | 1        |
| Sr. Librarian                  | 1        | 1        | Nil      |
| Sr. Investigator (SOCS)        | 3        | 1        | 2        |
| Sr. Investigator (EPS)         | 1        | Nil      | 1        |
| Sr. Technical Asst.<br>(Lab)   | 1        | Nil      | 1        |
| Sr. Technical Asst.<br>(X-ray) | 1        | Nil      | 1        |
| Accountant                     | 1        | 1        | Nil      |

\*Unauthorized absence



| <b>GROUP 'C' : TECHNICAL STAFF</b>                    |   |          |          |
|---|---|----------|----------|
| <b>Statistics Section</b>                             | <b>S</b>  | <b>P</b> | <b>V</b> |
| Statistical Assistant                                 | 6   | 6        | Nil      |
| Statistical Assistant (Machine)                       | 1   | Nil      | 1        |
| Sorter Operator                                       | 1   | 1        | Nil      |
| Punch Operator  | 2   | Nil      | 2        |
| Computer  | 6   | 5        | 1        |
| <b>Epidemiology Section</b>                           |   |          |          |
| Investigator  | 2   | 2        | Nil      |
| Team Leader   | 1   | 1        | Nil      |
| Field Investigator                                    | 7   | 6        | 1        |
| <b>Control Section</b>                                |   |          |          |
| Sister Tutor  | 2   | 2        | Nil      |
| Health Visitor  | 9   | 6        | 3        |
| Draughtsman   | 1   | 1        | Nil      |
| <b>Bacteriology Section</b>                           |   |          |          |
| Lab Technician  | 12  | 12       | Nil      |
| Lab Assistant   | 2   | 2        | Nil      |
| <b>X-ray Section</b>                                  |   |          |          |
| X-ray Technician                                      | 6   | 5        | 1        |
| <b>Sociology Section</b>                              |   |          |          |
| Social Worker   | 1   | 1        | Nil      |
| <b>TB &amp; HIV Section</b><br>(formed in March 2000) | One Sr. Social Investigator & One Social Worker are re-deployed from Sociology section. |          |          |
| <b>GROUP 'C' : TRANSPORT SECTION</b>                  |   |          |          |
|   | <b>S</b>  | <b>P</b> | <b>V</b> |
| Transport Supervisor                                  | 1   | 1        | Nil      |
| Mechanical Supervisor                                 | 1   | 1        | Nil      |
| Driver Mechanic                                       | 2   | 1        | 1        |
| Driver  | 15  | 14       | 1        |
| <b>GROUP 'C' : STORES &amp; HOSTEL</b>                |   |          |          |
|   | <b>S</b>  | <b>P</b> | <b>V</b> |
| Store Keeper  | 1   | 1        | Nil      |
| Hostel Warden   | 1   | 1        | Nil      |
| <b>GROUP C : MINISTERIAL STAFF</b>                    |   |          |          |
|   | <b>S</b>  | <b>P</b> | <b>V</b> |
| Head Clerk  | 1   | 1        | Nil      |
| Stenographer Gr. I                                    | 1   | 1        | Nil      |

| <b>GROUP C : MINISTERIAL STAFF</b> |   |     |     |
|------------------------------------|---|-----|-----|
| Stenographer Gr. II                | 2 | 2   | Nil |
| Stenographer Gr. III               | 3 | 3   | Nil |
| UDC                                | 8 | 7   | 1   |
| LDC                                | 9 | 9   | Nil |
| Junior Hindi Translator            | 1 | Nil | 1   |
| Hindi Typist                       | 1 | Nil | 1   |
| Telephone Operator                 | 1 | 1   | Nil |
| Gestetner Operator                 | 1 | 1   | Nil |

| <b>GROUP D : MINISTERIAL STAFF</b> |          |          |          |
|------------------------------------|----------|----------|----------|
|                                    | <b>S</b> | <b>P</b> | <b>V</b> |
| Lab Attendant                      | 7        | 6        | 1        |
| Animal Attendant                   | 5        | 3        | 2        |
| Field Assistant                    | 2        | 2        | Nil      |
| Dark Room Attendant                | 2        | 2        | Nil      |
| Daftry                             | 1        | 1        | Nil      |
| Chowkidar                          | 7        | 5        | 2        |
| Gardener                           | 1        | 1        | Nil      |
| Helper                             | 1        | 1        | Nil      |
| Safaiwala                          | 10       | 10       | Nil      |
| Cook                               | 10       | 8        | 2        |
| Bearer                             | 1        | 1        | Nil      |
| Peon                               | 21       | 20       | 1        |

**TOTAL STAFF IN EACH GROUP**

| <b>Sl. No.</b> | <b>Category</b>          | <b>Sanctioned (S)</b> | <b>Positioned (P)</b> | <b>Vacant</b> |
|----------------|--------------------------|-----------------------|-----------------------|---------------|
| 1.             | Group 'A'                | 17                    | 12                    | 5             |
| 2.             | Group 'B' (Gazetted)     | 4                     | 1                     | 3             |
| 3.             | Group 'B' (Non Gazetted) | 11                    | 4                     | 7             |
| 4.             | Group 'C'                | 108                   | 94                    | 14            |
| 5.             | Group 'D'                | 68                    | 60                    | 8             |
|                | <b>Total</b>             | <b>208</b>            | <b>171</b>            | <b>37</b>     |

### **3. FINANCIAL OUTLAY & EXPENDITURE**

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The budget allocation from the Ministry for NTI under Plan and Non-plan Schemes and the expenditure for the last three years (1999-2000 to 2001-2002) are shown below:

Revenue generated by the Institute for the Government is also given for the year 2001-02.

#### **PLAN**

| <b>Year</b>        | <b>Budget allocation (Rs)</b> | <b>Total expenditure (Rs)</b> |
|--------------------|-------------------------------|-------------------------------|
| <b>1999-2000</b>   | <b>30,01,000</b>              | <b>30,02,000</b>              |
| <b>2000-2001</b>   | <b>86,21,000</b>              | <b>86,10,000</b>              |
| <b>2001 - 2002</b> | <b>1,61,00,000</b>            | <b>1,49,79,000</b>            |

#### **NON PLAN**

| <b>Year</b>        | <b>Budget allocation (Rs)</b> | <b>Total expenditure (Rs)</b> |
|--------------------|-------------------------------|-------------------------------|
| <b>1999-2000</b>   | <b>2,09,25,000</b>            | <b>2,04,30,000</b>            |
| <b>2000-2001</b>   | <b>2,08,68,000</b>            | <b>2,10,38,000</b>            |
| <b>2001 - 2002</b> | <b>2,32,00,000</b>            | <b>2,10,12,000</b>            |

#### **REVENUE GENERATED**

| <b>Year</b>        | <b>Amount generated from various sources (Rs)</b> |
|--------------------|---|
| <b>2001 - 2002</b> | <b>1,40,760</b>                                   |

## 4. COMPUTER FACILITY

### I Hardware Configuration

| Sl. No.                  | Computer / Printer  | Qty. in Nos. | Operating system      | Installed at |
|--------------------------|---|--------------|-----------------------|--------------|
| 1                        | <b>I. Server :</b><br>Intel Pentium IV/1.5 GHz/1850 Mother Board/128 MB RD RAM/ 1.44 MB FDD/ 18.3 GB SOSI HDD/52x CD ROM drive/HP CD Writer 8200 series(External)/ 15" Colour Monitor/2SP/1 PP/AGP Card100/100/ MBPS Ethernet Card ATX 440 P IV cabinet/Windows compatible Key board with Mouse | 1            | Novell Netware V 4.01 | Statistics   |
| 2                        | <b>Nodes :</b><br>Intel Pentium III/866 MHz/128 MB RAM/ 1.44 MB FDD/1.2MB FDD/8.2 GB HDD/ 15" Colour Monitor/52x CD ROM drive/ 2SP/ 1 PP/104 Keys Key board 3 Button Mouse cabinet ATX 100/100 MBPS Ethernet card   | 3            | Novel Netware V 4.01  | Statistics   |
| 3                        | Pentium III/500 MHz/128 MB RAM/1.44 MB FDD/ 8.2 GB HDD/14" Colour Monitor/2 SP/1 PP/ Samsung 52x CD-ROM Drive/ Windows compatible Key board with Mouse  | 1            | Novel Netware V 4.01  | Statistics   |
| 4                        | Pentium III/500 MHz/128 MB RAM/1.44 MB FDD/ 14" Colour Monitor/2 SP/1 PP/ Windows compatible Key board with Mouse   | 1            | Novel Netware V 4.01  | Statistics   |
| <b>Stand alone PCs :</b> |   |              |                       |              |
| 5                        | Pentium III/800 MHz/128 MB RAM/ 1.44 MB FDD/ 20 GB HDD/Pioneer DVD-ROM Drive/HP CD-Writer 9100 Series/15" Colour Monitor/2 SP/1 PP/ Multimedia Key board with Mouse/2 Multimedia speakers   | 1            | Windows' Me           | Statistics   |
| 6                        | Intel Pentium(r)-MMX/16 MB RAM/ 1.44 MB FDD/2.1 GB HDD/ 14" Colour Monitor/2SP/ 1 PP/ Windows compatible Key board with Mouse   | 1            | Windows' Me           | Statistics   |

| <b>Sl. No.</b> | <b>Computer / Printer</b>  | <b>Qty. in Nos.</b> | <b>Operating system</b> | <b>Installed at</b>            |
|----------------|--|---------------------|-------------------------|--------------------------------|
| 7              | Compaq Presario 3200M2/ Intel Pentium III/ 933 MHz with 256 KB L2 Cache/ 128 MB SD RAM/20 GB Ultra EMA HDD/ 48x CD ROM Drive/ 56 KBPS Fax/Data Modem/ 15" Digital Monitor/ 1.44 FDD/ Platinum Speakers/ 2PC Expansion Slots/ USB Internet Keyboard/ Internet Scroll Mouse  | 1                   | Windows' Me             | Statistics                     |
| 8              | Intel Pentium –MMX/200 MHz/48 MB RAM/ 1.44 MB FDD/2.1GB HDD/14" Colour Monitor/2SP/ 1 PP/ Windows compatible Key board with Mouse  | 1                   | Windows' 98             | Statistics                     |
| 9              | Intel Pentium –MMX/200 MHz/32 MB RAM/ 1.44 MB FDD/2.1 GB HDD/14" Colour Monitor/2SP/ 1 PP/ Windows compatible Key board with Mouse   | 1                   | Windows' 98             | Statistics                     |
| 10             | Pentium II/350 MHz/32 MB RAM/ 1.44 & 1.22 MB FDD/ 4.2 GB HDD/HP CD Writer Plus, 8200 series/14" Colour Monitor/2 SP/1 PP/Windows compatible Key board with mouse   | 1                   | Windows' 95             | Statistics                     |
| 11             | HP Brio- Pentium III/ 550 MHz/ 64 MB RAM/ 1.44 MB FDD/ 8.5 GB HDD/ 48x CD ROM/ 14" colour monitor/ HP 101/102 key board/ PS/2 mouse  | 1                   | Windows' 95             | Stenographers pool             |
| 12             | Compaq Presario 3200M2/ Intel Pentium III/ 933 MHz with 256 KB L2 Cache/ 128 MB SD RAM/ 20 GB Ultra EMA HDD/ 48x CD ROM Drive/ 56 KBPS Fax/Data Modem/ 15" Digital Monitor/ 1.44 FDD/ Platinum Speakers/ 2PC Expansion Slots/ USB Internet Keyboard/ Internet Scroll Mouse | 1                   | Windows' Me, 2000       | X-Ray                          |
| 13             | Intel Pentium-III/ 10.2 GB HDD/ 64 MB RAM with 3½" floppy drive/ CD drive  | 1                   | Windows' 98             | Library                        |
| 14             | Pentium-III /733 MHz/128 MB RAM/ 10.2 GB Hard disk AGP with 4 MB RAM/ 3½ FDD / 52x CD drive/ 15" colour monitor /32 bit Ethernet Card/HP CD writer-80200 I/ 2 SP /1 P P  | 1                   | Windows' 98             | Library with internet facility |

| <b>Sl. No.</b> | <b>Computer / Printer</b>   | <b>Qty. in Nos.</b> | <b>Operating system</b> | <b>Installed at</b>            |
|----------------|---|---------------------|-------------------------|--------------------------------|
| 15             | Pentium III/ 933 MHz/Intel 815 E chipset/ 128 MB SD RAM/20 GB Hard disk/3.5" floppy drive/internal CD writer/15" colour monitor   | 1                   | Windows' 98             | Library                        |
| 16             | Compaq Presario 3200 MHz Pentium III/ 933 MHz/256 KB LZ cache/128 MB SD RAM/20 GB ultra DMA HDD with internal modem/3.5" floppy & CD drives   | 1                   | Windows' 98             | Library with Internet facility |
| 17             | Compaq Presario 3600M Intel Pentium IV/1.5 GHz Processor with 256 KB Integrated 1.2 Advanced Transfer Cache/123 MB Sync Dram/20 GB Ultra DMA Hard Driver/ DVD-ROM Drive/56 KBPS ITV V.90' DATA/FA MODEM/15" Digital Color Monitor/ 1.4 FDD/ Intel 845 AGP - 30 Graphics Accelarkar/11 MB Video Memory/MPEG 2 DIGITAL Video play back/JBL Platinum Speakers/ 2 pet expansions Share USB/ internet Keyboard with Scroll Mouse | 1                   | Windows' XP             | Control                        |
| 18             | Compaq Presario 3200M2/ Intel Pentium III/ 933 MHz with 256 KB L2 Cache/ 128 MB SD RAM/ 20 GB Ultra EMA HDD/ 48x CD ROM Drive/ 56 KBPS Fax/Data Modem/ 15" Digital Monitor/ 1.44 FDD/ Platinum Speakers/ 2PC Expansion Slots/ USB Internet Keyboard/ Internet Scroll Mouse  | 1                   | Windows' Me             | Control                        |
| 19             | Pentium III/450 MHz/32 MB RAM/1.44 FDD/ 4.2 GB HDD/14" Colour Monitor/16 Bit Ethernet Card/48x CD Drive with multimedia kit/2SP/1 PP  | 1                   | Windows' 95             | Bacteriology                   |
| 20             | Intel Pentium /133 MHz/16 MB RAM/1.22 & 1.44 FDD/14" Colour Monitor/1.2 GB HDD/32 Bit Ethernet Card/24x CD Drive with multimedia kit  | 1                   | Windows' 95             | Bacteriology                   |
| 21             | Intel Celeron / 300 MHz / 132 MB RAM / 1.44 FDD / 14" colour monitor / 2.1 GB HDD / 32 bit Ethernet card  | 1                   | Windows' 95             | Bacteriology                   |
| 22             | Pentium II/350 MHz/32 MB RAM/ 1.44 MB FDD/1.22 MB FDD/2.1 GB HDD/14" Colour Monitor/2SP/1 PP/ Windows compatible Key board with Mouse   | 1                   | Windows' 95             | Training                       |
| 23             | Intel Pentium II/350 MHz/32 MB RAM/ 1.44 MB FDD/4.2 GB HDD/14" Colour Monitor/ 2SP/1 PP/ Windows compatible Key board with Mouse  | 1                   | Windows' 95             | Accounts                       |

| <b>Sl. No.</b> | <b>Computer / Printer</b>   | <b>Qty. in Nos.</b> | <b>Operating system</b> | <b>Installed at</b>                     |
|----------------|---|---------------------|-------------------------|---|
| 24             | Intel Pentium III/933 MHz/128 MB RAM/1.44 MB FDD/20 GB HDD/52x CD ROM drive/14" Colour Monitor/ 2SP/ 1 PP/ Multimedia Key board with Scroll Mouse   | 1                   | Windows' 95             | Accounts                                |
| 25             | Intel Pentium II MMX/32 MB RAM/1.44 MB FDD/4.2 GB HDD/14" Colour Monitor/2SP/1 PP/ Windows compatible Key board with Mouse                          | 1                   | Windows' 95             | Establishment                           |
| 26             | Intel Pentium III/550 MHz/32 MB RAM/1.44 MB FDD/10.2 GB HDD/50x CD ROM drive/14" Colour Monitor/ 2SP/ 1 PP/ Windows compatible Key board with Mouse | 1                   | Windows' 95             | Establishment                           |
| 27             | Intel Pentium II/350 MHz/32 MB RAM/1.44 MB FDD/4.2 GB HDD/14" Colour Monitor/ 2SP/1 PP/ Windows compatible Key board with Mouse                     | 1                   | Windows' 95             | Draughtsman room                        |
| 28             | Intel Pentium III/550 E MHz/63 MB RAM/ 1.44 MB FDD/20 GB HDD/50x CD ROM drive/14" Colour Monitor/2SP/1 PP/ Windows compatible Key board with Mouse  | 1                   | Windows' 95             | Epidemiology                            |
| 29             | Intel(R) Celeron(TM) MMX/300 A MHz/32 MB RAM/ 1.44 MB FDD/2.1 GB HDD/ 14" Colour Monitor/ 2SP/ 1 PP/ Windows compatible Key board with Mouse        | 1                   | Windows' 95             | Epidemiology                            |
| 30             | Intel Pentium S/100 MHz/32 MB RAM/1.44 MB FDD/1.2 GB HDD/14" Colour Monitor/ 2SP/1 PP/ Windows compatible Key board with Mouse                      | 1                   | Windows' 98             | Epidemiology                            |
| 31             | Pentium III-500 MHz/64 MB RAM/8.4 GB HDD/15" Colour Monitor AGP card with 4 MB RAM/1.44 MB FDD/2 S P/ 1 PP/48x CD Drive                             | 1                   | Windows' 95             | Stores                                  |
| 32             | Pentium MMX/200 MHz/32 MB RAM/2.1 GB HDD/1.44 FDD / HP CD Writer (Internal) 8200i/2SP/1PP/14" Colour monitor  | 1                   | Windows' 95             | Dr VH Balasangameshwara, CMO(NFSG) Room |

| <b>Sl. No.</b>               | <b>Computer / Printer</b>  | <b>Qty. in Nos.</b> | <b>Operating system</b> | <b>Installed at</b>                  |
|------------------------------|--|---------------------|-------------------------|--------------------------------------|
| 33                           | Compaq Presario 3200M2/ Intel Pentium III/ 933 MHz with 256 KB L2 Cache/ 128 MB SD RAM/20 GB Ultra EMA HDD/48x CD ROM Drive/56 KBPS Fax/Data Modem/15" Digital Monitor/1.44 FDD/Platinum Speakers/2PC Expansion Slots/USB Internet Keyboard/ Internet Scroll Mouse   | 1                   | Windows' Me             | Director's Room                      |
| <b>LAPTOP Computers :</b>    |  |                     |                         |                                      |
| 1                            | IBM Think pad-Intel Pentium Processor/128 MB SD RAM/20 GB HDD/1.44 MB FDD/15" SFT Screen/ 16 MB VRAM/10x 100 Ethernet Card/8x DVD ROM/Internal Li-ion recharge battery/85 key keyboard/1 SP/1 PP/ Integrated track point III pointing device with leather carry case | 2                   | Windows' 98             | Statistics Section and with Director |
| 2                            | IBM Think pad-2626-Intel Pentium MMX/233 MHz/32 MB RAM/3.2 GB HDD/1.44 FDD/ CD ROM/1 SP/ 1 PP/ Integrated track point  | 1                   | Windows' 95             | Training                             |
| <b>DOT Matrix Printers :</b> |  |                     |                         |                                      |
| 1                            | Wipro LQ1050+ DX   | 1                   | -                       | Statistics                           |
| 2                            | TVSE MSP-155 Dot Matrix  | 1                   | -                       | Statistics                           |
| 3                            | Wipro LQ1050/132 col./300 cps  | 1                   | -                       | X-Ray                                |
| 4                            | Fujitsu- DL 3400 Dot Matrix Printer, 132 col., 24 pin, 268 CPS   | 1                   | -                       | Library                              |
| 5                            | TVSE 245 MSP, Dot Matrix Printer   | 1                   | -                       | Library                              |
| 6                            | Epson LX-300 DMP: 9 Pin, 80 col, 264 CPS.  | 1                   | -                       | Library                              |
| 7                            | EPSON CQ 132, column printer   | 1                   | -                       | Bacteriology                         |
| 8                            | TVSE/MSP 245 dot matrix printer  | 1                   | -                       | Bacteriology                         |
| 9                            | WIPRO LQ1050 with sharer ESC P2  | 1                   | -                       | Control                              |
| 10                           | EPSON LQ 1050 plus DX  | 1                   | -                       | Training                             |
| 11                           | TVS MSP 345 Classic  | 1                   | -                       | Accounts                             |
| 12                           | WIPRO LQ1050+ DX   | 1                   | -                       | Establishment                        |
| 13                           | WIPRO LX 800   | 1                   | -                       | Draughtsman room                     |



| <b>Sl. No.</b>                     | <b>Computer / Printer</b>                     | <b>Qty. in Nos.</b> | <b>Operating system</b> | <b>Installed at</b> |
|------------------------------------|---|---------------------|-------------------------|---------------------|
| 14                                 | EPSON LQ1070+ DX                              | 1                   | -                       | Epidemiology        |
| 15                                 | WIPRO EX-1050                                 | 1                   | -                       | Epidemiology        |
| 16                                 | TVSE MSP 345-138 col Dot Matrix printer       | 1                   | -                       | Stores              |
| <b>Laser Jet Printers :</b>        |   |                     |                         |                     |
| 1                                  | HP Laser Jet 6P                               | 1                   | -                       | Statistics          |
| 2                                  | HP 6 L (Laser jet Printer)                    | 1                   | -                       | Library             |
| <b>Ink Jet Printers :</b>          |   |                     |                         |                     |
| 1                                  | HP 860C Series Printer                        | 1                   | -                       | Statistics          |
| 2                                  | Epson Stylus 480 printer                      | 1                   | -                       | Statistics          |
| 3                                  | HP 860 C series Printer                       | 1                   | -                       | Directors Room      |
| 4                                  | HP Deskjet 820 C                              | 1                   | -                       | Stenographers pool  |
| <b>Scanners &amp; CD Writers :</b> |   |                     |                         |                     |
| 1                                  | HP Scanjet 5100C Scanner                      | 1                   | -                       | Statistics          |
| 2                                  | HP Scan jet 5300 -C Scanner                   | 1                   | -                       | Library             |
| 3                                  | HP CD Writer 8200e series                     | 1                   | -                       | Statistics          |
| 4                                  | HP external CD Writer                         | 1                   | -                       | Library             |
| 5                                  | HP CD Writer 8200e series                     | 1                   | -                       | Epidemiology        |
| 6                                  | HP CD Writer 7500e series                     | 1                   | -                       | Bacteriology        |
| 7                                  | Creative - Infra 5400, External CD-ROM drive  | 1                   | -                       | Statistics          |
| <b>II. Zip Drives :</b>            |   |                     |                         |                     |
| 1                                  | <b>Iomega -250 MB parallel port Zip Drive</b> | 1                   | -                       | Bacteriology        |
| <b>III. LCD Projector :</b>        |   |                     |                         |                     |
| 1                                  | Epson-5500 LCD Projector                      | 1                   | -                       | Training            |

## II. Software:

|    |  |
|----|--|
| 1  | Dos Ver 6.2  |
| 2  | Window 95  |
| 3  | Window 98  |
| 4  | Windows ME   |
| 4  | Microsoft Office 1997                                |
| 5  | SPSS/PC+ V 4.0                                       |
| 6  | Quattro Pro V 4.0                                    |
| 7  | dBase IV V2.0  |
| 8  | Fox Pro V 2.6  |
| 9  | Word Star V 6.0                                      |
| 10 | Worldlord Super                                      |
| 11 | Xerox Ventura - V3.0                                 |
| 12 | Stellar Data Recovery                                |
| 13 | Mcafee Antivirus Software 5 users                    |
| 14 | CDS/ISS (Library Software)                           |
| 15 | Epi Info 6.22  |
| 16 | Epi info 2000  |
| 17 | Probability & Statistics - Tutor CD                  |
| 18 | Akruthi Hindi Software                               |
| 19 | LEAP Hindi Software                                  |
| 20 | ABBY Fine Reader OCR software                        |
| 21 | Microsoft Visual Studio Professional 6.0             |
| 22 | Novel NetWare V 4.01 -10 users                       |
| 23 | Slim ++ ( Library Automation software with web OPAC) |

INTERNET facilities are provided in the  
Library and Director's office  
e-mail address: ntiindia@blr.vsnl.net.in

### ***Extension of Internet facility:***

One more computer was installed in the library hall to extend Internet facilities to the faculty, staff members and trainees. Through this, all the users can now browse the Internet whenever they desire. An aluminum cabin was fixed in the library hall to house the computers.

## 5. FUNCTIONS OF ADMINISTRATIVE DIVISIONS

### ESTABLISHMENT

- i. Upkeep of office.
- ii. Recruitment, posting, transfers, retirements and all other service matters.
- iii. Maintenance of hostel facilities, garden, lawn etc.
- iv. Providing secretarial assistance and Group 'D' assistance to all the sections.
- v. Attending to legal matters.
- vi. Correspondence with Directorate General of Health Services (DGHS), on administrative matters & other agencies.
- vii. Attending to administrative matters of the Institute.

### Activities during the period under report.

| Sl. No.                             | Name  | Designation      | Date       |
|-------------------------------------|---|------------------|------------|
| <b>Recruitment</b>                  |   |                  |            |
| 1.                                  | Smt S Lakshmi Devi  | Safaiwala        | 18-Apr-01  |
| 2.                                  | Sri Narasimhamurthy   | Safaiwala        | 25-Apr-01  |
| 3.                                  | Sri Raghunandan   | Lab Technician   | 2-Jul-01   |
| 4.                                  | Sri S Kumar   | Chowkidar        | 8-Aug-01   |
| 5.                                  | Smt SR Kusuma   | Lab Technician   | 20-Aug-01  |
| 6.                                  | Sri Suhail Pasha  | Field Assistant  | 22-Oct-01  |
| 7.                                  | Sri Nandish Prasad  | Computer         | 12-Nov-01  |
| 8.                                  | Smt Shantha Kumari  | Steno Grade III  | 12-Nov-01  |
| 9.                                  | Sri T Lokesh  | Group D          | 21-Nov-01  |
| 10.                                 | Smt SL Nagarathna   | LDC              | 18-Dec-01  |
| 11.                                 | Sri TN Nagaraju   | Gardener         | 9-Jan-02   |
| 12.                                 | Sri Narayana Rao  | LDC              | 23-Jan-02  |
| 13.                                 | Sri J Tharuna Kumar   | Peon             | 4-Feb-02   |
| <b>Deputation</b>                   |   |                  |            |
| 1.                                  | Sri A Ramesh  | UDC              | 18-Oct-01  |
| <b>Transfer</b>                     |   |                  |            |
| 1.                                  | Sri P Sangeet Kumar<br>(From Field Survey Unit(CBHI) Regional Office for H & FW Kendriya Sadan, Koramangala, Bangalore) | Sr. Statistician | 10-Jan-02  |
| <b>Retirement on Superannuation</b> |   |                  |            |
| 1.                                  | Smt Aleyamma Korah  | Sister Tutor     | 30-Apr-01  |
| 2.                                  | Sri P James   | Lab Technician   | 31-July-01 |
| 3.                                  | Sri V Muniyappa   | DRA              | 31-Oct-01  |
| 4.                                  | Dr (Ms) P Jagota  | Director         | 31-Jan-02  |
| 5.                                  | Sri VV Narayana kutty   | Cook             | 28-Feb-02  |
| <b>Voluntary Retirement Scheme</b>  |   |                  |            |
| 1.                                  | Sri Chennappa   | Chowkidar        | 01-Apr-01  |
| 2.                                  | Sri P Perumal   | Steno Grade III  | 01-June-01 |

| Sl. No.            | Name                 | Designation               | Date       |
|--------------------|----------------------|---------------------------|------------|
| 3.                 | Sri KM Vasudevan     | Chief Statistical Officer | 02-July-01 |
| <b>Death</b>       |                      |                           |            |
| 1.                 | Ms S Uma             | Group                     | 11-June-01 |
| 2.                 | Sri DT Giri          | Gardener                  | 2-Aug-01   |
| 3.                 | Sri Basudev Verma    | Field Investigator        | 19-Oct-01  |
| 4.                 | Sri Srinivasa murthy | Group D                   | 07-Mar-02  |
| <b>Resignation</b> |                      |                           |            |
| 1.                 | Smt S Padmavathi     | UDC                       | 23-Nov-01  |

## ACCOUNTS

- i. Preparation of annual budget proposal, estimates and performance budget.
- ii. Drawing and disbursement of salaries, TA, other allowances and expenses.
- iii. Payment for purchases.
- iv. Arrangement and payment of advances like GPF, Festival, TA, Vehicle etc and maintenance of records.
- v. Calculation of income tax in respect of Group A, B and C officials and its submission to income tax department annually.

## STORES

- i. Purchases and supply of store items.
- ii. Maintenance of stores ledger/stock.
- iii. Maintenance of electrical and electronic equipments.
- iv. Disposal of condemned items received from different sections as per Government procedure.
- v. Replenishment of stores stock of general requirements in anticipation of demand for immediate supply to sections.

## Activities:

Stock Verification of various sections of the Institute was done during the year 2001-02 by the following faculty:

- a) Stores Section
  - Vehicle spares : Dr (Ms) Sophia Vijay, Sr. TB Specialist
  - Laboratory items : Dr VK Chadha, Sr. Epidemiologist
  - X-ray stores : Dr Preetish S Vaidyanathan, SMO
  - Chemicals & Drugs : Dr B Ramakrishna Goud
  - General stores : Mr. KP Unnikrishnan, Chief Statistical Officer
  - Stationery items : Ms. PA Mini, Statistical Officer
- b) AMRU : Dr L Suryanarayana, CMO(NFSG)
- c) Transport Section : Dr (Ms) Sophia Vijay, Sr. TB Specialist
- d) Hostel : Dr VH Balasangameshwara, CMO (NFSG)

- e) Library : Dr B Mahadev ,CMO(NFSG)  
f) X-ray Section : Dr (Ms) Chitra Nagaraj, CMO  
g) Laboratory : Dr Preetish S Vaidyanathan, SMO

## **TRANSPORT**

- i. Procurement and maintenance of fleet of vehicles.
- ii. Providing vehicles for field visits, training programmes and other official purposes.
- iii. Maintenance of all documents pertaining to the registration of vehicles.
- iv. Processing of papers for condemnation and disposal of vehicles.

## **HOSTEL**

- i. Providing boarding and lodging facilities for medical and paramedical trainees and visitors from DGHS / health departments.
- ii. Supervision and control of chowkidars & safaiwalas.
- iii. House keeping.

## **6. BUILDING DEVELOPMENT & MAINTENANCE WORK**

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The Institute took up several building and campus maintenance works during the period under report. These works were executed through Civil and Electrical wings of CPWD, utilising the budget of Rs.70 lakhs, provided to the Institute under PLAN – Major Works.

An amount of Rs.13, 24, 938/- (inclusive of both Civil and Electrical works) has also been utilised out of the funds allocated under the account head – Machinery and Equipment, for providing an Incinerator for Bio-medical waste at AMRU.

A few civil works were taken up by CPWD under AR & M account. The following is the list of works:

### **CIVIL**

1. Providing Lift to 'PV Benjamin Block' (Civil portion of the work).
2. Providing collapsible gate to eastern side of 'AVALON' corridor.
3. Alterations to rooms for making Board Rooms in 'Robert Koch Block'.
4. Providing pressed clay tiles over the terrace of 'Robert Koch Block'.
5. Renovation of toilets in Para Medical Hostel.
6. Providing GI pipeline to garden from open well.
7. Distempering rooms and corridors of 'AVALON' Building.
8. Renovation of rear side toilets of 'Robert Koch Block'.
9. Conversion of III floor rooms of 'PV Benjamin Block' as Guest Rooms.
10. Resurfacing Cement Concrete road in front of 'Robert Koch Block'.
11. Repainting Garden House.
12. Renovation of open well.
13. Providing RCC slab with rag bolts over the car washer tank and miscellaneous works in Transport Section.
14. Bio-safety level III Lab. Facility (Turnkey project to be executed by National Dairy Development Board (NDDB), Ministry of Agriculture, Govt. of India) Funds partly provided in the previous financial year and the balance of Rs.11, 92, 757/- provided in the current financial year for completing the project.
15. Distempering and water proof cement paint to several buildings, viz., 'Robert KochBlock', Stores Block, Automobile and X-ray workshop, Para Medical Hostel, Six blocks of NTI staff quarters, Garages, AMRU building, and curbstone painting were carried out under AR & M account of CPWD.

16. Adjoining walls in the library Annexe were demolished to provide one big hall to accommodate printing section that was hitherto in the first floor of the P.V. Benjamin block. Now the library annexe has a floor area of 3000 sq. ft.

### **ELECTRICAL**

17. Providing Lift to 'PV Benjamin Block'.

18. Providing 125 KVA DG set with 'Acoustic' housing to meet the requirement of entire campus except NTI staff quarters.

19. Rewiring a portion of AVALON building.

20. Providing 3 Phase power supply to multi-purpose X-ray unit in old Machine room.

21. Shifting of 4 KVA UPS and providing additional power points through UPS.

22. Rewiring Automobile workshop & Additional wiring in PV Benjamin Block, Submersible pump to sump and installation of three fountains and miscellaneous works.

## 7. COMPOSITION AND FUNCTIONS OF COMMITTEES

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### A. *Head of Sections*

Dr L Suryanarayana, Training Section; Control Section upto October 2001

Dr (Ms) Sophia Vijay, Control Section & X-ray section from Oct 2001; Transport Section upto October 2001

Dr VK Chadha, Epidemiology Section and Library & Publication

Dr B Mahadev, Bacteriology Section & AMRU till 12<sup>th</sup> March 2002

Dr VH Balasangameshwara, TB & HIV Section & I/C Bacteriology Section & AMRU from 13<sup>th</sup> March 2002

Mr KM Vasudevan, Statistics & Monitoring Section & DDO upto 2<sup>nd</sup> July 2001

Mr KP Unnikrishnan, Statistics & Monitoring Section from 2<sup>nd</sup> July 2001

Dr Preetish S Vaidyanathan, Transport Section from August 2001; X-Ray Section upto October 2001

Dr VK Challu, Stores Officer upto 28<sup>th</sup> January 2002

Mr P Sangeeth Kumar, Stores Officer from 28<sup>th</sup> January 2002

- B.** Various committees have been formed under the chairmanship of senior officers to examine the relevant matters and to submit recommendations to the Director to take decisions on various matters. The functions and the composition of various committees are described below:

#### 1. *Technical Co-Ordination Committee*

Director is the chairperson of this committee and all Gazetted Officers are its members. This committee meets frequently to ensure adequate inter-disciplinary discussions, exchange of information, plan and coordinate research activities. Whenever a new research activity is proposed to be undertaken, it is discussed threadbare among the members. It also reviews progress of fieldwork & the draft report of the research study before it is presented in the conferences/published in the journals. It reviews the contents and scope of the training courses conducted by the institute periodically.

#### 2. *Purchase Committee*

*Chairperson:* Dr VH Balasangameshwara, CMO(NFSG) till 31<sup>st</sup> July 2001; Dr L Suryanarayana, CMO(NFSG) from 31<sup>st</sup> July 2001. *Co-chairperson:* Mr KP Unnikrishnan, CSO, *Members:* Mr SJ Savanur till July 2001; Dr (Ms) Chitra Nagaraj, CMO till 15<sup>th</sup> February 2002; Dr Preethish S Vaidyanathan, SMO & Miss P A Mini, SO.

**Functions** – Opening of quotations/tenders and their scrutiny, furnish recommendations to the Director for purchase of store items.

#### 3. *Library Committee*

*Chairperson:* Dr (Ms) P Jagota, Director, *Members:* Dr VK Chadha, Sr. Epidemiologist; Dr B Mahadev, CMO(NFSG); *Ex.officio Secretary:* Ms Sudha S Murthy, Sr. Librarian.

**Functions** - To regulate the subscriptions for periodicals, acquisition of books, user oriented activities and promote dissemination of information



#### **4. Editorial Committee**

*Editor:* Dr (Ms) P Jagota, Director, *Members:* Dr VK Chadha, Sr. Epidemiologist; Dr VH Balasangameshwara, CMO(NFSG); Dr B Mahadev, CMO(NFSG); Dr (Ms) Chitra Nagaraj, CMO from 18<sup>th</sup> April 2001; Mr S Ravindra, X-ray Technician (XT) and Mr Vishweswara Sharma, Computer; *Publication Secretary:* Ms Sudha S Murthy, Sr Librarian.

**Functions** - Responsible for the publication activities of the Institute, especially NTI Bulletin.

#### **5. Website Committee**

*Chairperson:* Dr (Ms) Chitra Nagaraj, CMO, *Members:* Ms. Sudha S Murthy, Sr. Librarian; Mr. Shashidar J Savanur, SO & Mr. Jitendra, Computer.

**Functions** - Preparation and Launching of Website and to update the website from time to time.

#### **6. NTI Staff Quarters Allotment Committee**

*Chairperson:* Dr L Suryanarayana, CMO(NFSG) till 24<sup>th</sup> Oct 2001; Dr VK Chadha, Sr. Epidemiologist from 24<sup>th</sup> Oct 2001, *Members:* Mr KM Vasudevan, Chief Statistical Officer till July 2001; Dr Preetish S Vaidyanathan, SMO from July 2001 & Ms VN Saroja, Sr. PHN.

**Functions** - Scrutiny of waiting list, applications & recommendations for allotment of quarters.

#### **7. Rajbhasha Implementation Committee**

*Chairperson:* Mr Shashidhar J. Savanur, Sr. Statistical Officer till July 2001; Dr VK Challu, Veterinarian from July 2001, *Members:* Ms VN Saroja, Sr.PHN; Mr S Ravindra, XT; Mr CM Ganapathy, Mechanical Supervisor; Ms S Susheela Rani, Head Clerk; Mr R Rajan, LDC; Ms G Sumathi, Computer and Ms HT Mangala Gowri, LDC.

**Functions** - To promote the use of Rajbhasha and encourage the officials to learn and use Hindi language in official correspondence.

#### **Activities -**

- 1 Two Hindi Softwares Installed.
- 2 Officers of NTI attended
  - the II quarterly Meeting of TOLIC for 2001 and III quarterly meeting of 2001 at Central Power Research Institute, Government of India, Bangalore and
  - Conference on official languages.
- 3 The Following documents are translated:
  - Forms of Establishment Section.
  - Introductory pages of the document "Sociological aspects of TB".
  - Introductory pages of the document "Annual Report for 2000-2001".
  - Regular training time table.
- 4 **Literature Library:**  
To promote use of Hindi in the office, Director NTI initiated action to setup Hindi Literature Library on 5<sup>th</sup> May 2001.

Mr. V Siddharthan, Sr. Investigator; Mr. HS Mallikarjunaiah, Social Worker and Mr. Rajan, LDC, dealing Clerk were involved as a team to setup the Library. They have so far purchased 161 Hindi documents viz., Fiction, Dictionaries and Epics etc., worth Rs. 10,000/- and spent Rs. 500/- for two rubber stamps for the same purpose. This facility is open to the faculty, staff and trainees of NTI.

**8. NTI Campus Maintenance Committee**

*Chairperson:* Dr VK Challu, Veterinarian till 4<sup>th</sup> September 2001; Dr (Ms) Chitra Nagaraj, CMO from 4<sup>th</sup> September 2001, *Members:* Ms Aleyamma Korah, Sister Tutor till April 2001; Ms Victoria Lalitha, Health Visitor & Mr Stanley Jones, Hostel Warden.

**Functions** - To supervise the activities of the staff assigned with maintenance of the campus, its security and upkeep.

**9. Staff Quarters Welfare Committee**

*Chairperson:* Dr VH Balasangameshwara, CMO(NFSG) till March 2001; Dr VK Challu, Veterinarian from April to September 2001; Dr (Ms) Chitra Nagaraj, CMO from September 2001, *Secretary:* Mr BA Eswara, Health Visitor, *Treasurer:* Mr K Lakshminarayana, Group D, *Members:* Ms Kamala Rathnaswamy, Stenographer Gr II; Mr TR Thulasi, Telephone operator; Mr ME Babu, Gestetner Operator; Mr D Vijendran, Lower Division Clerk; Mr Kempiah, Laboratory Attendant & Mr K Patelappa, Chowkidar.

**Functions** - To attend to the welfare and grievances of staff members residing in the quarters.

**10. Staff Service Verification Committee**

*Chairperson:* Dr B Mahadev, CMO(NFSG), *Members:* Mr Shashidhar J. Savanur, Sr.Statistical officer till July 2001.

**Functions** - For reviewing the services of staff who attain the age of 50/55 and who have served more than 30 years under FR.56 (5).

**11. Staff Cadre Review Committee**

*Chairperson:* Dr B Mahadev, CMO (NFSG), *Members:* Dr (Ms) Sophia Vijay, Sr. TB Specialist & Mr KM Vasudevan, Chief Statistical Officer till July 2001.

**Functions** - To look into the staff structure cadre review.

**12. Technical Appraisal Committee**

*Chairperson:* Dr (Ms) P Jagota, Director, *Members:* Dr L Suryanarayana, CMO(NFSG); Dr B Mahadev, CMO(NFSG); Dr VK Challu, Veterinarian; Mr L Krishna Murthy, Accountant & Asst. Engineers, Civil and Electrical, CPWD.

**Functions** - To review the proposals and draw up its recommendations after prioritising the various requirements for building infrastructure etc., of NTI, Bangalore in relation to the funds available with reference to letters from Planning Commission & DGHS.

**13. Flag Hoisting Committee**

*Chairperson:* Dr B Mahadev, CMO(NFSG) till January 2002; Dr VH Balasangameshwara, CMO(NFSG) from January 2002, *Members:* Ms. Susheela Rani, Head Clerk; Mr. B A Eshwara, Health visitor; Mr Stanley Jones, Hostel Warden & Mr. ME Babu, Gestener Operator.

**Functions** - Daily hoisting of the National Flag as per Flag Constitution has been under taken from 2<sup>nd</sup> October 2000 at the NTI main gate. The Chowkidar on duty hoist the flag every day. The committee looks after the accurate hoisting of our tricolor flag.

**14. Sexual Harassment Committee**

*Chairperson:* Dr (Ms) Sophia Vijay, Sr. TB. Specialist, *Members:* Ms.Kamala Rathnaswamy, Stenographer Gr.II; Ms. Sujatha Sathyanarayana, UDC; Ms. Bhagirathi, LT & Ms. Rahelamma, UDC.

**Functions** - To look after the welfare and into the complaints from female Govt. Servants.

**15. Institutional Ethics Committee**

*Chairperson:* Justice V.S. Malimath, Former Chief Justice, Karnataka & Kerala High Court, Bangalore; *Members:* Sri T.P. Issar, IAS Retired, Bangalore; Sri B.S. Muddappa, IAS Retired, Bangalore; Dr Omprakash, Head of the Medicine Department, St. Martha's Hospital, Bangalore; Ms Brindha, M. Advocate, Bangalore; Dr K. Rudresh, Prof, Department of Medicine, M.S.Ramaiah Medical College, Bangalore; Dr Thelma Narayan, Community Health Cell, Bangalore; Dr S. Vijaya, Associate Prof. Department of Microbiology & Cell Biology, Indian Institute of Science, Bangalore and Director, NTI, Bangalore.

**Functions** - review of research protocols and give approval for the protocol after Ethical considerations.

**16. Institutional Animal Ethics Committee**

*Chairperson:* Dr (Ms) P Jagota, Director, NTI. *Members:* Ms Suparna Bakshi - Ganguly, Hon'ble Secretary, Compassion Unlimited Plus Action (CUPA), Bangalore; Ms Sanober Z. Bharucha, CPCSEA Nominee; Dr S. Vijaya, Associate Professor, Dept. of Microbiology & Cell Biology, IISc, Bangalore; Dr B. Mahadev, CMO(NFSG), NTI, Bangalore and Dr V.K. Challu, Veterinarian, NTI, Bangalore.

**Functions** - To discuss and approve ongoing and new research projects involving animal experimentation.

**17. Annual Report Committee for the year 2000-2001:**

*Chairperson:* Dr (Ms) Chitra Nagraj, CMO *Members:* Ms. Sudha Murthy, Sr. Librarian; Ms. V.N. Saroja, Sr. PHN & Ms. M.A. Sharada, SA.

**Functions-** To bring out the Annual Report of the Institute for the year 2000-2001.

**18. Committee for updating technical information on NTI Panels and Display charts:**

*Chairperson:* Dr Balasangameshwara, CMO(NFSG), *Members:* Ms. Sudha

S. Murthy, Sr.Librarian; Sri V Siddharthan, Sr. Investigator; Sri, HS Malikarjunaiah, Social Worker; Sri. BR Narayana Prasad, Draughtsman.

**Functions-** Updating Technical information on NTI Panels and Display charts.

**19. Other assignments:**

*Vigilance Officer:* Dr VK Chadha, Sr. Epidemiologist till 23<sup>rd</sup> October 2001, Dr B Mahadev, CMO(NFSG) from 24<sup>th</sup> October 2001.

*Grievance & Welfare Officer:* Dr B Mahadev, CMO(NFSG) till 23<sup>rd</sup> October 2001, Dr VK Chadha from 24<sup>th</sup> October 2001.

*Liasion Officer:* Dr VH Balasangameshwara, CMO(NFSG).

## **8. TECHNICAL ACTIVITIES DURING 2001-2002**

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### **EPIDEMIOLOGY SECTION**

#### ***Functions***

##### **i. Research**

- a) To carry out community based studies for assessment of TB situation and its trends in different parts of the country.
- b) To conduct other epidemiological studies that provide necessary inputs for formulation/reformulation of TB control strategy.

##### **ii. Training**

- a) To impart necessary knowledge and skills to state and district level TB workers in epidemiology of TB.
- b) Participation in regular training activities of the Institute.

##### **iii. Supervision**

- a) Field visits to research project areas.
- b) Field visits to NTP & RNTCP areas.

#### ***Major activities during the year***

- i) The National Sample Survey to estimate the Annual Risk of Tuberculous Infection in different parts of India (NSS – ARI): The fieldwork was organised and implemented under the supervision of officers and staff of epidemiology section. About 49,265 children from 9 districts were investigated during the year under report. So far, the fieldwork of the survey has been completed in North, South and West Zones. In the East zone, the fieldwork in one district is completed and is in progress in other two districts. Data entry and analysis is under progress.
- ii) The Sr. Epidemiologist prepared the protocols and work instructions for three collaborative studies between NTI and (a) DANTB, Orissa (b) DFID, Andhra Pradesh and (c) State TB cell, Kerala. The fieldwork for the study in Khammam district of Andhra Pradesh was initiated in December 2001 and the training of the field health staff for the survey in Orissa is in progress at NTI.
- iii) The Section staff participated in the training programmes on Epidemiological aspects of tuberculosis, presentation skills and health management to DTO's, paramedical staff, post graduate students, international fellows, etc.
- iv) Departmental selection committee selected one Data Entry Operator (Contractual) for the NSS-ARI Survey project of the Institute during March 2002: Dr V.H. Balasangameshwara, CMO (NFSG) was the Chairperson.
- v) Writing and review of research papers pertaining to epidemiological studies.

- vi) Interacted periodically with epidemiological officials of TRC, Chennai and others both at Bangalore and Chennai to discuss analysis of ARI data.
- vii) Provided technical guidance to Joint Director (TB) of Rajasthan, in August 2001, for conducting ARI survey.
- viii) Mr. Joydev Gupta, Field Investigator prepared a write-up viz., "Overcoming hurdles in field work" for publication in NTI Bulletin.
- ix) Mr. Sanjay Singh, Field Investigator prepared a write-up viz., "Some Field experience at Delhi NSS-ARI Survey" for publication in NTI Bulletin.
- x) Mr. Basudev Verma, Field Investigator prepared a write-up in Hindi viz., "Field experience at Delhi NSS-ARI" for publication in NTI Bulletin.

## **CONTROL SECTION**

### ***Functions***

#### ***i. Research***

- a) To formulate and evolve strategies for TB control programme after synthesizing the results of epidemiological and sociological studies and also conducting clinical trials on treatment for TB.
- b) To conduct operational studies related to case finding, treatment activities, modalities of management of TB patients under domiciliary treatment to reinforce the control programme.

#### ***ii. Training***

- a) Participation in regular training activities of the Institute.
- b) Participation in CMEs, Workshops & Seminars.

#### ***iii. Supervision***

- a) Field visits to research project areas.
- b) Field visits to NTP & RNTCP areas.

### **Major activities during the year**

- i. Preparation of Protocols, Supervision of the field work, Data Analysis & Preparation of papers for the presentation at conferences and publication pertaining to the following research studies were undertaken a) Treatment outcome of pulmonary Tuberculosis patients treated under RNTCP; b) Health seeking pattern and delay in Tuberculosis case finding process; c) Follow up of smear positive cases treated under DOTS in BMP; d) Implementation status of DOTS in India - Research cum action plan.
- ii. Officers & staff of the section participated in the regular training activities of NTP & RNTCP, Workshops, Seminars and CME programmes on TB control conducted within Bangalore and outside.
- iii. Supervisory visits were undertaken to monitor NTP/RNTCP in the respective

areas including appraisal visits.

- iv. Reviewed papers/articles.
- v. Patients referred for consultation and various studies were advised regarding further course of action.
- vi. Details required by the Indian Audit & Accounts team who visited NTI, Bangalore regarding the training courses conducted under NTP / RNTCP during the previous financial year were furnished.
- vii. Reviewed X-ray films of smear negative patients from Broadway TB Unit on a weekly basis and gave advice to the Medical Officer of the TB unit on further course of action

## **TRAINING SECTION**

### ***Functions***

- i. Basic Training courses for DTP key personnel – medical & para medical in the management of TB control programme.
- ii. Modular training courses in RNTCP for medical & para medical personnel.
- iii. Training international participants in the field of TB control, as a WHO collaborating center.
- iv. Orientation training courses for undergraduate & postgraduate medical students and medical and paramedical personnel from medical colleges and other non-governmental agencies.
- v. Participation in the CME programmes and other academic meetings on TB control sponsored by different agencies like medical colleges, Indian Medical Association, Karnataka Medical Education Trust.
- vi. Conducting WHO sponsored Workshops for Professors of medical colleges and NGOs.

### ***Major activities during the year***

- i. Two regular training courses in DTP of eight weeks duration.
- ii. Modular training courses in RNTCP of 1-2 week's duration for medical and paramedical personnel.
- iii. Short-term courses varying from 2-6 weeks for medical and paramedical personnel, WHO fellows and post graduate medical students.
- iv. Workshops.
- v. Specialised training courses of a weeks' duration for researchers & programme workers.
- vi. Active participation in meetings, symposiums, seminars, training & CME programmes organised within and outside NTI.
- vii. Sensitization programme for Medical, paramedical, Nursing, MSW, Micro-

biology and Bio-technology students on TB control.

## **BACTERIOLOGY SECTION**

### **A. LABORATORY**

#### **Functions**

##### **i. Service**

- a) To carry out laboratory diagnosis of TB on specimens of patients suspected of TB by (i) Smear microscopy (ii) Culture and sensitivity of *M.tuberculosis*.
- b) Offering above facilities to the patients who form subjects of research protocols taken up by different sections of the Institute.

##### **ii. Training**

- a) Participation in routine training activities of the Institute on TB control and imparting information/training on the laboratory aspects of TB to the participants.
- b) Conducting task training programmes to those with special or specific requirements viz., culture & sensitivity.
- c) Participation in CMEs, Workshops & Seminars.

##### **iii. Research**

- a) Assistance to all the research activities of different sections.
- b) To conduct independent research on laboratory aspects of TB.
- c) Involvement in collaborative research activities with other leading institutes of the country.

##### **iv. Quality Control**

Involvement in internal and external quality control activities with reference to:

- a) Tuberculosis bacteriology.
- b) Revised National Tuberculosis Control Programme.

##### **v. Supervision**

- a) Field visits to research project areas.
- b) Field visits to NTP & RNTCP areas.

#### **Major activities during the year**

##### **i. Service**

- a. A total of 3298 specimens, which includes study specimens of the Institute, were registered during the year under report.



- b. A total of 2353 specimens were put up for culture of which 4 specimens were processed by swab method and 2349 were processed by Modified Petroff's method.
- c. Of the positives isolated, 1215 cultures were processed by economic version of proportion method and 465 cultures were processed for sensitivity testing by MIC method.
- d. Identification tests were carried out for 777 cultures by proportion method and 429 by MIC method.
- e. Five pulmonary specimens and 141 Extra pulmonary specimens were processed by MB/BacT 240 System.
- f. Three thousand one hundred and seventy five smears were examined by Ziehl Neelsen staining procedure.
- g. The details of the specimens received on out-patient basis and from major hospitals of the city are as under :

| <b>Sl. No.</b> | <b>Type of Specimen</b>               | <b>No. processed</b> |
|----------------|---------------------------------------|----------------------|
| 1.             | Sputum                                | 2245                 |
| 2.             | Urine                                 | 121                  |
| 3.             | Gastric Lavage                        | 162                  |
| 4.             | Pus                                   | 48                   |
| 5.             | Culture (NIMHANS, Kidwai & St.John's) | 69                   |
| 6.             | Cultures (Other hospitals)            | 59                   |
| 7.             | Others                                | 98                   |

h. **MB/BacT-240 System**

In collaboration with SDS Sanatorium & St.Martha's Hospital, Bangalore, extra pulmonary specimens, bronchial aspirates received by the Institute are being subjected for processing by MB/BacT-240 system. The details of specimens processed during the year under report are as follows:

| <b>Nature of Specimen</b> | <b>No. processed</b> |
|---------------------------|----------------------|
| Pleural fluid             | 20                   |
| Bronchial wash            | 27                   |
| Pus                       | 26                   |
| Urine                     | 19                   |
| Gastric Lavage            | 07                   |
| Biopsy                    | 22                   |
| Aspirated fluid           | 04                   |
| CSF                       | 01                   |

| <b>Nature of Specimen</b> | <b>No. processed</b> |
|---------------------------|----------------------|
| Sputum                    | 05                   |
| Lymph Node                | 15                   |
| <b>Total</b>              | <b>146</b>           |

i. **Quality assurance in sputum microscopy under RNTCP**

During the year under report 6<sup>th</sup> and 7<sup>th</sup> rounds of quality assurance of smear microscopy have been completed and feed back communicated to 8 STCs assigned to NTI viz., Agra, Ahmedabad, Ajmer, Bangalore, Kolkata, Kangra Patiala and Srinagar. as per the revised guidelines sent by Central TB Division, DGHS, New Delhi The panel slides for the 8<sup>th</sup> round have been despatched during second week of February 2002 and the results are awaited.

j. **External quality assurance programme**

Ten cultures were received from TRC, Chennai for blind testing during June 2001 and the results showed 100% concordance.

Twenty culture strains received from the Institute of Tropical Medicine, Mycobacteriology Unit, Belgium were put up for sensitivity testing and the results showed reproducibility of 100% for INH, E and SM and 89% for R (Round VIII).

ii. **Training**

- a) The section participated in imparting training to medical and paramedical personnel of Government and non-Government agencies on NTP and RNTCP.
- b) Officers & staff of the section participated in the Workshops, Seminars CME programmes conducted within and outside NTI.

iii. **Supervision**

Supervision visits to various districts were undertaken to monitor NTP and RNTCP.

iv. **Research**

Research studies on

- a) Surveillance of Drug Resistance in Mysore district.
- b) Surveillance of Drug resistance in the districts of Hoogly (West Bengal), Nagaon (Assam) & Mayurbhanj (Orissa).
- c) Status of Pulmonary TB patients put on treatment under RNTCP from Bangalore Mahanagara Palike (RP/209).
- d) Treatment outcome of smear positive pulmonary tuberculosis patients in RNTCP- A Prospective study (RP/210).
- e) Evaluation of yield of Extra-pulmonary isolates using MB/BacT-240 system in collaboration with SDS Sanatorium and St.Martha's Hospital, Bangalore.

- f) Effectiveness of two models of DOTS Providers under RNTCP in Bangalore Mahanagara Palike .

## **B. ANIMAL MODEL RESEARCH UNIT**

### **Functions**

1. Breeding and maintenance of homogenous stock of laboratory animals (Albino guinea pigs).
2. Conducting experiments on the laboratory animals.

### **Major activities during the year**

#### **A. Status of Laboratory animals:**

Five hundred and twenty two NTI-bred albino guinea pigs were raised in healthy condition. Appropriate preventive measures were taken to check sickness and outbreak of diseases. One hundred twenty one animals were utilized for in-vivo experimentation.

#### **B. Research activities**

##### *Ongoing study*

“Screening two novel *M.tuberculosis* proteins for human T-cell response and testing DNA expressing the two proteins in guinea pigs for protection against tuberculosis” in collaboration with CGE, IISc, Bangalore.

##### *New Study*

“Evaluation of Chemotherapeutic potential of polymer entrapped isoniazid, rifampicin and pyrazinamide V/s free drugs in guinea pigs” in collaboration with PGIMER, Chandigarh.

##### *Studies completed*

1. “Identification and characterization of protective antigens of *M.tuberculosis* in albino guinea pigs” in collaboration with Srichitra Thirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala.
2. “Evaluation of protective efficacy of mycobacterial antigens against tuberculosis” in collaboration with PGIMER, Chandigarh.

#### **C Other relevant activities**

##### **Technical**

1. Institutional Animal Ethics Committee meetings were held under the chairmanship of Dr (Ms) P Jagota, Director, NTI and the other members who participated were Ms. Suparna Bakshi – Ganguly, Hon’ble Secretary, CUPA, Bangalore; Mr Sanober Z, Bharucha, CPCSEA Nominee, Dr S. Vijaya, Associate Professor, Dept. of Microbiology & Cell Biology, IISc, Bangalore; besides Dr B. Mahadev, CMO(NFSG) and Dr V.K.Challu, Veterinarian as its members from

NTI, Bangalore. The ongoing and new research project involving animal experimentation were discussed and approved.

2. The turnkey project of establishing Bio-safety Level III facility at AMRU is under progress.
3. Various groups of post graduate students, medical microbiologists, nursing students etc., who visited the section were briefed about the role of laboratory animals in bio-medical research besides importance of safe disposal of laboratory waste through segregation, sterilization and incineration.

## **X-RAY SECTION**

### **Functions**

#### ***i Repair & Maintenance***

To advise and assist in selection, repair and maintenance of X-ray equipments for NTP.

#### ***ii Training***

To impart training to XTs & MOs in operation and maintenance of different types of Mass Miniature Radiography units.

#### ***iii Service delivery/ Assistance in Research Activities***

- a) To conduct X-ray examinations for patients taken up for research studies, conducted by different sections of the Institute.
- b) To take X-rays of patients referred by Medical Officers of the Institute.

#### ***iv Supervision***

Field visits to NTP & RNTCP areas.

#### ***v Major activities during the year***

- i. A total of 142 X-ray examinations were done for patients of various studies conducted by different sections of the Institute.
- ii. Mobile X-ray unit is being sent to Broadway clinic on weekly basis and 151 patients (smear negative with persistence of chest symptoms) referred by the clinic have been X-rayed.
- iii. A total of 25 roll film cassettes received from various DTCs / STCs / TB Clinics were repaired and sent back in working condition.
- iv. Repaired 3 Generators of mobile X-Ray unit of the Institute.
- v. X-Ray Technician visited DTC Mysore, Karnataka and University General Hospital, Vijayawada, Andhra Pradesh for repair of X-ray unit.
- vi. Tested the Siemens Seriophos 5 X-Ray unit, Ergophos 4 M X-Ray unit & CD mobile X-Ray Unit with Generators as part of Routine Maintenance.

- vii. Tested Sriram Honda Kerosene run Generator regularly as part of Routine Maintenance.
- viii. Corresponded with 107 DTCs / STCs/ TB Clinics for lending Technical advise regarding servicing / Maintenance of X-Ray units and accessories were given.
- ix. Participated in regular Training courses on NTP.
- x. Mr. S. Ravindra was co-opted for the editorial committee. He helped in compilation of the Training & Supervision, News & Views for the NTI Bulletin.
- xi. The staff visited Hindustan Photo Films (HPF), Ooty, for co-ordination with Technical staff of HPF for improvement in quality of Mass Miniature Radiography Roll Films.
- xii. About 580 letters were sent to STCs/DTCs/XCs asking for a report on condition of X-ray unit of their centers. As on 10<sup>th</sup> March 2002, about 318 reports have been received and a data base regarding the status of X-ray units and their accessories has been created”.

## **STATISTICS SECTION**

### ***Functions***

#### ***i. Research***

- a) To assist in designing field surveys, determination of sample size, preparation of survey schedules and instructions to the field staff, selection of sample units etc., for the research protocols.
- b) Inspection of fieldwork, scrutiny of filled in schedules received from the field, provide feedback to the field staff regarding deficiencies and discrepancies to ensure quality of data collection of the research studies.
- c) Data entry, verification, processing, generation of tables and statistical analysis.
- d) To assist in the preparation of reports of the research protocols.

#### ***ii. Monitoring***

- a) Scrutiny of the periodical DTP implementation reports and sending feedback to the DTCs regarding deficiencies/discrepancies found in the reports for rectification.
- b) Processing and analysis of reports and preparation of State & National reports to be sent to DGHS, New Delhi.
- c) Providing feedback comments on the performance to the DTCs for effecting further improvements in their performance.

#### ***iii. Supervision***

- a) Supervising RNTCP project sites in Bangalore and the DTPs of States and

Union Territories.

**iv. Training**

- a) Training medical and para medical personnel in Statistics and Monitoring aspects of TB control programme and computerisation of data on NTP.

**v. Documentation**

- a) Documentation of the research protocols and their reports.
- b) Keeping custody of records, forms and filled-in schedules of the research studies.

**Major activities during the year**

**i. Research**

During the year statistical assistance has been provided to six research studies/surveys undertaken by the Institute. The nature of assistance has been in the areas of:

- a) Designing of sample survey strategies including schedules.
- b) Identification of sample units and supervision of field work.
- c) Analysis of data as per statistical techniques.
- d) Helping in drafting reports/papers.
- e) Custody of the research data.

**ii. Monitoring**

- a. Monitoring reports on the Performance of NTP were compiled and published for the four quarters during the year. The publication also contained feedback letters to the State TB Officers for taking necessary corrective actions.
- b. The section actively participated in series of meetings held for revising the reporting formats under NTP, which is still under consideration in DGHS.

**iii. Supervision**

Supervision visits to Mangalore, Udupi and Kodagu districts were undertaken during the year and suggestions were given for improving the recording and reporting system. The section also assisted in the Appraisal of Bangalore Rural district prior to RNTCP implementation.

**iv. Training**

The Statistics section played an active role in imparting training to Medical and Para-medical personnel in statistics and monitoring aspects of TB Control Programme during the two regular training courses conducted by the Institute.

The section was involved in the RNTCP modular training for the DTOs of Maharashtra, Karnataka and Madhya Pradesh during the year and for the participants of the SAARC countries in the Training of Trainers Programme.

## **v. Other Technical Activities**

Staff from the section:

- Visited TRC, Chennai in connection with digitizing the Longitudinal Survey data from the tape on VAX machine.
- Assisted in preparation of NTP reports for workshop at Vellore.
- Assisted in calculation of sample size, preparation of protocol and selection of clusters for the ARI study to be conducted in Orissa in collaboration with DANIDA.
- Assisted in calculation of sample size, preparation of protocol and selection of clusters for the ARI study in Khammam District conducted in collaboration with DFID.

## **TB AND HIV SECTION**

### **FUNCTIONS:**

- a. To co-ordinate with NACO and its subsidiary state units to integrate the existing TB Control activities along with HIV diagnosis and management.
- b. To develop a sustainable MIS for TB cases in HIV positive persons.
- c. To obtain the nationwide prevalence and incidence of TB disease among HIV positive persons notified by NACO.
- d. To initiate various research studies in the field of TB and HIV.

### **TECHNICAL ACTIVITIES**

1. Dr V.H. Balasangameshwara, CMO (NFSG)
  - a. In consultation with Dr Vishweshwariah, Secretary and Dr Krishnacharya, Chairman, Scientific Committee of Karnataka State TB Association developed the power point presentation material for involvement of Private Practitioners in RNTCP.
  - b. Participated in the discussion on revised SCC/ SR reporting formats.
2. Kannada Health Education material was prepared by Social Worker as per the instructions of Dr L. Suryanarayana, CMO(NFSG).

## **LIBRARY**

### **Functions**

- i. Acquisition of technical and administrative books, reports, CD-ROMs, periodicals, journals and their processing.
- ii. Creation of bibliographies in anticipation and on demand.
- iii. User education.
- iv. Current awareness service.

- v. Providing reprographic facilities.
- vi. Dissemination of information and maintenance of mailing addresses.
- vii. Co-ordination of publication activities of the Institute.
- viii. Updating Electronic databases.

**Major activities during the year**

- I. The Institute's Website was launched on 15<sup>th</sup> August 2001 and website is periodically updated.
- II. Acquisition of technical and administrative books, Annual Reports reprints etc.
- III. Renewal of subscriptions of periodicals and introduction of new periodicals.
- IV. Procurement of reprints on inter-library co-operation.
- V. User education on effective utilisation of library and information services.
- VI. E-mail and Internet facility: Two computers are provided with Internet facility for all Library users.
- VII. Compilations of select bibliographies.
- VIII. Distribution of NTI publications as per the mailing addresses maintained.
- IX. Reprography services to the users.
- X. Display/circulation of newspaper clippings related to TB, etc.
- XI. Co-ordination of publication programmes of the Institute.
- XII. Preparation of the monthly progress/quarterly reports of the institute from the library continued.

**PRINTING**

During the period, work instructions, training course material, periodical literature and other related official matter, etc. were done. Details are as follows.

|               |               |
|---------------|---------------|
| Printing:     | 92,400 copies |
| Xeroxing:     | 53,744 copies |
| Cyclostyling: | 13,600 copies |

**TRANSPORT SECTION**

**Functions**

**Major activities during the year**

- i. Two vehicles were provided for ARI survey at Maharashtra and West Bengal states.
- ii. Posting of Drivers for the studies on rotation basis and also for local duties.



- iii. Transport Supervisor and Mechanical Supervisor along with Driver Mechanics and Helper visited the field areas where research and Training activities were in Progress, for attending major repairs.
- iv. Transshipment of vehicles to ARI Survey area by road and bringing them back.
- v. All major and minor repairs like Engine, Clutch, suspension, overhauling were carried out at NTI workshop.

## 9. RESEARCH

### A: Status of research studies during the year 2001-2002

| Sl. No | RP No. | Title of the study   | Objectives   | Status   |
|--------|--------|--|--|--|
| 1      | 206    | <b>Epidemiology Section</b><br>National Sample Survey to estimate ARI in different parts of India. | <p>a) To estimate prevalence of tuberculous infection among children aged 1-9 years, in different parts of the country</p> <p>b) To compute ARI from the estimated prevalence.</p> | <p><b>Under progress:</b> A total of 1,65,464 lakh children were investigated till date.</p> <ul style="list-style-type: none"> <li>The fieldwork is completed in 19 districts and under progress in 2 districts.</li> <li>Double data entry of all the districts of North and West zones has been completed.</li> <li>Analysis was undertaken for Rae Bareilly, Hardoi, Jaunpur, Gurdaspur, Kangra, Delhi and Junagadh. Discussions held with TRC for analysis of South Zone data.</li> <li>Tuberculin testing of smear positive cases to study "Batch to batch variation in the potency of tuberculin: is also under progress.</li> </ul> <p>Zone-wise progress is as under:</p> <p><b>South Zone:</b> Fieldwork &amp; analysis completed.</p> <p><b>North Zone:</b> Fieldwork completed. Data entry under progress. Analysis completed for five districts, sixth under progress.</p> <p><b>West Zone:</b> Field work completed. Data entry under progress. Analysis completed for one district.</p> <p><b>East Zone:</b> Currently the survey is under progress in Barddhaman (West Bengal) and Cuttack (Orissa).</p> |

| Sl. No | RP No. | Title of the study  | Objectives  | Status  |
|--------|--------|---|---|---|
| 2      | Nil    | Estimation of ARI in Khammam district of Andhra Pradesh – Collaborative study with DFID.  | To estimate the prevalence of infection in children aged 5-9 years and to compute the ARI.  | Field work under progress since December 2001, under technical guidance and supervision of NTI officials.   |
| 3      | Nil    | Sample survey to estimate ARI in Orissa – in collaboration with DANTB.  | To estimate the prevalence of infection in children aged 1-9 years and to compute the ARI   | Training of the Field staff for the survey in progress at NTI.  |
| 4      | Nil    | Study of Relationship between ARI and prevalence of smear positive cases of pulmonary TB in Wardha district– in Collaboration with MGIMS, Wardha. | <ol style="list-style-type: none"> <li>1. To estimate ARI by studying the prevalence of infection among 1-9 year old children.</li> <li>2. To find the prevalence of bacillary and abacillary cases of pulmonary TB among 10 year and above age group.</li> <li>3. To study the relationship between ARI and prevalence of smear positive &amp; total bacteriologically confirmed cases of pulmonary TB.</li> </ol> | <p>Clarification to Comments / observations of Central TB division, DGHS, New Delhi were submitted.</p> <p>Project approval is awaited from DGHS.</p> |
| 5.     | 200    | <b>Control Section</b><br>Health seeking pattern and delay in TB case finding process.  | <ol style="list-style-type: none"> <li>a) Study the general population attitude towards public health services and their preference for the same, when they have respiratory symptoms.</li> <li>b) Study the action taking pattern with attendant delays, if any among chest symptomatics in general population, and the correlated delays on the part of health systems.</li> </ol>                                | Data analysis and preparation of paper of part a) of the study has been completed and data analysis of study b) is under progress.                    |

| <b>Sl. No</b> | <b>RP No.</b> | <b>Title of the study</b>   | <b>Objectives</b>  | <b>Status</b>  |
|---------------|---------------|---|--|--|
| 6.            | <b>210</b>    | Treatment outcome of pulmonary TB patients treated under RNTCP - A prospective study. | To study<br>a) The pretreatment bacteriological profile.<br>b) The treatment outcome among new and re-treatment smear positive patients initiated on DOTS in the BMP centres implemented under RNTCP.  | Intake of patients under Cat-I and Cat-II completed in September 2000 and fieldwork (data collection) was completed in September 2001. Data analysis completed. The first paper entitled "Outcome of re-treatment smear positive TB cases treated under DOTS in Bangalore city" was prepared and presented in the 56 <sup>th</sup> National Conference on TB and Chest Diseases from 9-11 <sup>th</sup> October 2001. This is sent to Editor, Indian Journal of TB and has been accepted for publication. Other two papers related to new smear positive cases and defaults are under preparation. |
| 7.            | <b>213</b>    | Follow up of smear positive cases treated under DOTS in BMP.                          | To study the following aspects among new and re-treatment smear positive cases treated under DOTS:<br>a) Present clinical (symptoms) & bacteriological status.<br>b) Pattern of subsequent treatment during the intervening period.<br>c) Socio-economic repercussions due to disease.<br>d) disease pattern among household contacts. | The protocol was approved by the TCC. Pilot study for pre-testing the interview schedule was completed in first week of February 2002. The study will commence from 1 <sup>st</sup> April 2002.  |
| 8.            | <b>Nil</b>    | Implementation status of DOTS in RNTCP districts.                                     | a) To estimate the proportion of new cases initiated on Non-DOTS regimen in the RNTCP districts.<br>b) To identify reasons for initiation on Non-DOTS Regimen.<br>c) To formulate/suggest possible corrective measures based on the findings of the study.   | The protocol, data collection formats and the interview schedules were prepared. These were approved in the TCC meeting held on 26 <sup>th</sup> July 2001. The study is yet to commence.  |

| Sl. No | RP No. | Title of the study   | Objectives  | Status  |
|--------|--------|--|---|---|
| 9      | 214    | Current status of functioning of TB Sanatoria and Chest Diseases Hospitals in Karnataka.                           | To<br>a) evaluate the infra-structure and manpower available in the sanatorium.<br>b) evaluate the diagnostic and treatment practices in the sanatorium<br>c) study the socio-economic and clinical profile of the patients utilising the sanatorium treatment. | <i>Pilot Study under progress from 21.2.2002.</i><br>Cumulative progress of the study is as under:<br>No. of inpatients interviewed :100<br>No. of discharged patients interviewed :29<br>No. of staff nurses interviewed:22<br>No. of patient's houses visited:100.  |
| 10     | 208    | <b>Bacteriology Section</b><br><b>Laboratory</b><br>Surveillance of Drug Resistance in Mysore district.            | To measure the proportion of initial drug resistance in Mysore district for INH, R, E and SM.   | Study completed and paper presented in the 56 <sup>th</sup> National Conference on TB and Chest diseases.   |
| 11     | Nil    | Surveillance of Drug resistance in the districts of Mayurbhanj (Orissa), Hoogli (West Bengal), and Nagaon (Assam). | To measure the proportion of initial drug resistance for INH, R, E and SM in the districts of Mayurbhanj (Orissa), Hoogli (West Bengal), and Nagaon (Assam).  | The intake of 352 specimens from Hoogli completed during July 2001. Sensitivity testing of all the cards were carried out and sent for analysis to Statistical section. The intake of samples from Mayurbhanj, Orissa and Nagaon, Assam is under progress and till date 338 and 301 specimens respectively have been received and subjected for processing. Dr B Mahadev visited Chandranagore, Hooghly district, West Bengal and Nagaon, Assam for a review meeting on the ongoing study from 8 <sup>h</sup> to 11 <sup>th</sup> August, 2001. |
| 12     | 209    | Study on Status of Pulmonary TB patients put on treatment under RNTCP from BMP.                                    | a) To Measure the proportion of patients having received DOTS.<br>b) To Study the present status of patients in terms of Bacteriological & radiological status among the pulmonary TB patients on DOTS and other than DOTS.                                     | Basic tables received from the statistical section were scrutinized. Discussions were held on the basic tables generated and certain additional information was sought. The paper is under preparation and will be submitted for publication in the NTI Bulletin.   |

| Sl. No | RP No. | Title of the study  | Objectives  | Status  |
|--------|--------|---|---|---|
| 13     | Nil    | Evaluation of yield of Extrapulmonary isolates using MB/BacT-240 system in collaboration with SDS Sanatorium and St. Martha's Hospital, Bangalore.  | To compare the conventional method of processing culture Vs. MB/BacT System using Extrapulmonary specimens.   | The study started during April 2001 and so far 146 specimens have been processed from extra pulmonary specimens. The yield of positivity among the specimens processed is relatively less than anticipated. Therefore, some more specimens will be processed before taking it for analysis. |
| 14     | 212    | Effectiveness of two models of DOTS Providers under RNTCP in BMP.   | To assess<br>(i) the acceptability of DOTS by the Provider and the patient.<br>(ii) the strength and weaknesses of DOTS provider and<br>(iii) Cure/completion rates achieved by the different DOTS providers in relation to the rates achieved by the health system in respect of treatment administered to the unwilling patients. | Study started in the month of March 2002. Progress of the study is as follows:<br><br>No. of patients taken into the study as on 26.3.2002 : 15.  |
| 15     | Nil    | <b>AMRU Collaborative Studies with</b><br><br>(i) Sri Chitra Thirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala (SCTIMST)<br><br>"Identification and characterization of protective antigens of <i>M.tuberculosis</i> in albino guinea pigs". | Evaluation of Sonicated antigens in Animal Model.   | The processed data was sent to Dr Murlidhar Katti, Associate Professor, SCTIMST, Thiruvananthapuram, in accordance with the discussions held during the month of January 2002.  |

| Sl. No | RP No. | Title of the study   | Objectives   | Status   |
|--------|--------|--|--|--|
| 16     | Nil    | (ii) PGIMER, Chandigarh<br><br>Evaluation of protective efficacy of mycobacterial antigens against tuberculosis.   | Protective effect of 30 kDa FIA/71 kDa FIA and combination of both in Guinea pig models.             | Viability counts of spleen tissue homogenates from groups immunized with 30 kDa FIA/71 kDa FIA and combination of 30 & 71 kDa FIA were analysed with the assistance of Senior Statistical officer and sent to Dr Khuller, Prof & Head, Bio Chemistry Department, PGIMER.   |
| 17     | Nil    | (iii) CGE, IISc, Bangalore<br><br>Screening two novel <i>M.tuberculosis</i> proteins for human T-cell response and testing DNA expressing the two proteins in guinea pigs for protection against tuberculosis. | Testing of DNA vaccine in Guinea pig models.   | Continued intradermal immunization of different groups of albino guinea pigs with DNA/recombinant BCG/Placebo followed by intramuscular challenge with high virulent culture of <i>M.tuberculosis</i> . Besides noting weekly weight gain / weight loss, the animals were sacrificed for conducting necropsy examination. Spleen tissues from each animal were aseptically dissected out, mechanically homogenised, serial dilutions prepared and inoculated on to LJ media for quantitative analysis. |
| 18     | Nil    | (iv) PGIMER, Chandigarh<br><br>Evaluation of Chemotherapeutic potential of polymer entrapped isoniazid, rifampicin and pyrazinamide V/s free drugs in guinea pigs.   | Potential of polymer entrapped isoniazid, rifampicin and pyrazinamide V/s free drugs in guinea pigs. | Three groups of albino guinea pigs comprising of 8 animals each were inoculated intramuscularly with high virulent culture of <i>M.tuberculosis</i> (H <sub>37</sub> R <sub>v</sub> ) received from PGIMER, Chandigarh. From the Group 1 (control), one animal was sacrificed 3 weeks after infection and found positive for Acid Fast Bacilli spleen tissue homogenate. Group 2 received polymer - entrapped drugs at weekly interval, while Group 3 was given free INH, R and Pyrazinamide daily.    |

| Sl. No | RP No. | Title of the study   | Objectives  | Status   |
|--------|--------|--|---|--|
| 19     | Nil    | <b>TB &amp; HIV Section</b><br>Collaborative study to evaluate diagnosis of TB among HIV infected persons. | To<br>(a) evaluate the sensitivity and specificity of the current RNTCP algorithm for diagnosis of TB among HIV-infected persons.<br>(b) evaluate the sensitivity and specificity of alternative algorithms for diagnosis of TB among HIV-infected persons. | The protocol was discussed in TCC and approved by Institutional Ethics Committee. The study will be taken up in May 2002.  |
| 20     | Nil    | HIV Seropositivity among smear positive pulmonary tuberculosis patients.                                   | To estimate the HIV seropositivity among new smear positive TB patients.  | This protocol was suggested by TCC for a pilot study. The protocol was prepared and the same was discussed by Institutional Ethics Committee and approved with changes. However, in view of the fact that importance has to be accorded for the study on TB in HIV positive persons and also that testing HIV positivity among TB cases would not help the TB programme in the present circumstances, it was decided to keep this protocol in abeyance for the time being. |

**Institutional Ethics Committee** for the NTI research work had its first meeting on 12<sup>th</sup> July 2001. All the TCC Members participated in this meeting. Ethical Committee Clearance was given to the following studies:

1. Effectiveness of two models of DOTS Providers under RNTCP in Bangalore Mahanagara Palike in the meeting held on 5<sup>th</sup> December 2001. PI: Dr B Mahadev, CMO(NFSG) & CI: Dr (Ms) Chitra Nagraj, CMO.
2. Follow up of smear positive cases treated under DOTS in BMP in the meeting held on 26<sup>th</sup> March 2002. PI: Dr (Ms) Sophia Vijay, Sr. TB Specialist.
3. Current status of functioning of TB Sanatoria and Chest Diseases Hospitals in Karnataka in the meeting held on 26<sup>th</sup> March 2002. PI: Dr L Suryanarayana, CMO(NFSG).

## **B. Studies proposed during the year 2001-2002**

### **Bacteriology Section**

#### **Surveillance of Drug Resistance in Rangareddy District of Andhra Pradesh in collaboration with DFID & STC, Hyderabad.**

Three Hundred and Fifty strains isolated from Rangareddy district by Blue Peter's laboratory, Hyderabad will be subjected for sensitivity testing. The results of sensitivity testing carried out by STC, Hyderabad of the same strains using drugs from Indian firms will be compared with the results of sensitivity testing carried out at NTI using drugs from Sigma company.



## 10. PAPERS PUBLISHED

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### A Summary of papers published

**1. Chadha VK, Jagannatha PS & Shashidhar J Savanur: Annual risk of tuberculous infection in Bangalore city; Indian J Tub 2001, 48, 63-71.**

There is a paucity of data on epidemiological situation of tuberculosis in big cities. Therefore, a tuberculin survey to estimate the ARI in Bangalore city was conducted among children aged 6 and 7 year attending 161 schools. A single stage cluster sampling design was adopted for selection of schools by random sampling, from a consolidated list of Government-run, Government aided and Private schools.

Based on the frequency distribution of reaction sizes among 9,340 test read children, 11.1% were estimated to be infected with tubercle bacilli. The children studying in Govt-run and Govt-aided schools more likely to be infected than those attending private schools. The ARI in Bangalore city was estimated as 1.67%; it was higher than the recent estimates obtained from the surrounding per-urban and rural areas. This high rate of transmission of tuberculous infection in the city suggests an urgent need for drastically improving the efficiency of case-finding and treatment activities. The results further indicate that BCG vaccinated children can be included for the purpose of estimating ARI.

**2. Chadha VK: Epidemiology of tuberculosis in Status of Tuberculosis in India; Sir Dorabji : TATA symposium series: Vol. 1 2000; Ed by R.Nayak, MS Shaila & G.Ramachandra Rao ; Bangalore, IISc, P 19-23.**

Tuberculosis continues to be a major public health problem in our country. The study of Epidemiology provides the scientific basis for tuberculosis control. It aims at identifying factors which increase the likelihood of acquiring infection and progression to disease or death besides measurement of disease frequency and distribution which are vital for assessment of disease trends in the community and planning of resources.

ARI is currently the preferred epidemiological indicator of TB situation and its trend in developing countries.

There are an estimated 13-14 million cases at any point, of which one fourth are infectious in nature. Over all, 40% of our country population are infected with tubercle bacilli. The impact of HIV pandemic is expected to be more serious in developing countries where most of young adults are already infected with tubercle bacilli. The increase in cases of MDR-TB is an added variable responsible for recent rising trend in TB and India is the most likely breeding ground of MDR -TB. TB threatens to become an incurable disease for future generation and TB deaths will rise further, also because of higher mortality of HIV associated TB.

Reducing the duration of infectiousness by earlier case detection and prompt effective treatment remains the most viable tool for controlling the disease of TB. Implementation of RNTCP is the major step in this direction.

**3. Sophia Vijay : Revised National TB Control Programme an over view in Status of Tuberculosis in India Sir Dorabji : TATA symposium series: Vol. 1**

**2000; Ed by R.Nayak, MS Shaila & G.Ramachadra Rao ; Bangalore, IISc, P 91-96.**

The NTP has been in existence since 1962 but did not bring an appreciable change in the epidemiological situation in the country. TB remains the leading cause of death. TB takes its toll in terms of mortality, morbidity and economy. The advent of HIV epidemic can further increase the problem. The 1992 GOI-WHO and SIDA review showed that even though NTP was technically sound, there were managerial weaknesses and over reliance on X-ray. To rectify the lacunae, RNTCP was formulated and implemented in 1993 as a pilot. The DOTS strategy emphasises on political commitment, quality diagnosis by smear microscopy, uninterrupted good quality drugs, direct observation of therapy and accountability. The RNTCP builds on the strength and achievements of NTP. Inputs have been given in form of funds, staff and creations of sub district units. The objective of RNTCP is to achieve 85% cure rate among new smear positive cases and thereafter a case detection of 70%. Once the DOTS strategy is implemented, the success of the programme will depend on the regular monitoring of its effectiveness. The results from pilot project areas have shown encouraging results. The major challenges ahead are the successful and rapid expansion of the RNTCP to cover the entire country with out compromising on the excellent quality of services. Success of the TB programme is mandatory not only for the health of the community but also for the economic reforms of the country. Dedicated efforts and supports from all the concerned sectors in the country are the need of the hour to win the battle against TB.

**4. Balasangameshwara VH: HIV & tuberculosis in Status of Tuberculosis in India Sir Dorabji : TATA symposium series: Vol. 1 2000; Ed by R.Nayak, MS Shaila & G.Ramachadra Rao ; Bangalore, IISc, P 41-46.**

There has been a global resurgence of tuberculosis during the last decade and HIV infection has contributed significantly towards this scenario. In India, the state specific estimates indicate that there were 2.97 to 3.5 million people living with HIV in mid-1998. World over, tuberculosis is the most common opportunistic disease seen in HIV infected persons. The impact of HIV infection on tuberculosis situation is related to the prevalence of TB infection in the area, exposure to infectious patients, the quality of tuberculosis control programme in the country and the degree of immunodeficiency. In general, TB occurs early in HIV patients. TB is one of the important exogenous factors known to accelerate progression of HIV disease. Thus, HIV worsens TB situation and TB disease worsens the clinical picture of HIV infected person. The diagnostic criteria and treatment strategy for TB in HIV positive persons is same as those followed for TB in HIV negative persons. The DOTS is the surest way of limiting the impact of HIV on TB situation.

**5. Mahadev B: Drug resistance in tuberculosis in Status of Tuberculosis India in Sir Dorabji : TATA symposium series: Vol. 1 2000; Ed by R.Nayak, MS Shaila & G.Ramachadra Rao ; Bangalore, IISc, P 109-113.**

Drug resistance in tuberculosis poses a potential threat to TB control. WHO estimates about 50 million people to be infected with drug resistance strains of *M.tuberculosis* globally. In clinical practice two types of drug resistance are commonly encountered i.e., initial drug resistance and acquired drug resistance. MDR-TB is a daunting health problem and can shake the very foundation of TB control programme.

The information available on initial drug resistance is very sketchy. Drug resistance surveillance if carried out in a proper manner would provide valuable information for policy makers and also facilitate designing regimens for the programme. The DOTS strategy under Revised National TB Control Programme if implemented effectively would minimise the problem of drug resistance.

**6. Mahadev .B: Comparison between rapid Colorimetric Mycobacterial Isolation and Susceptibility testing method and conventional method using LJ media; Indian J TB 2001, 48, 129-134.**

The objective of the study was to evaluate mycobacterial isolation rates, Mean Detection Time (MDT) and reliability of susceptibility as well as identification procedures in regard to clinical specimens by colorimetric and conventional methods. A total of 205 clinical specimens were processed by Modified Petroff's method and then inoculated into MB/BacT-240 system bottles and on LJ medium slopes. A total of 101 isolates were detected by both the methods: the recovery rate was 57.1% (117/205) by the colorimetric method and 55.1% (113/205) by the conventional method. Contamination rates were 1% & 6.8% respectively. The MDT including susceptibility testing period was 28 and 52 days respectively. Highly significant difference was observed between the two sample means in the colorimetric and conventional methods.

Colorimetric method not only enables rapid detection and drug susceptibility testing, gives the results four weeks earlier compared to the conventional method. But, the Para-nitro Benzoic Acid (PNB) test by the colorimetric method needs standardization.

**7. Jagota P: Chemotherapy of tuberculosis rationale of intermittent therapy of directly observed treatment in Status of Tuberculosis in India Sir Dorabji: TATA symposium series: Vol. 1 2000; Ed by R.Nayak, MS Shaila & G.Ramachandra Rao; Bangalore, IISc, P 97-104.**

Inspite of having the knowledge and means to control TB, we have not been successful in our efforts. The developing countries were the brunt of this problem. The revolutionary findings of fifties are: Domiciliary treatment, development of highly effective drug regimens through control clinical trials & evolution of the development of SCC regimens have helped tremendously.

INH & RIF are the most potent anti TB drugs bactericidal at all pH values. SM & Pyrazinamide (PZA) are bactericidal in alkaline and acidic pH values respectively. These four drugs together make the most potent anti TB drug combinations. INH remains the corner stone of anti TB treatment and no standard drug regimen is formulated with out INH.

Ethambutol and Thiactazone are bacteriostatic in nature and are more suitable as companion drugs. They are usually used alone with INH especially in the continuation phase and to prevent emergence of drug resistance.

Majority of the tubercle bacilli in the lesions at the beginning of treatment actively multiplies giving numbers in excess of  $10^8$ . These are killed mainly during the first few days by Isoniazid. Semi dormant cells are best killed by PZA. Other tubercle bacilli slowly multiply, semi dormant, intercellular and their growth is inhibited by the acidic environment. The third groups are intermittently multiplying, semi dormant bacilli and have occasionally spurts of active metabolism, lasting perhaps a few hours. There may be completely

document population unaffected by any drug.

In this hypothesis early bactericidal activity of INH kills population i, while populations' ii & iii are killed by RIF throughout the entire period of chemotherapy. The combination of INH & RIF decimates the sensitive population effectively within 6 months.

Efficacious regimens are developed using 4 drugs in the intensive phase followed by INH and RIF in the continuation phase. The total duration is 6 months. There is a loss of efficacy if the duration is reduced in spite of adding more drugs in the continuation phase, thereby showing that the antimycobacterial activity is also the function of time and with the currently available drugs, the duration cannot be reduced to less than 6 months.

The impetus for the development of SCC regimens with high cure rate come from the developing countries because the result with the SR regimen were poor due to poor patient compliance and logistic problems. There is an urgent need to develop new anti TB drugs, as the existing drugs are 20 to 30 yr. old.

**8. Jagota P : Revised National Tuberculosis Control Programme constraints; proceedings of 7<sup>th</sup> round table conference held at New Delhi 2000, Ed by Sushma Gupta & OP Sood, Harayana, Ranbaxy Science foundation; P 33-37**

National Tuberculosis Institute was established in 1959 with the main objective of formulating NTP. NTP was started in 1962 was expanded to the entire country in a phased manner. A GOI and WHO joint review of TB control activities in 1992 indicated that despite the existence of NTP for 25-30 years, the programme has not been able to make a desired impact on the control of the disease. This review led to the RNTCP implementing the formulation of DOTS strategy.

RNTCP is based on sound technical aspect. The major constraints for its implementation are Organisational, Managerial, Administrative and Operational. Some of the Constraints have been taken care in RNTCP by Strengthening:

1. Infrastructure by providing one TB unit for every 5 lakhs population.
2. Training, Monitoring and Supervision.

**9. Suryanarayana L, Suryanarayana HV & Jagannatha PS: Prevalence of pulmonary tuberculosis among children in a South Indian community in Status of tuberculosis in India Sir Dorabji: TATA symposium series: Vol. 1 2000; Ed by R.Nayak, MS Shaila & G.Ramachandra Rao; Bangalore, IISc, P 171.**

A study on the prevalence of pulmonary TB was conducted among 20,063 children aged  $\leq 14$  years residing in 62 randomly selected villages situated within 5 Km belt, beyond 19 km radius from the center of Bangalore city during 1991-94. Among these 17,477 were subjected to initial investigations consisting of elicitation of history and clinical examination and tuberculin test with 1 TU PPD RT 23 with Tween 80, whose results were read later between 72-96 hours. Of 16,451 (94.1%) children test read, 34.5% had tuberculin induration of  $\geq 10$  mm, 20.1% were undernourished, 3.2% had lymph node enlargement and 4% had history of contact with pulmonary tuberculosis. In all 6,075 children with

the above criteria became eligible for subsequent investigations. While 1,798 (29.6%) children aged < 5 years were subjected only for chest X-ray, the remaining 4,277 (70.4%) (Aged  $\geq$  5 years) were subjected for bacteriological (smear and culture) and radiological examination. From these, a total of 50 radiological positive cases (11 from below 5 year and 39 from 5 years and above) and 17 (14 culture positive + 3 smear positive) bacteriological positive cases from children aged 5-14 were detected. The presence of disease was found to be related to under-nutrition, reaction to tuberculin and history of contact. The prevalence of bacteriological cases was 0.15% in the age group 5-14 years and that of radiological positive cases was 0.3% in the age group 0-14 years. These rates are similar to the rates observed in the initial round of longitudinal survey conducted 30 year ago and the one that was conducted among the urban slum children of Bangalore. These rates, considered as low, will have no impact on the epidemiological situation of TB because of their non-infectious nature.

**10. Malati V Joshi, Sharada MA & Vasudevan KM: Performance of NTP in Karnataka and Maharashtra State; NTI Bulletin 2000, 36,7-8.**

A Comparison of the performance of the NTP in states of Karnataka and Maharashtra has been attempted in the paper on the basis of Quarterly Performance reports received from the DTCs for the year 2000. The highlight of the Paper has been the comparison of the performance in terms of case finding activity and smear conversion ratio. The performance of the RNTCP in the two states during the year 2000 has also been briefly discussed. In respect of Karnataka, the total number of new TB cases reported for the year 2000 was 53,330 of which 34% were smear positive and 59% were new X-ray suspect cases. In Maharashtra, the total number of new TB cases reported for the year was 1,40,814 of which 35% were smear positive and 55% were new X-ray suspect cases. The ratio of new smear positive to new X-ray in both the states has been in the range of 1:1.2 to 2. Information on Treatment outcome was not available for all the patients put on treatment. However for the patients for whom it was available, the success rate in SCC areas was 53% in Karnataka & 74% Maharashtra.

**B. Papers under publication**

**(i) With International Journal of TB and Lung Disease**

1. Chadha VK, Jagannatha PS, Preetish Vaidyanathan & Jagota P: PPD RT23 for tuberculin surveys in India.
2. Chadha VK, Jagannatha PS, Preetish Vaidyanathan, Sanjay Singh, Lakshmi Narayana: Annual Risk of Tuberculous Infection in rural areas of Uttar Pradesh, India.
3. Balasangameshwara VH & Sophia Vijay: Health seeking pattern and provider Delay in tuberculosis case finding process.

**(ii) With Indian Journal of Tuberculosis**

4. Sophia Vijay & Balasangameshwara VH: Outcome of re-treatment smear positive tuberculosis cases treated under DOTS in Bangalore city.
5. Jagota P: Revised National Tuberculosis Control Programme - a success story-Lupin TAI oration.

6. Shashidhara JS, Chadha VK & Jagannatha PS : Mixture model for analysis of tuberculin surveys.
7. Balasangameshwara VH & Jagota P: HIV & TB in Indian expertise on Tuberculosis.

### **C. Documents under Publication**

1. NTI Bulletin- Vol.37/1&2.2001: Dr (Ms) Chitra Nagraj, CMO compiled Abstracts and wrote Editorial for the Bulletin. Dr V.K.Chadha, Sr. Epidemiologist undertook extensive review and editing of NTI Bulletin, including all publications of NTI.
2. Dr. VK Chadha compiled the Report on the National Workshop on RNTCP for Professors of Medical Colleges held on 14<sup>th</sup> & 15<sup>th</sup> September 2001 with assistance from Dr VH Balasangmeshwara.
3. Sociological aspects of Tuberculosis – summaries of Published Literature 1939-2000.
4. Dr (Ms) Chitra Nagraj, CMO compiled 'Summaries of NTI studies' published in various journals from the year 1995 onwards.

### **D. Papers under Preparation**

- 1) Annual risk of tuberculous infection in rural areas of Junagadh, by VK Chadha et al.
- 2) Annual Risk of tuberculous Infection in North Zone of India, by VK Chadha et al.
- 3) Drug resistant pattern among new and re-treatment cases initiated under DOTS in Bangalore City by Dr (Ms) Sophia Vijay.
- 4) Defaults under RNTCP in a metropolitan city – A search for solution by Dr (Ms) Sophia Vijay.

## **11. PAPERS PRESENTED IN THE CONFERENCE**

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### **A At 56<sup>th</sup> National Conference on TB & Chest Diseases held at Chennai from 9<sup>th</sup> - 12<sup>th</sup> October 2001**

#### **1. Sophia Vijay: Out come of retreatment smear positive TB cases treated under DOTS in Bangalore city.**

A cohort of 226 smear and culture positive re-treatment cases initiated on Cat II regimen under DOTS, from April 1999 to September 2001 in BMP, was followed up prospectively to study their treatment outcome along with their drug susceptibility status. The study group was subjected for interviews at the initiation of treatment and on declaration of treatment outcome using the pre-tested semi-structured questionnaire to elicit details regarding their past and present TB treatment.

More than half of study group (60%) was initially susceptible to all drugs. The MDR-TB among the study cohort was 12.8%. 'Treatment after default' constituted the majority (65.5%) and the 'defaults' among them were also high (65.5%). The overall favourable treatment outcome was only 39.8% as a result of high proportion of 'defaults' (43.8%). However, the favourable outcome among all those completing the prescribed duration of treatment was 75%, irrespective of pre-treatment drug susceptibility status. In addition, emergence of drug resistance, especially to Rifampicin (1.8%) was negligible during treatment with Cat II, despite the high default. These findings suggest the effectiveness of Cat II regimen. The favourable response among pre-treatment MDR cases was low (17.2%) and remained so even after excluding defaults (22.7%) and significantly lower compared to those without-MDR (75%). However, the MDR component of the study cohort was low.

The study findings underscore the importance of treatment adherence for treatment success. The focus should be on prompt defaulter retrieval of patients belonging to type TAD, who emerged as potential defaulters. However, the low treatment efficiency in MDR cases makes it prudent to prevent development of MDR during the primary treatment by strict adherence to DOTS, thereby keeping patients amenable for re-treatment with Cat II regimen.

#### **2. Mahadev B: Surveillance of drug resistance in Mysore district of Karnataka.**

Surveillance of Drug Resistance (SDR) was carried out in Mysore district of Karnataka with the objective of determining the proportion of Initial Drug Resistance among self-reporting new smear positive cases. The procedures prescribed by WHO/IUATLD were followed to carry out the study.

A total of 205 patients were taken into the study. One sputum specimen was collected from each patient selected for the study attending the health facilities; susceptibility testing could not be done for two patients as the specimens were dried up. Out of the 203 patients, results were available for 179 patients for whom drug susceptibility to Streptomycin, INH, Rifampicin and Ethambutol was carried out. Among the 179 culture positive patients, eight patients were excluded for the purpose of analysis because of history of anti-TB treatment in the past and seven being patients from outside the district. Therefore, the core groups included for the analysis were 164 of which 137 (83.5%) were sensitive

to all drugs. The proportion of initial resistance in this group worked out to 11.6% for INH, 1.8% for Rifampicin and 1.2% for both INH & Rifampicin.

### **3. Mini PA: Performance of National Tuberculosis Programme during the year 2000 – A Report.**

National Tuberculosis Institute has been monitoring NTP since 1978. DTP has been under implementation in 440 districts, of which 121 districts are covered under RNTCP, two hundred twelve districts are under SCC and 107 districts are under SR. There are 17 additional DTCs also. This paper aims at appraising the performance of NTP in terms of implementation, supervision and performance of case finding and treatment activities during the year 2000. During the year 2000, reporting efficiency of DTCs is 82%. Smear positive in DTC is 8.1%. Ratio of smear positive to smear negative is 1:2.3. Out of the total TB cases, 28% are smear positive, 64% are smear negative and 8% extra pulmonary. Total case detection rate and Annualized smear positive case detection rate were 131 and 37 per lakh population respectively. From the revised SCC reports received (29%), sputum conversion rate was 68% for SCC and 39% for SR districts. Treatment success rates were 65% for SCC and 39% for SR. Only 21 DTCs have full complement of core trained personnel. The overall performance of NTP is far below the expectation in all aspects. Doctors at DTCs and PHIs still depend on X-ray for diagnosis when it is well-established fact that the sputum microscopy is a far better tool for diagnosis of pulmonary tuberculosis.

### **4. Shashidhar J Savanur, Chadha VK & Jagannatha P S - Mixture model for analysis of tuberculin surveys.**

Mixture Model for Analysis of Tuberculin Surveys was developed with the objective of estimating the prevalence of tuberculous infection by using mixture analysis. The tuberculin reaction sizes obtained in four tuberculin surveys conducted in India were analyzed using mixture model. For this purpose, the tuberculin reaction sizes in a given distribution were assumed to represent a mixture of three sub-groups, each following normal distribution. The maximum likelihood estimates of the parameters of component distribution and proportion of sub-groups in the study population were obtained using EM-algorithm. The estimates of prevalence of tuberculosis infection obtained by mixture analysis were compared with the estimates based on locating the cut-off point (anti-mode) or the mode of reactions attributable to infection with *M.tuberculosis*. The prevalence of infection estimates obtained by mixture model for different age groups in the four surveys were similar to the estimates obtained based on the anti-mode or the mode method. The mixture analysis can prove to be a very useful tool for analysis of tuberculin surveys specially when there is difficulty in identification of the anti-mode or the mode of reactions attributable to infection with *M.tuberculosis*.

### **5. Jagota P: Revised National Tuberculosis Control Programme - a success story- Lupin TAI oration.**

TB is one of the most ancient diseases and has been referred to in the Vedas and Ayurvedic Samhita. It continues to be one of the main causes of morbidity and mortality. NTP was started in 1962 to reduce the burden of TB gradually till it ceases to be a Public Health problem. NTP was reviewed by GOI, WHO and SIDA in 1992. This review led to formulation of RNTCP.



The success of RNTCP is evaluated by the population coverage, case detection rate, ratio of smear positive to smear negative patients and cure rates.

Currently over 425 million population has been covered in India and the Programme is second only to that of China. Treatment outcomes have been consistently good, with 8 out of 10 patients (80% cure rate) being successfully treated. Treatment success has increased for all types of patients between 1995 and the first two quarters of 1998.

**B At 12<sup>th</sup> Karnataka State Conference on TB & Chest disease at Bidar on 6<sup>th</sup> January 2002**

**1. Jagota P: “Genesis of Directly Observed Treatment Short Course ” – Dr K. Nagappa Alva oration.**

Dr (Ms) P Jagota, Director, NTI, Bangalore on the occasion of Dr. Nagappa Alva Oration at 12<sup>th</sup> Karnataka State TB & Chest Diseases Conference, Bidar, Karnataka narrated the contribution of NTI and TRC to RNTCP, since major share of the components of DOTS were formulated through studies conducted in India. She paid rich tributes to NTI and TRC, by quoting the studies conducted in the chronological order beginning with supervised chemotherapy particularly the intermittent regimens, followed by short course chemotherapy and case finding. She also highlighted the published literature from India, which had emphasized the importance of government commitment and accountability.

## **12. PAPERS/BOOKS REVIEWED**

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- “A, B, C of chest X-ray interpretation” sent for publication in the NTI Bulletin was reviewed.
- “DOTS centres at private practitioner’s clinics” was reviewed in detail. Three tables were re-drafted and comments sent to Editor, Indian Journal of TB.
- The book “Imaging of Tuberculosis” by P.E.S. Palmer was reviewed for its procurement.
- “Worry due to belief of having tuberculosis” was reviewed and Comments sent to Editor, Indian Journal of TB.

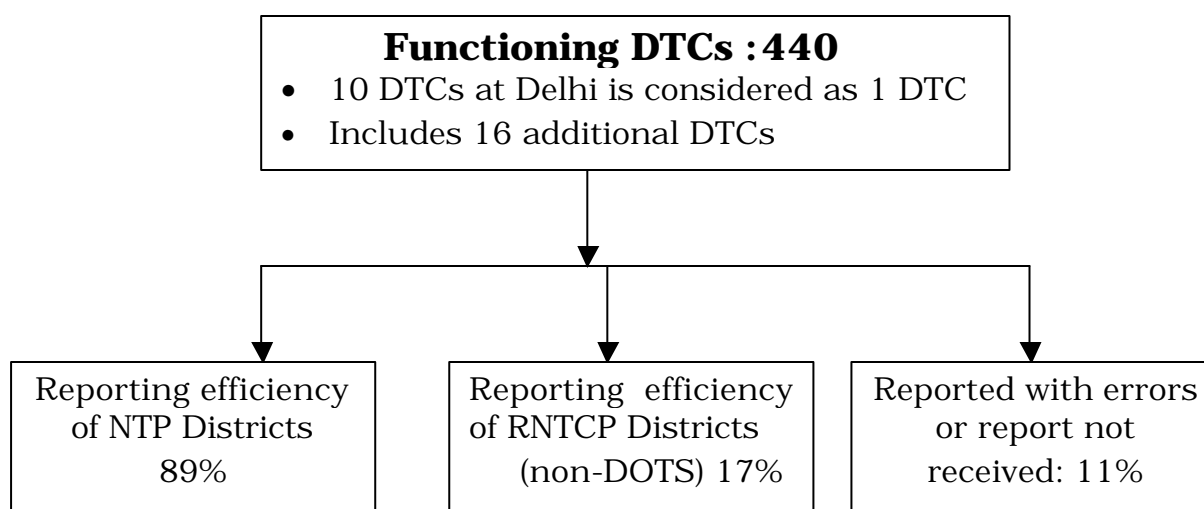
## 13. MONITORING

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### Performance of the National Tuberculosis Programme -2001

National Tuberculosis Programme formulated in 1962, covers the entire country and is implemented through 440 DTCs located in the various district headquarters. NTI has been monitoring the performance of NTP since 3<sup>rd</sup> quarter of 1977 through periodic reports from the DTCs and supervision visits to the DTCs and PHIs. The DOTS is now provided in 193 districts under RNTCP. The RNTCP performance in these districts is monitored directly by Central TB division, DGHS, Ministry of Health & Family Welfare, New Delhi. These districts are supposed to report Non-DOTS cases to NTI.

The quarterly reports brought out in 2001-02 appraise the performance of NTP Districts in terms of implementation, reporting, supervision, case finding and treatment activities of NTP districts and Non-DOTS component of RNTCP districts during 2001. The figure below gives the pattern of reporting under NTP.



#### Status of Reports received during January to December-2001

|  |   |     |
|--|---|-----|
| Census enumeration districts                                 | : | 591 |
| NTP Functioning Districts                                    | : | 287 |
| Additional DTCs  | : | 16  |
| New Districts<br>(Presumed to be implementing either SCC/SR) | : | 126 |
| RNTCP Districts  | : | 193 |

A total of 1,626 reports received without errors were analysed during the year 2001. Some of the reports were with errors and some DTCs did not submit the report for one or more quarters. Out of 1626 reports analysed, 133 reports pertained to non-DOTs cases from RNTCP districts.

### **Case finding Activity:**

During the calendar year 2001, following number of cases were reported either under NTP or non-DOTS under RNTCP.

|                 |        |
|-----------------|--------|
| Bacillary cases | 199550 |
| X-ray suspects  | 406914 |
| Extra Pulmonary | 60389  |
| <hr/>           |        |
| Total cases     | 666853 |

The States of Uttar Pradesh, Maharashtra, Andhra Pradesh, Madhya Pradesh, Karnataka, Tamil Nadu, Punjab, Bihar, Gujarat, Haryana and Assam together account for 86% of the case finding activity. At National level, the ratio of Bacillary to X-ray cases was 1:2.04(ranging from 1:0.9 to 1:5.3 over the states) as against the expected norm of 1:1.2. The ratio has been decreasing steadily over the years. However, the ratio for Bihar and Assam were 1:5.1 and 1:5.3, which were still very high. Overall percentage of smear positives among new sputum examined was 8.5%. The case detection rate per lakh population/per annum was 38 new smear positive cases, whereas the expected number was 50. Total case detection rate per lakh population per annum was 129.

### **Treatment Outcome**

Conversion rate at 2 months was 74%, and Cure rate 37%. These were very low Compared to the expectations under the programme.



Institute of Medical Sciences, & Bangalore Medical College, Bangalore; Microbiologist from LRS Institute of TB & Allied Sciences, New Delhi & 2<sup>nd</sup> year MD student from Govt. Aurvedic College, Bangalore utilized the library resources for retrieving information required by them

***Undergraduate students:***

Students from St John's medical college, Bangalore & Al-Ameen Medical College, Bangalore; used the library resources for their academic pursuit.

**b Documentation services**

**Selected bibliography of Indian Medical Literature** on tuberculosis with 180 citations was compiled for the NTI Bulletin.

**Periodical abstract Bulletins:** Vol 35.1-12, 2001 each having approximately 100 citations were brought out and distributed to the faculty, as a part of current awareness service. These citations were later on added to the database.

During the year under report, the following publication is under process.

NTI Bulletin: Vol 37. 1 & 2, 2001

**IV Activity on Databases**

The databases created earlier were updated periodically. New library automation software SLIM ++ was installed. Data entry has started.

**V Publications**

1. NTI Annual Report 2000-2001 = 150 copies.
2. NTI Bulletin - Vol. 36/ 1 & 2; 3 & 4 March to December 2001 = 1000 copies each.

These were distributed to the faculty and to the addresses as per the mailing list maintained in library.

3. Report of the National Workshop for Professors of Medical College (NWMC) on RNTCP held at NTI from 14 & 15<sup>th</sup> September 2001 = 200 copies.
4. Recommendations of the NWMC report = 400 copies

These were distributed among NTI faculty, Ministry of Health & Family Welfare; DGHS; Participants of the Workshop; RNTCP consultants & WHO SEARO, New Delhi. Recommendations of the NWMC workshop were sent to the Deans/Principals of all Medical College in India.

**VI Launching of Web Site**

A committee consisting of Dr (Mrs) Chitra Nagaraj as chairperson & Mr Shashidhar J Savanur, Sr Statistical Officer, Mrs Sudha S Murthy, Sr. Librarian & Mr. Jitendra, Computer as members was constituted on 8<sup>th</sup> May

2001 to work for collection, collation, editing & organizing information required for creation of the WEB SITE on NTI. The NIC team from National Technology promotion unit, Bangalore to whom the task of hosting of website, gave technical help for this task. The Website on the “National Tuberculosis Institute” was launched on 15<sup>th</sup> August 2001 by Dr (Ms) P Jagota, Director, NTI, Bangalore in the NTI Auditorium in presence of trainees of 86<sup>th</sup> training course & Team from National Informatics Centre, Bangalore. The website address is: <http://ntiindia.kar.nic.in> A brief Introduction on design and development of the website was given by Mr. R Venkatesh,, Principle system analyst of National Informatics center. Dr (Mrs) Chitra Nagraj, Chairperson, Website committee, introduced Home page, Dr VH Balasangameshwara, CMO briefed other pages of the website & Mrs Sudha S Murthy Sr Librarian about Library, Information services & Publications. Dr VK Chadha, Sr Epidemiologist and Officer I/c, Library & Publications concluded the function with vote of thanks

Launching of the website was informed to all the important individual organizations through e-mail in India & abroad. Action has been taken to include the website address in all NTI communications. The website is periodically updated.

(COLLECT PHOTO)

#### **VII User Assistance**

Dr OmPrakash, HOD, Department of Medicine, St. Martha’s Hospital, Bangalore obtained the permission of Director NTI, to take additional copies of the medical journals from NTI Library for use in his departmental library & the same were handed over to Dr OmPrakash.

#### **VIII Updating of Health Education –panels**

Sr. Librarian assisted Dr VH Balasangameshwara, CMO(NFSG), Chairman of the committee, in updating panels made in the year 1992 & creation of new panels due to changes in the programme. In total, 22 panels were updated, 4 new panels on RNTCP & monitoring were added. A new technology vinyl display was used in creation of the panels. Sri. Siddharthan, Sr. Investigator and Sri. Mallikarjunaiah, Social Worker of the TB & HIV section as the members of the committee collected the information needed in consultation with librarian for updating the panels. The photographs of the existing panels were taken for archives.

## 15. TRAINING ACTIVITIES CONDUCTED AT NTI, BANGALORE

### A. Regular Training Programme

The 86<sup>th</sup> and 87<sup>th</sup> regular training programmes each of 8 weeks duration on TB control were conducted from 16<sup>th</sup> July - 7<sup>th</sup> September 2001 and 15<sup>th</sup> January to 8<sup>th</sup> March 2002 respectively. These two training programmes were for a duration of 8 weeks each. The break up of the key personnel trained is given below.

#### 86<sup>th</sup> & 87<sup>th</sup> Training Courses

| Sl.No. | Category                     | 86 <sup>th</sup> course | 87 <sup>th</sup> course |
|--------|------------------------------|-------------------------|-------------------------|
| 1.     | Medical Officers (MOs)       | 15                      | 11                      |
| 2.     | Laboratory Technicians (LTs) | 12                      | 16                      |
| 3.     | X-ray Technicians (XTs)      | 6                       | 7                       |
| 4.     | Treatment Organizers (TOs)   | 14                      | 13                      |
| 5.     | Statistical Assistants (SAs) | 10                      | 11                      |
|        | Total                        | 57                      | 58                      |

A total of 115 trainees consisting of 26 MOs and 89 paramedicals from different states and union territories participated in the above mentioned training programmes. They underwent one week modular training on managing tuberculosis in SCC districts and supervised some RNTCP areas in BMP. The trainees were also taken to the DTCs in the Districts of Tumkur. They visited PHIs Ramnagaram, Channapattana, Kanakapaura, Devanahalli, Doddaballapur, Magadi, Anekal and Bangalore urban and rural. These visits were for a period of 5 days for implementation/supervision activity.

All NTI faculty and MO trainees of the 86<sup>th</sup> regular training course participated in the Workshop on Management skills conducted by Dr Sudhir Sharan, Dean of M.S. Ramaiah Institute of Management, Bangalore on 4<sup>th</sup> August 2001.

The NTI faculty guided the trainees in preparation and presentation of seminars on (a) DTP Management, (b) Organisation & functions of STCs, (c) Role of Medical Colleges in TB control, (d) Role of IEC in TB control and (e) Role of NGOs in TB control. Participants were also guided in presentation of a paper on Health Research Methodology.

### B. Revised National Tuberculosis Control Programme

#### i) Training programmes

##### Modular training

| Sl. No. | Category                  | No of Participants | Period  | Funded by         |
|---------|---------------------------|--------------------|---|-------------------|
| 1       | MOs of Armed Forces       | 18                 | 16 <sup>th</sup> -26 <sup>th</sup> April 2001 | DGHS              |
| 2       | LMO/Sr. Specialist of BMP | 4                  | 8 <sup>th</sup> -14 <sup>th</sup> May 2001    | LWSTC (Karnataka) |



| Sl. No. | Category  | No of Participants | Period   | Funded by            |
|---------|---|--------------------|--|----------------------|
| 3       | MOs from Maharashtra & Andhra Pradesh                 | 30                 | 19 <sup>th</sup> –29 <sup>th</sup><br>September 2001 | DGHS                 |
| 4       | MOs from Madhya Pradesh, Karnataka, Goa & Chattisgarh | 27                 | 7 <sup>th</sup> – 19 <sup>th</sup><br>January 2002   | DGHS                 |
| 5       | MOs from Madhya Pradesh , Andaman Nicobar & karnataka | 21                 | 11 <sup>th</sup> – 23 <sup>rd</sup><br>February 2002 | DGHS                 |
| 6       | STS of Karnataka                                      | 8                  | 4 <sup>th</sup> – 13 <sup>th</sup> March<br>2002     | LWSTC<br>(Karnataka) |
| 7       | STLS of Karnataka)                                    | 6                  | 4 <sup>th</sup> – 15 <sup>th</sup> March<br>2002     | LWSTC<br>(Karnataka) |
| 8       | MOTCs of Karnataka                                    | 12                 | 18 <sup>th</sup> – 30 <sup>th</sup> March<br>2002    | LWSTC<br>(Karnataka) |

## ii) Workshops

| Sl. No. | Particulars  | Period   |
|---------|--|--|
| 1       | Sensitization Workshop on RNTCP for CMOs/Civil Surgeons/Municipal Health Officers of RNTCP districts.                          | 25 <sup>th</sup> – 26 <sup>th</sup> May<br>2001    |
| 2       | Sensitization Workshop on RNTCP for NGOs of Karnataka.   | 30 <sup>th</sup> –31 <sup>st</sup> May<br>2001     |
| 3       | Workshop on RNTCP for Medical College Professors from Chandigarh, Delhi & Karnataka.   | 25 <sup>th</sup> - 29 <sup>th</sup> June<br>2001   |
| 4       | Workshop on RNTCP for DHOs of RNTCP districts and Superintendents of TB Sanatoria in Karnataka.                                | 9 <sup>th</sup> – 10 <sup>th</sup> July<br>2001    |
| 5       | Workshop on RNTCP for Professors of Medical colleges from Karnataka, Andhra Pradesh, Pondicherry, Orissa, Assam & Maharashtra. | 3 <sup>rd</sup> – 7 <sup>th</sup><br>December 2001 |

### **National Workshop on RNTCP for Professors of Medical colleges, 14<sup>th</sup> – 15<sup>th</sup> September 2001 (TO COLLECT PHOTO)**

A two-day National Workshop on involvement of medical colleges in the Revised National Tuberculosis Control Programme (RNTCP) was conducted at the Institute on 14<sup>th</sup> & 15<sup>th</sup> September 2001. This was jointly sponsored by the Government of India (GOI) and World Health Organization (WHO), SEARO, New Delhi.

#### **Day-1: 14.9.2001, Friday**

**Inauguration** – The inaugural function of the Workshop started with invocation song by Ms Geetha Koppa, AIR Artist. The welcome address was by Dr (Ms) P Jagota, Director, NTI. The workshop was inaugurated with traditional lighting of

the lamp by Shri A Raja, Honorable Minister of State, Ministry of Health & Family Welfare (MH&FW), GOI, New Delhi. This was followed by the opening remarks – Past, Present & Future of TB control programme in India by Prof M.M. Singh, Vice President, TB Association of India, New Delhi; the keynote address by Dr S.P. Agarwal, Director General of Health Services, MOH&FW, GOI, New Delhi; the Inaugural address by Shri A Raja, Hon Minister of State, MH&FW, GOI, New Delhi; and Vote of Thanks by Dr Narayana Murthy, JD (TB), Government of Karnataka, Bangalore.

In all, seventy-eight (78) professors of Community & Respiratory Medicine representing 38 medical colleges across India participated. Others who graced the function were: dignitaries & Administrators from Karnataka State; Members of Karnataka State TB Association, Media persons, WHO Consultants; senior officials from Bangalore Mahanagara Palike, Bangalore and staff of NTI / NICD / PAO / CPWD.

**Press Meet:** After inaugural function, a “press meet” was arranged with Union Minister of State, DDG (TB), Central TB Division, DGHS, New Delhi; Director, NTI, Bangalore; and Dr Thomas R Frieden, Medical Officer, WHO, SEARO. Press note, Press brief, Press release approved by Director, NTI and DDG (TB), DGHS were sent to 25 local, regional and national dailies at appropriate time. The inaugural function was concluded with high tea for all.

**Special features:** Publications from NTI, Bangalore; Central TB Division, DGHS, New Delhi; and WHO, on TB control programme were displayed in a specially created book stall for the benefit of the participating delegates. In all, 15 NTI publications; 23 RNTCP publications and 10 WHO publications were displayed (list attached).

**Technical Session:** The technical session started with presentations as under:

| <b>Topic</b>   | <b>Spoken by</b>  |
|--|---|
| Global status of TB control                                | Dr Thomas R Frieden, Medical Officer, WHO   |
| Technical basis of RNTCP                                   | Dr T Santha Devi, Dy. Director, TRC, Chennai  |
| Status of TB control in India                              | Dr G.R. Khatri, DDG (TB), DGHS, New Delhi   |
| Role of Medical Colleges in RNTCP/TB control               | Prof J.N. Pandey, Professor of medicine from All India Institute of Medical Sciences, New Delhi |
| Presentation of report on survey of TB Hospitals in India. | Dr Alka Singh, WHO Consultant   |

**Field visit:** The participants accompanied by NTI faculty were taken to TB Units of BMP, Bangalore. Presentation of the field visits were made by the participants. They were made into 6 groups to have detailed group discussions on “Implementation of RNTCP in medical colleges”; “Incorporating RNTCP into medical college curriculum”; and “other roles of medical colleges in programme implementation”.

### **Day 2 : 15.9.2001, Saturday**

Group discussions were continued on the second day. This was followed by

presentation of each group work & further discussion on it. Draft recommendations were presented by Dr J.N. Pande, HOD, Medicine, All India Institute of Medical Sciences.

**Recommendations:** It was recommended during the Workshop that the medical colleges should be included as members in the District/State TB Society and involved in planning and evaluation of RNTCP at district, state and national levels. The medical colleges should provide referral services in the management of complicated cases and culture and drug susceptibility testing. It was decided that a core group consisting of leading professors of medical colleges may be constituted with the responsibility to facilitate and monitor the involvement of medical colleges in RNTCP, with necessary support from Central TB Division, Govt. of India. The Workshop concluded with vote of thanks by Dr G.R. Khatri, DDG (TB), DGHS, New Delhi.

The detailed technical report prepared by Dr V.K. Chadha, Sr. Epidemiologist and Dr V.H. Balasangameshwara, CMO(NFSG) after obtaining the approval of Central TB Division, DGHS, New Delhi has been printed in 3 versions viz., **Full report for participants; Recommendations for deans of the medical colleges & digital version for the libraries of medical colleges.**

### **Sensitization Workshop on HIV-TB Co-ordination on 19<sup>th</sup> March 2002**

The above programme was held at NTI conducted by Karnataka State AIDS Prevention Society. Faculty of Medical Colleges, staff from private hospitals, NGO's etc., attended. They were given information on HIV and TB and how co-ordination could be achieved between the two Programmes.

## **C. Special Training Programmes**

### **i). Training conducted for Postgraduate students/Paramedicals & Other categories**

- |                |  |
|----------------|--|
| May 2001       | One Microbiologist and one Lab Technician from STC, Hyderabad were given training in Culture Isolation, Sensitivity and Identification of Mycobacteria for 4 weeks and 6 weeks respectively from 14.05.2001 to 23.06.2001.   |
| July 2001      | One Lab Technician from GENETUP, Nepal was given training in Culture Isolation, Sensitivity and Identification of Mycobacteria for 8 weeks from 16.07.2001 to 07.09.2001.<br><br>One Microbiologist (WHO fellow) from ESI Hospital Delhi, was given training in Culture Isolation, Sensitivity and Identification of Mycobacteria for 6 weeks from 16.07.2001 to 24.08.2001.<br><br>One MO each from Andaman & Nicobar Islands and BSF were given training in Epidemiology and TB control from 16.7.2001 to 24.8.2001. |
| September 2001 | Three Medical Officers (WHO fellows) from North Korea were given One day training on TB control programme on 03.09.2001.   |
| November 2001  | Orientation Course on TB Control Programme was given to 20 PG Students in Chest and Community Medicine from Medical  |

colleges of Andhra Pradesh, Pondicherry & Kerela from 15.11.2001 to 30.11.2001.

January 2002 One Microbiology student from St George's college of science and management, Bangalore was given training in Culture Isolation, Sensitivity and Identification of Mycobacteria for 8 weeks from 01.01.2002 to 28.02.2002.

One Medical Technologist (WHO fellow) from Public Health Laboratory, Dept of Health services, Thimphu- Bhutan was given training in Culture Isolation, Sensitivity and identification of Mycobacteria for 8 weeks from 22<sup>nd</sup> January – 15<sup>th</sup> March 2002.

March 2002 An Orientation Programme on RNTCP was held for Medical officers of Public sector under taking on 24th March 2002 (World TB day). Technical staff of NTI also participated.

**Faculty delivered the following Lectures:**

Dr L.Suryanarayana: RNTCP an overview

Dr (Ms) Sophia Vijay: Treatment strategies on RNTCP

Dr V.K. Chadha: Burden of Tuberculosis

Dr B.Mahadev: DOTS

Dr (Ms) Chitra Nagaraj: Case finding Strategies under RNTCP

**ii) SAARC Trainers Training on TB Control programme management from 8<sup>th</sup> – 21<sup>st</sup> December 2001 (to collect PHOTO)**

The SAARC Trainers Training on TB control programme management was held at the Institute from 8-21<sup>st</sup> December 2001. This was jointly organized by SAARC Tuberculosis Centre, Nepal and National Tuberculosis Institute, Bangalore.

**Inauguration** -The welcome address was by Dr (Ms) P Jagota, Director, NTI and Dr D.S. Bam, Director SAARC TB Centre, Kathmandu, Nepal. The Programme was inaugurated with traditional lighting of the lamp by Dr G.R. Khatri, DDG (TB), DGHS, New Delhi. This was followed by Inaugural address by Dr G.R. Khatri and speeches by Dr Narayana Murthy, JD (TB), Government of Karnataka and Dr Klaus Jochem, Project Manager, TB-HIV, Canada Project. Vote of thanks was by Dr Prahlad Kumar, Deputy Director, SAARC TB Centre, Kathmandu, Nepal. After the inauguration, the technical session started with presentations by the faculty members and facilitators.

In all, 14 delegates from six member countries of SAARC viz., Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka participated. The details are as under:

| <b>Sl. No.</b> | <b>Name &amp; Designation</b>  | <b>Place &amp; Country</b>             |
|----------------|--------------------------------|--|
| 1.             | Dr Anwarul Azad, Consultant    | TB Clinic, Khulna, Bangladesh          |
| 2.             | Dr Md. Jalaluddin, Consultant  | TB Clinic, Chuadanga, Bangladesh       |
| 3.             | Dr Deki Choden, Superintendent | Phuntsholing Hospital, Chhukha, Bhutan |

| <b>Sl. No.</b> | <b>Name &amp; Designation</b>                                 | <b>Place &amp; Country</b>  |
|----------------|---|---|
| 4.             | Dr Ugyen Thinley,<br>District Medical<br>Officer              | District Hospital, Trashy Yangtse, Bhutan   |
| 5.             | Dr V.S. Salhotra,<br>CMO (TB),                                | Central TB Division, DGHS, New Delhi, India                                       |
| 6.             | Dr P.P. Mehta,<br>Director                                    | STDTC, Ahmedabad, Gujarat, India  |
| 7.             | Dr S. Pera Reddy,<br>Senior Zonal<br>Advisor, Leprosy &<br>TB | Damien Foundation India Trust, Cuddapah, Andhra Pradesh, India                    |
| 8.             | Dr G. Ramakrishna<br>Raju, Senior<br>Medical Advisor          | Damien Foundation India Trust, Morabadi, Ranchi, India                            |
| 9.             | Mr Hassan Riyaz,<br>Community Health<br>Worker                | Dept of Public Health, Shaviyani Atoll, Komandoo, Maldives                        |
| 10.            | Mr Ahmed Rasheed,<br>Supervisor                               | Dept. of Public Health, Male, Maldives  |
| 11.            | Dr Shyam Raj<br>Upreti, Medical<br>Superintendent             | Tamghas Hospital, Lumbani Zone, Gulmi, Nepal                                      |
| 12.            | Mr Usha Bhatta,<br>Officer 6 <sup>th</sup> level              | National Centre for AIDS and STC Control, Dept. of health, Teku, Kathmandu, Nepal |
| 13.            | Dr K.A.I.U.<br>Imbulana, Training<br>Coordinator              | Directors Office, RDCP, Welisara, Ragama, Sri Lanka                               |
| 14.            | Dr (Ms) Sujatha<br>Samarkoon,<br>Consultant<br>Venereologist  | STD/AIDS Control Programme, Colombo, Sri Lanka                                    |

Dr G.R. Khatri, Dr (Ms) P Jagota, Dr D.S. Bam, & Dr Prahlad Kumar participated as **Faculty Members**. Besides Dr Rani Balasubramanian & Dr N.Selvakumar, Deputy Directors, TRC, Chennai; Prof Udai Pareek, Indian Institute of Health Management Research, Jaipur; Mr Avijit Home Choudhary, Epi-Centre Resource Person, WHO; New Delhi; and Dr S.B. Pande, Sr. Research Officer, Nuffield Institute for Health, Bhaktapur, all the Officers of NTI also participated as faculty members in the programme. The concerned staff took active participation.

As part of the training programme, the participants were taken to Broadway and Neelasandra RNTCP TB Treatment Centres by the CMO, SMO, Senior PHN and Sister Tutor. The technical sessions continued upto 21<sup>st</sup> December 2001.

The Sr. Librarian gave introduction of the library & information services to the delegates and Vol.36/3&4 of the NTI Bulletin was distributed to them. Library compiled a bibliography on "Management of TB Control Programme in SAARC countries" as a hand out for the delegates attending workshop.

**Concluding session:** Valedictory function was arranged in the NTI Auditorium

on 21<sup>st</sup> December 2001 and Lunch was hosted jointly by the Directors, NTI & STC for all. All the faculty members, facilitators, participants and staff of NTI, attended the function. Certificates were distributed to all the participants and momentos were given to the Faculty members and Facilitators of the programme.

#### **D. Visit of medicals/paramedicals for orientation**

**Faculty of Control and Bacteriology Section delivered lectures/demonstration to the following Medical and Paramedical students during their visit to the Institute:**

| <b>Year/<br/>Month</b>               | <b>Category</b>                      | <b>No</b> | <b>Organization</b>                                    |
|--------------------------------------|--------------------------------------|-----------|--|
| 4 <sup>th</sup> May<br>2001          | First year BSc nursing students      | 25        | St. Philomena School of Nursing, Bangalore             |
| 30 <sup>th</sup> May<br>2001         | Nursing students                     | 26        | Father Muller Nursing College, Bangalore               |
| 15 <sup>th</sup> June<br>2001        | District Health Officers             | 18        | State Institute of Health & Family Welfare, Bangalore  |
| 22 <sup>nd</sup> June<br>2001        | Nursing students                     | 32        | Adichunchanagiri College of Nursing, Chennarayapattana |
| 4 <sup>th</sup> July<br>2001         | Final year nursing students          | 51        | M.S. Ramaiah Institute of Nursing Education, Bangalore |
| 17 <sup>th</sup> July<br>2001        | BSc Nursing students                 | 29        | Nitte Institute of Nursing, Mangalore                  |
| 2 <sup>nd</sup> August<br>2001       | Nursing students                     | 29        | St John's College. Bangalore                           |
| 5 <sup>th</sup><br>September<br>2001 | Lady Health Visitors                 | 28        | Vani Vilas Nursing Training Institute, Bangalore       |
| 11 <sup>th</sup><br>October<br>2001  | Nursing students                     | 28        | JSS College of Nursing, Mysore                         |
| 16 <sup>th</sup><br>October<br>2001  | BSc final year microbiology students | 42        | Maharani Ammani College, Bangalore                     |
| 8 <sup>th</sup><br>November<br>2001  | Nursing students                     | 80        | Gautham College of Nursing, Rajajinagar, Bangalore     |
| 9 <sup>th</sup><br>November<br>2001  | First year BSc Microbiology students | 20        | SJRC College, Bangalore                                |
| 27 <sup>th</sup><br>November<br>2001 | Medical Assistants                   | 60        | Command Hospital, Air Force, Bangalore                 |
| 28 <sup>th</sup><br>November<br>2001 | Nursing students                     | 21        | St. John's College of Nursing,                         |
| 6 <sup>th</sup><br>December<br>2001  | Final year MBBS students             | 30        | St.John's Medical College, Bangalore                   |

| <b>Year/<br/>Month</b>               | <b>Category</b>                         | <b>No</b> | <b>Organization</b>                                      |
|--------------------------------------|---|-----------|--|
| 10 <sup>th</sup><br>December<br>2001 | BSc microbiology<br>students            | 25        | Sangli College, Maharashtra                              |
| 3 <sup>rd</sup> January<br>2002      | IInd year students                      | 42        | Victoria College of Nursing, Bangalore                   |
| 9 <sup>th</sup> January<br>2002      | BSc Microbiology<br>students            | 9         | Islampur College, Sangli, Maharashtra                    |
| 16 <sup>th</sup><br>January<br>2002  | BSc Microbiology<br>students            | 18        | Rajajinagar Parents Association<br>College, Bangalore    |
| 17 <sup>th</sup><br>January<br>2002  | Final year BSc<br>Microbiology students | 22        | Gautam College of Nursing, Bangalore                     |
| 18 <sup>th</sup><br>January<br>2002  | BSc final year students                 | 14        | Willington College, Sangli,<br>Maharashtra               |
| 22 <sup>nd</sup><br>January<br>2002  | BSc Microbiology<br>students            | 19        | Govt. Arts & Science College,<br>Bangalore               |
| 12 <sup>th</sup><br>February<br>2002 | BSc Microbiology<br>students            | 22        | Gandhi University, Kottayam, Kerala                      |
| 1 <sup>st</sup> march<br>2002        | Microbiology students                   | 11        | Indian Academy Degree<br>College, Kalyannagar, Bangalore |
| 11 <sup>th</sup> March<br>2002       | Microbiology students                   | 13        | Vishveshwarapuram College of<br>Science, Bangalore       |
| 13 <sup>th</sup> March<br>2002       | Microbiology students                   | 12        | East West College of Science,<br>Rajajinagar, Bangalore  |

## 16. MEETINGS HELD AT NTI

| Sl No | Particulars  | Participants  |
|-------|--|---|
| 1     | Inter-State review meeting and workshop sponsored by WHO at NICD/PSU, Bangalore, organised at NTI from 23 <sup>rd</sup> to 27 <sup>th</sup> April 2001 and addressed the gathering i.e., nodal officers and district surveillance officers from Karnataka, Tamil Nadu, Kerala, Andhra Pradesh, Pondicherry, Lakshadweep and other states and union territories                                       | Dr (Ms) P Jagota, Director  |
| 2     | Attended the inaugural session of "Prevention and Control of Fluorosis" sponsored by WHO at NICD/PSU, Bangalore, organised at NTI from 30 <sup>th</sup> April to 1 <sup>st</sup> May 2001  | Dr (Ms) P Jagota, Director  |
| 3     | Participated in detailed discussion on the ongoing research projects in Bacteriology Section held with the Dignitaries - Dr Adalbert Laszlo, Senior Consultant, TB Microbiology, Health Canada, Dr Klaus Jochem, Canadian Project Manager, Health Canada, and Dr Prahlad Kumar, Deputy Director, SAARC Tuberculosis Centre and SAARC Project Manager on 28 <sup>th</sup> & 29 <sup>th</sup> May 2001 | Dr (Ms) P Jagota, Director<br>Dr L. Suryanarayana, CMO(NFSG)<br>Dr (Ms) Sophia Vijay, Sr. TB Specialist<br>Dr V.K.Chadha, Sr. Epidemiologist<br>Dr VH Balasangameshwara, CMO(NFSG)<br>Dr B.Mahadev, CMO(NFSG)<br>Dr (Ms) Chitra Nagaraj, CMO<br>Dr Preetish S Vaidyanathan, SMO |
| 4     | Participated in the meeting for DTOs of Karnataka state held under the Chairmanship of DDG (TB), DGHS, at NTI, Bangalore on 6 <sup>th</sup> and 7 <sup>th</sup> December 2001. Assisted in preparation of Action Plan for implementation of RNTCP in these districts.  | All faculty   |



**17. PARTICIPATION IN MEETINGS, TRAININGS, SEMINARS, CONFERENCES, WORKSHOPS AND CONTINUING MEDICAL EDUCATION – PROGRAMMES OUTSIDE NTI, BANGALORE**

| <b>Sl No</b> | <b>Particulars</b>  | <b>Participants</b>   |
|--------------|---|---|
| 1            | Attended the meeting of Sub Group I on Leprosy, TB, STD/AIDS held at NICD, New Delhi on 3 <sup>rd</sup> April 2001.   | Dr (Ms) P Jagota, Director<br>Dr Preetish S Vaidyanathan, SMO |
| 2            | Attended the Workshop on 'Research Methodology' held at CMC, Vellore between 25 <sup>th</sup> – 28 <sup>th</sup> April 2001.  | Dr Preetish S Vaidyanathan, SMO                               |
| 3            | Attended the Seminar organised by Town Official Language Implementation Committee (TOLIC) held at CSIC, Tata Institute sponsored by Indian Institute of Science, Bangalore on 9 <sup>th</sup> May 2001.                       | Dr (Ms) Chitra Nagaraj, CMO                                   |
| 4            | Attended the Seminar on TB & Meningitis organised by Neurology Department of NIMHANS, Bangalore on 11 <sup>th</sup> May 2001.   | Dr B Mahadev, CMO(NFSG)                                       |
| 5            | Participated in the workshop on Laboratory Based Disease Surveillance at Chennai sponsored by World Health Organization from 23 <sup>rd</sup> to 25 <sup>th</sup> May 2001.   | Dr B Mahadev, CMO(NFSG)<br>Dr (Ms) Chitra Nagaraj, CMO        |
| 6            | Attended the technical Committee meeting of Karnataka State TB Association at the office of Karnataka State TB Association, Bangalore on 6 <sup>th</sup> June 2001.   | Dr (Ms) Chitra Nagaraj, CMO                                   |
| 7            | Meeting at STC, Hyderabad on 13 <sup>th</sup> July 2001 for finalisation of modalities for initiating Surveillance of Drug Resistance in Ranga Reddy district during September, 2001  | Dr B Mahadev, CMO(NFSG)                                       |
| 8            | As a WHO fellow, participated in a four weeks course on "Financing of Health Care" conducted by the Centre for Health Economics, Chulalongkorn University, Bangkok from 6 <sup>th</sup> to 31 <sup>st</sup> August 2001.      | Shri. K.P. Unnikrishnan, Chief Statistical Officer            |
| 9            | Attended the Extra-ordinary meeting of the Academic council of Rajiv Gandhi university of the health sciences, Karnataka on 14 <sup>th</sup> August 2001, held in the syndicate hall of the university, jayanagar, Bangalore. | Dr (Ms) P Jagota, Director                                    |

| <b>Sl No</b> | <b>Particulars</b>   | <b>Participants</b>  |
|--------------|--|--|
| 10           | Attended the "Sixth Joint Hindi Workshop" held at Kendriya Sadan, Koramangala, Bangalore from 27 <sup>th</sup> -31 <sup>st</sup> August 2001   | Sri. B.V. Venkatachalappa,<br>Computer   |
| 11           | Attended the District Surveillance Workshop at CMC, Vellore in August 2001.  | Shri. P.S. Jagannath, Statistical<br>Asst.   |
| 12           | Attended the inaugural session of the WHO workshop- training course on Man power development for organising the survey for assessing STH infection on 25 <sup>th</sup> September 2001 at NICD auditorium, NTI campus , Bangalore   | Dr (Ms) P Jagota, Director   |
| 13           | Attended workshop on Karnataka Integrated Health Policy 2001 held at Urban Health Research & Training Institute, Bangalore on 4 <sup>th</sup> October 2001.  | Dr (Ms) Chitra Nagaraj, CMO  |
| 14           | <p>Attended the 56<sup>th</sup> Conference on TB and chest diseases held at Chennai between 9<sup>th</sup> - 12<sup>th</sup> October 2001</p> <p>The following papers were presented</p> <ul style="list-style-type: none"> <li>• Revised National Tuberculosis Control Programme - a success story- Lupin TAI oration</li> <li>• "Outcome of re-treatment smear positive tuberculosis cases treated under DOTS in Bangalore city".</li> <li>• Performance of National Tuberculosis Programme during the year 2000 - A Report</li> <li>• Mixture model for analysis of tuberculin surveys</li> </ul> <p>Attended the conference as delegates</p> | <p>Dr (Ms) P Jagota, Director</p> <p>Dr (Ms) Sophia Vijay<br/>Sr. TB Specialist</p> <p>Miss. P.A. Mini, Statistical Officer</p> <p>Shri. P.S. Jagannatha, Statistical<br/>Asst.</p> <p>Dr V.K.Chadha,Sr. Epidemiologist<br/>Dr V.H. Balasangameshwara,<br/>CMO(NFSG)<br/>Dr Preetish S. Vaidyanathan,SMO</p> |

| <b>Sl No</b> | <b>Particulars</b>   | <b>Participants</b>   |
|--------------|--|---|
| 15           | Delivered two lectures on “Vaccine Preventable Diseases” & “Management Of Diarrhoea ”to Community Development Project Officers (CDPOs)/ Asst.CDPOs at the National Institute of Public Co-operation & Child Development, Yelahanka, Bangalore 27 <sup>th</sup> November 2001.  | Dr (Ms) Chitra Nagaraj, CMO   |
| 16           | Attended the meeting of the Academic council of Rajiv Gandhi university of the health sciences, Karnataka on 1 <sup>st</sup> December 2001, held in the syndicate hall of the university, jayanagar, Bangalore.  | Dr (Ms) P Jagota, Director  |
| 17           | Attended workshop on Vigilance Mechanism For Vigilance & Non Vigilance Functionaries conducted by the Institute of Socio-Economic Research & Action, New Delhi held at Bangalore from 20 <sup>th</sup> to 22 <sup>nd</sup> December 2001   | Dr B Mahadev, CMO(NFSG)   |
| 18           | Attended meet on “Health Care” at the 89 <sup>th</sup> Session of Indian Science Congress held at University of Lucknow from 3-7 <sup>th</sup> January 02.   | Ms. PA Mini, Statistical Officer<br>Mr. BA Eswara, Health Visitor   |
| 19           | <p>Participated and delivered lecture in the 12<sup>th</sup> Karnataka State Conference on TB &amp; Chest Diseases held at Bidar from 4 – 6<sup>th</sup> Jan 2002.</p> <ul style="list-style-type: none"> <li>• Dr K Nagappa Alva Oration “Genesis of Directly Observed Treatment Short course ”</li> <li>• Role of X-Ray as a Diagnostic tool in NTCP</li> <li>• Prevention and Chemoprophylaxis</li> <li>• Sputum Microscopy</li> <li>• Recording and Reporting system in the TB control programme</li> <li>• Problem of TB (Epidemiological aspects) and Tuberculin test</li> <li>• Panel Disucusion “Organization and structure under NTP and RNTCP “</li> </ul> | <p>Dr (Ms) P Jagota, Director</p> <p>Dr (Ms) Sophia Vijay<br/>Sr. TB Specialist</p> <p>Dr VH Balasangameshwara,<br/>CMO(NFSG)</p> <p>Dr B.Mahadev, CMO(NFSG)</p> <p>Mr. KP Unni krishnan,CSO</p> <p>Dr Preetish S Vaidyanathan,SMO</p> <p>Dr (Ms) Chitra Nagaraj, CMO<br/>(Moderator)</p> <p>Mr KP Unnikrishnan,CSO(Panelist)</p> <p>Ms. V.N. Saroja,Sr. PHN (Panelist)</p> <p>Mr. Ravindra,XT (Panelist)</p> <p>Mr. HD Surendra,LT (Panelist)</p> <p>Mr. BA Shivashankar,LT (Panelist)</p> |

| Sl No | Particulars  | Participants  |
|-------|--|---|
| 20    | Attended International Symposium on Current Developments in Drug Discovery for Tuberculosis Conducted by Astra Zeneca Research Foundation, India, The Global Alliance for TB Drug Development, World Health Organization and Tropical Diseases Research at National Science Seminar Complex, Indian Institute of Science, Bangalore from 14 <sup>th</sup> to 16 <sup>th</sup> January 2002 | Dr (Ms) P Jagota, Director<br><br>Dr (Ms) Sophia Vijay,<br>Sr. TB Specialist<br><br>Dr V.H. Balasangameshwara,<br>CMO(NFSG) |
| 21    | Attended Annual Symposium of IAMM, Karnataka Chapter. Conducted by IAMM, Karnataka Chapter and Bangalore Medical College, Bangalore at Medical College, Bangalore on 2 <sup>nd</sup> February, 2002  | Dr V.H. Balasangameshwara,<br>CMO(NFSG)   |
| 22    | Participated in the Joint meeting of WHO/GOI Collaborating Centres in India held at Jaipur between 5 <sup>th</sup> and 6 <sup>th</sup> February 2002   | Dr V.K.Chadha, Sr. Epidemiologist   |
| 23    | Attended CME on TB HIV for MO's of Mysore, conducted by DTCs, Mysore at IMA, Mysore on 17 <sup>th</sup> February, 2002   | Dr V.H. Balasangameshwara,<br>CMO(NFSG)   |
| 24    | Delivered lecture on Drug Resistance Surveillance for IMA members, Mysore 17 <sup>th</sup> February, 2002  | Dr B Mahadev, CMO(NFSG)   |
| 25    | Attended 3-day workshop on "Electronic Publishing of Scientific information" held at IISc, Bangalore from 8 <sup>th</sup> - 10 <sup>th</sup> March 2002.   | Ms Sudha S Murthy, Sr. Librarian<br>Mr. S. Nandish Prasad , Computer  |
| 26    | <b>Under RNTCP</b><br>Delivered a talk on "RNTCP" to DHOs and District and Taluka Programme officers of Karnataka at State Institute of Health & Family Welfare, Magadi Road, Bangalore on 15 <sup>th</sup> June, 2001   | Dr V.H. Balasangameshwara,<br>CMO(NFSG)   |
| 27    | Participated as facilitator in the Workshop for sensitization of private practitioners on RNTCP at Kannur on 22 <sup>nd</sup> June 2001  | Dr L. Suryanarayana, CMO(NFSG)<br>Dr V.K.Chadha, Sr. Epidemiologist   |
| 28    | Participated as facilitator in the Workshop for sensitization of Medical College faculty on RNTCP at Kozikode and Kannur on 11 <sup>th</sup> and 12 <sup>th</sup> of July 2001.  | Dr L. Suryanarayana, CMO(NFSG)<br>Dr V.K.Chadha, Sr. Epidemiologist   |

| <b>Sl No</b> | <b>Particulars</b>  | <b>Participants</b>  |
|--------------|---|--|
| 29           | Spoke on "RNTCP", "TB and HIV" and "Involvement and Role of Medical Colleges in TB Control" to Medical College students and faculty of BLDEA Sri. B.M. Patil Medical College, Bijapur on 13 <sup>th</sup> July, 2001                                      | Dr V.H. Balasangameshwara,<br>CMO(NFSG)                                      |
| 30           | Spoke on "RNTCP" to 21 DHO's, Programme Officers and Taluka Medical Officers of Karnataka who visited NTI as a part of their Management Training that was conducted at State Institute of Health and Family Welfare, Magadi Road, Bangalore on 19.07.2001 | Dr V.H. Balasangameshwara,<br>CMO(NFSG)                                      |
| 31           | Attended the meeting of BMP held at Mayo Hall , Bangalore on 26 <sup>th</sup> July 2001   | Dr (Ms) P Jagota, Director   |
| 32           | Invited to inaugurate the DOTS center and also for a panel discussion on "Role of medical faculty in RNTCP/ DOTS Programme" in Ambedkar Medical college and Hospital on 8 <sup>th</sup> October 2001  | Dr (Ms) P Jagota, Director   |
| 33           | Attended the meeting of BMP held at Mayo Hall , Bangalore on 19 <sup>th</sup> November 2001   | Dr (Ms) P Jagota, Director<br>Dr V.H. Balasangameshwara,<br>CMO(NFSG)        |
| 34           | Delivered talk on the "Role of smear microscopy under RNTCP" to the staff of Microbiology Dept.of St.John's Medical College, Bangalore 28 <sup>th</sup> January 2002.   | Dr B Mahadev, CMO(NFSG)  |
| 35           | Attended clinical session at St.Martha's hospital, Bangalore on DOTS services being provided by the hospital on 26 <sup>th</sup> February 2002  | Dr L Suryanarayana, CMO(NFSG)<br>Director i/c<br>Dr (Ms) Chitra Nagaraj, CMO |

## 18.SUPERVISORY & APPRAISAL VISITS BY NTI STAFF

### A. DTP/RNTCP Visits:

| Sl. No. | Place of Visit   | Period  | Faculty  | Purpose   |
|---------|--|---|--|---|
| 1       | Davanagere   | 2 <sup>nd</sup> & 3 <sup>rd</sup> May 2001.         | Dr V.H. Balasangameshwara,<br>CMO(NFSG)  | Appraisal of the preparedness for starting service delivery in the RNTCP district |
| 2       | Latur & Beed RNTCP districts, Maharashtra                                  | 18 <sup>th</sup> - 21 <sup>st</sup> June 2001       | Dr (Ms) Sophia Vijay,<br>Sr. TB Specialist   | Appraisal visits for 3 <sup>rd</sup> year RNTCP Districts                         |
| 3       | Madikeri, Udupi & Mangalore  | 8 <sup>th</sup> - 13 <sup>th</sup> July, 2001       | Miss P.A. Mini , SO<br>Ms. V.N. Saroja, Sr. PHN<br>Mr. S.G. Radhakrishna, SA<br>Mr. Ravindra, XT<br>Mr H.D. Surendra, LT | Supervisory visit to SR & SCC districts   |
| 4       | Solapur corporation, Solapur rural and Osmanabad,                          | 18 <sup>th</sup> - 23 <sup>rd</sup> September, 2001 | Dr V.H. Balasangameshwara,<br>CMO(NFSG) with STO, Maharashtra and WHO Consultant.  | Appraisal of the preparedness of RNTCP districts                                  |
| 5       | Barddhaman district  | 28 <sup>th</sup> September                          | Dr Preetish S Vaidyanathan , SMO   | Supervision of RNTCP districts  |
| 6       | P.G. Halli Maternity Home & Srirampuram Maternity Home, Bangalore          | September, 2001                                     | Lab Technician of NTI  | Supervisory visit to see the laboratory components of RNTCP                       |
| 7       | K.R Puram, Yelahanka , Anekal Hospitals and Attibele PHC (Bangalore Urban) | 8 <sup>th</sup> - 11 <sup>th</sup> October 2001     | Mr. KR Hemanth Kumar, HV<br>Mr O Srinivasalu, HV<br>Ms.Malati V Joshi, SA<br>Ms. MA Sharada, SA                          | RNTCP Supervision   |

| <b>Sl. No.</b> | <b>Place of Visit</b>  | <b>Period</b>                                  | <b>Faculty</b>  | <b>Purpose</b>  |
|----------------|--|--|---|---|
| 8              | Broadway and Neelasandra TB units (BMP)                          | 19 <sup>th</sup> October 2001                  | Mr. B.A. Eshwara, HV  | RNTCP Supervision   |
| 9              | Audugodi, DMC & Hanumantha nagar TB unit(BMP)                    | 20 <sup>th</sup> October 2001                  | Mr. N.K.Hemanth Kumar, HV<br>Mr. O. Srinivasalu, HV   | RNTCP Supervision   |
| 10             | Broadway, Hanumantha nagar, Neelasandra & Dasappa TB Units (BMP) | 17 <sup>th</sup> November 2001                 | Ms. V.N. Saroja , Sr.PHN<br>Mr. Zacharia Joseph, ST<br>Mr. N.K.Hemanth Kumar, HV<br>Mr. K.R.Hemanth Kumar, HV | RNTCP Supervision   |
| 11             | Gujarat  | December 2001                                  | Dr (Ms) Sophia Vijay, Sr. TB Specialist   | Co-ordinator for the internal evaluation of the RNTCP                     |
| 12             | Bangalore Rural  | 8 <sup>th</sup> December 2001                  | Dr L Suryanarayana, CMO(NFSG)   | Appraisal of the preparedness of Rural RNTCP district                     |
| 13             | Bangalore Rural  | 8 <sup>th</sup> December 2001                  | Dr V.H. Balasangameshwara, CMO(NFSG) with DDG (TB).   | Appraisal of the preparedness of Rural RNTCP district                     |
| 14             | Bangalore Rural  | 8 <sup>th</sup> December, 2001                 | Dr Preetish S Vaidyanathan , SMO  | Appraisal Team for implementation of RNTCP in Bangalore Rural district    |
| 15             | Bangalore Rural Ramanagara TU & MC                               | 8 <sup>th</sup> Dec 2001                       | Dr (Ms) Sophia Vijay, Sr. TB. Specialist  | As member of the Appraisal team for the propose service delivery of RNTCP |
| 16             | Barddhaman district  | 2 <sup>nd</sup> & 3 <sup>rd</sup> January 2002 | Dr V.K.Chadha, Sr. Epidemiologist   | Supervision of RNTCP  |

| <b>Sl. No.</b> | <b>Place of Visit</b>   | <b>Period</b>   | <b>Faculty</b>   | <b>Purpose</b>  |
|----------------|---|---|--|---|
| 17             | Bangalore Rural   | 11 <sup>th</sup> January 2002.                          | Dr V.H. Balasangameshwara, CMO(NFSG) with Director NTI | Reappraisal of the preparedness of Bangalore Rural RNTCP district |
| 18             | Guntur, AP  | 4 <sup>th</sup> - 6 <sup>th</sup> February 2002.        | Dr V.H. Balasangameshwara, CMO(NFSG)                   | Reappraisal of the preparedness of RNTCP district                 |
| 19             | DTC, Cuttack and 2 PHIs under it                                | 19 <sup>th</sup> & 20 <sup>th</sup> February 2002       | Dr V.K.Chadha, Sr. Epidemiologist                      | Supervisory visit   |
| 20             | Surat Municipal Corporation & Surat Rural district              | 24 <sup>th</sup> February to 2 <sup>nd</sup> March 2002 | Dr (Ms) Sophia Vijay, Sr. TB.Specialist                | Internal evaluation of RNTCP                                      |
| 21             | Cuddapah district Andhra Pradesh                                | 5 <sup>th</sup> - 7 <sup>th</sup> March 2002            | Dr Preetish S Vaidyanathan, SMO                        | As member of Appraisal Team for implementation of RNTCP           |
| 22             | West and East Medinipore, West Bengal                           | 12 <sup>th</sup> - 16 <sup>th</sup> March 2002.         | Dr V.H. Balasangameshwara, CMO(NFSG)                   | Appraisal of the preparedness of RNTCP district                   |
| 23             | North 24 Parganas, Murshidabad, & Malda districts (West Bengal) | 17 <sup>th</sup> - 23 <sup>rd</sup> March, 2002         | Dr V.H. Balasangameshwara, CMO(NFSG)                   | Internal assessment of RNTCP districts                            |
| 24             | Villupuram & Namakkal districts (Tamil Nadu)                    | 17 <sup>th</sup> - 22 <sup>nd</sup> March, 2002         | Dr B Mahadev, CMO(NFSG)                                | RNTCP Internal evaluation   |
| 25             | Hamirpur district (Himachal Pradesh)                            | 18 <sup>th</sup> - 20 <sup>th</sup> March               | Dr V.K.Chadha, Sr. Epidemiologist                      | As head of the six member committee for evaluation of RNTCP       |



**B. NSS to estimate ARI**

The following officials supervised the field work on regular basis during the year under report

| Districts visited                     | Name (s) of officer/official & Designation  |
|---------------------------------------|---|
| Delhi                                 | Dr V K Chadha, Senior Epidemiologist<br>Dr Preetish S Vaidyanathan, SMO<br>Mr. Shashidhar J Savanur, Senior statistical Officer,<br>Ms. Malati Joshi, Statistical Assistant<br>Mr. R Jitendra, Computer,<br>Mr. D Narayana Prasad, Team Leader,<br>Mr. Ramesh Kumar Srivatsava, FI<br>Mr. V Magesh, Field Investigator<br>Mr. Basudev Verma, Field Investigator<br>Ms. Suganthi P, FI<br>Mr. B V Venkatachalappa, Computer<br>Mr. K R Hemanth Kumar Health Visitor (HV) |
| Jaunpur                               | Dr V K Chadha, Senior Epidemiologist<br>Dr Preetish S Vaidyanathan, SMO<br>Mr. K R Hemanth Kumar, HV<br>Mr. O Srinivasulu, HV<br>Mr. D Narayana Prasad, Team Leader<br>Mr. Sanjay Singh, Field Investigator (FI),<br>Mr. Joydev Gupta, FI<br>Mr. Jameel Ahmed S, FI<br>Mr. Lakshminarayana, Investigator<br>Mr. Basudev Verma, Field Investigator<br>Mr. Ramesh Kumar Srivatsava, FI<br>Mr. J Balachander, Field Assistant  |
| Thane                                 | Dr V K Chadha, Sr. Epidemiologist<br>Dr (Ms) Chitra Nagaraj, CMO<br>Mr. Jameel Ahmed S, FI<br>Mr. Lakshminarayana, Investigator   |
| Purbi Singhbhum<br>Jamshedpur         | Dr V K Chadha, Sr. Epidemiologist<br>Mr. Shashidhar J Savanur, Senior statistical Officer<br>Mr. Joydev Gupta, FI<br>Mr. V Magesh, FI<br>Mr. Sanjay Singh, Field Investigator (FI)<br>Mr. Lakshminarayana, Investigator   |
| Bardhaman<br>(Planning & Supervision) | Dr V K Chadha, Sr. Epidemiologist<br>Dr Preetish S Vaidyanathan, SMO<br>Dr B Ramakrishna Goud, Medical Officer<br>Mr. Ramesh Kumar Srivatsava, FI<br>Ms Mini, Statistical Officer<br>Mr P S Jagannatha, SA<br>Mr. R Jitendra, Computer<br>Mr. D Narayana Prasad, TL<br>Mr. V Magesh, FI<br>Mr. Joydev Gupta, FI<br>Mr. Basudev Verma,FI   |

| <b>Districts visited</b>           | <b>Name (s) of officer/official &amp; Designation</b>   |
|------------------------------------|---|
| Ratnagiri<br>(Planning)            | Dr B Ramakrishna Goud, Medical Officer<br>Mr. Jameel Ahmed, Field Investigator<br>Mr. Ramesh Kumar Srivatsava, FI<br>Mr. Lakshminarayana, Investigator<br>Mr. D Narayana Prasad, TL |
| Cuttack<br>(Planning & initiation) | Dr V K Chadha, Sr. Epidemiologist<br>Mr. Lakshminarayana, Investigator<br>Mr. Jameel Ahmed, Field Investigator  |

## 19. HIGHLIGHTS OF FUTURE PLANS

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### 1. Health Internet Work (HIN) Pilot Project India- Tuberculosis

Dr Fabio Luelmo, Medical Officer, TB strategy and operations (TBS), WHO Geneva during his visit to NTI, Bangalore on 24<sup>th</sup> May 1999, introduced the concept of the project "Health Internetwork (HIN) Pilot Project, India for the disease Tuberculosis " for dissemination of Information nationally and globally through Intra and Internetwork. Under this project, information generated in India on various aspects of "Tuberculosis" and published in Indian/Foreign periodicals; non conventional media; programme reports, success stories; discussion board etc., will be made available under one portal on the internet which could be freely accessed nationally and globally. Full text of important publications will also be made available on the net. In this connection, Dr Shyama Kuruvilla, Global Health leadership Officer WHO, Geneva held meetings with Director I/c, Officer I/c Library & Publication & Sr. Librarian on 24<sup>th</sup> May 01. Subsequently several meetings were held to take timely decisions:

Mr. Ranjan Dwivedi Program Manager of the project conducted a meeting on 5.10.01 to have an initial understanding of the scope of the pilot; preparatory next step & listing of institutions and resource persons for different Project Components. Meeting conducted on 29<sup>th</sup> December 02 had detailed thread bare discussions on aim, scope and objectives of the project. In this meeting several decisions took place viz., (i) Dr Nirmala Murthy will be the project co-ordinator & conduct a need assessment survey in co-ordination with NTI & MS Ramiah Medical College, Bangalore. In a meeting conducted on 25<sup>th</sup> January 02, Director constituted a local working committee at NTI, Bangalore i.e., Director as Project Director - Project In charge- Mr.K.P.Unnikrishnan CSO; Project Consultants - Dr V.K.Chadha, Sr. Epidemiologist & Dr L.Suryanarayana, CMO (NFSG), Members, Dr. Lalitha S. Narayana, CMO (NFSG) & Ms. Sudha S Murthy, Sr. Librarian.

Participating Institutions under this project are :

1. NTI, Bangalore
2. TRC, Chennai
3. VP Chest Institute, New Delhi
4. LRS Institute of TB & Allied Diseases, New Delhi
5. TAI, New Delhi
6. New Delhi TB Centre, New Delhi

The NTI Bangalore will be nodal centre for content collection, selection, and consolidation of information.

Detail discussion took place regarding inventory of research data carried out by research institutions and individual researchers. It was decided to start off this task as early as possible with the data available at the NTI library. A decision was also taken to include the thesis from few selected Medical Colleges at Bangalore and Orissa.

The facets for selection of articles for inclusion into database and e-Publication are:

- (1) The NTI will take charge of content development by looking into following facets of publications quantified for the data base
- Whether the document can be included into the Data base Yes/No
  - Out of the documents selected for the data base, prioritise the **important documents for digitalization**, which, under the HIN project is known as “e-publishing”
  - Out of the documents included into the database, categorise them to suit the information needs of
    1. Beurocrats (i.e., policy makers, administrators etc.)
    2. Academicians
    3. Research Workers
    4. Programme Workers
    5. General Practitioners
    6. Paramedical Workers
    7. Pharmacists
    8. Common public

Quantification of published Data on TB from the year 1980 has started. Total of 896 documents were identified not only from participating institutions viz. NTI, Bangalore; TRC, Chennai; VP Chest Institute New Delhi; New Delhi TB Centre New Delhi; TB Association of India, New Delhi, but also from Medical Colleges, NGO's, TB Hospitals/Clinics; DTC's STC's etc. Meeting was conducted on 25<sup>th</sup> February 2002 to review the progress of work. During the meeting, it was decided that details of the data quantified may be started hence forth. Acceptable International Standard template will be followed for the data entry. A detail discussion took place regarding collection, selection and collation of data. Finally it was decided: that (1) the 5 participating institutions viz. NTI, Bangalore, TRC, Chennai, VP Chest Institute, Delhi & Tuberculosis Association of India, New Delhi will send the data in soft copy for inclusion in the data base; (2) Criteria to be applied for selecting the data mainly depend on the needs of users/user requirement. A thorough scrutiny should be done with regard to thesis from PG Medical students. It was also decided that “NTI Bangalore” would be the nodal centre for selecting documents into database. A consensus was arrived that the participating institutions will be made responsible for collecting data, Hard/Soft from NGO's and other research institution of their regions

### **Need Assessment Survey**

Needs assessment survey was conducted by Foundation for Research in Health Systems, Ahmedabad at the state and district level (Kanakapura and Doddaballpura Taluks) to assess the information needs of users at different levels. One Medical Officer, Staff of Control and TB & HIV sections from NTI participated in the data collection. The data was collected by using structured pretested proformae. Separate questionnaire were used for Programme administrators, Researchers, Government Medical Officers, Private Medical Officers, Laboratory Technicians and Para-medical workers. In total, 30 government health care providers, policy makers and private health care providers at the state level and 135 government and private health care providers at the district level were interviewed. The information

coded were classified into clinical policy, Research, Programme and Medical aspects of TB. According to the survey, more than 50% of the interviewees have knowledge about tuberculosis. Administrators, Researchers and a good number of private doctors have the knowledge of Internet and its use. Many of the service providers desired CME and Refresher training. It was decided that Dr Nirmala Murthy will submit the report in the workshop to be conducted at NTI, Bangalore during May 2002 to present the data collected in the survey.

- 2.** Enhancement of training activity in RNTCP keeping in pace with the extension of RNTCP to other districts.
- 3.** Intensification of monitoring and supervision of NTP and RNTCP.
- 4.** Commissioning of P3 system for AMRU.
- 5.** Installation of a lift in the Dr PV Benjamin memorial block [Library & Training Block].
- 6.** Construction/Modification of Guest rooms in 3<sup>d</sup> floor of Dr PV Benjamin memorial block.

## 20. VISITORS

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### From Ministry of health and family welfare

September 2001

Dr S.P. Agarwal, Director General of Health Services, Ministry of Health & Family Welfare, New Delhi visited the Bacteriology section on 14<sup>th</sup> September, 2001. He was taken round the section and was briefed about the upgraded facilities and activities of the section.

October 2001

Mr Javed Chowdhary, Health Secretary, to Government of India, Ministry of Health & Family Welfare visited the institute on 14<sup>th</sup> October 2001. He was briefed about the various activities of all sections. A detailed presentation was made on progress of the on going "NSS-ARI in different parts of India "

January 2002

Dr BM Das Director (EMR) & Sri Jaswant singh, Deputy Director (Admn), DGHS visited the NTI on 2<sup>nd</sup> January 2002 on official inspection . They also visited the library to know the resources and services available .

Padmashree Dr C.P. Thakur , Honourable union minister of Health and family welfare visited the institute on 19<sup>th</sup> January 2002. In this connection, a technical co-ordination meeting was held with the faculty of the institute (PHOTOS)

### Others

May 2001

During the visit of Dr Fabio Luelmo, MO from WHO, Geneva on 24<sup>th</sup> May, 2001 the draft protocol "A collaborative cohort study on breakdown to tuberculosis among HIV positive persons." was discussed. During the visit of Dr P. Kumar, Deputy Director, SAARC TB Centre and Dr. Klaus Jochem, of Health Canada from SAARC on 28<sup>th</sup> & 29<sup>th</sup> May, 2001, the material on "TB & HIV" taught in NTI training courses and the draft protocol on "A collaborative cohort study on breakdown to tuberculosis among HIV positive persons" were discussed.

The SAARC - Canada TB & HIV project team visited the Institute on 28<sup>th</sup> & 29<sup>th</sup> May, 2001 and had meeting with the Director followed by visit to the Bacteriology Section and a detailed discussion on the ongoing research projects in Bacteriology Section. The team consisted of Dr Adalbart Laszio & Dr Klaus Jochem from Health Canada and Dr Prahlad Kumar, Deputy Director of SAARC TB Centre.

- June 2001 Dr Vishalakshi, Consultant Microbiologist from LRS Institute of TB & Allied Diseases, New Delhi visited the section on 8<sup>th</sup> June, 2001 and she was briefed about the activities of the Bacteriology section.
- Dr Khaleelulla, WHO Fellowship Officer from SEARO, New Delhi visited the NTI on 12<sup>th</sup> June, 2001 and a meeting was held to discuss the involvement of the NTI as collaborating center for training and he was also briefed about the activities of different sections of the institute. He visited the library to know about the resources and services available on tuberculosis for users.
- Mr. Nandana N Jayaram, a second year medical student from University of Dundee, UK who visited the TB-HIV section on 15<sup>th</sup> June, 2001 was briefed about the activities of the section and was given education material.
- August 2001 Mr. Avijit Home Choudhury, EPI-Centre resource person from WHO SEARO, New Delhi visited the Institute on 8<sup>th</sup> August 2001 & addressed faculty and staff of the Institute about efficient ways of maintenance of computers free from viruses and effective ways of keeping of backups of computer files for archival & prospective use. He demonstrated in Library about important points to note while taking backups routinely and from emails.
- February 2002 Mr Postma, Chief Adviser, DAN-TB, Orissa visited the Bacteriology section on 28<sup>th</sup> February, 2002.
- March 2002 Three Medical officers from Korea who were at NTI as part of their overseas training on TB, spent time in the library for browsing information.

## 21. IMPORTANT DAYS CELEBRATED AT NTI

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| 15 <sup>th</sup> August 2001                  | Independence Day & Launching of the NTI website.                         |
| 6-12 September 2001                           | Hindi Rajbhasha week   |
| 14 <sup>th</sup> September 2001               | Hindi day  |
| 14-15 September 2001                          | National Workshop on Involvement on Medical Colleges in RNTCP            |
| 2 <sup>nd</sup> October 2001                  | Gandhi Jayanthi  |
| 31 <sup>st</sup> Oct-6 <sup>th</sup> Nov 2001 | Vigilance awareness week   |
| 8-21 December 2001                            | SAARC trainers training on TB Control Programme Management               |
| 26 <sup>th</sup> January 2002                 | Republic Day   |
| 7 <sup>th</sup> March 2002                    | Cultural Function by Trainees of 87 <sup>th</sup> regular training batch |
| 24 <sup>th</sup> March 2002                   | World TB Day   |

### **(Photos WHEREVER AVAILABLE)**

#### **Awards and Honours**

Dr (Ms). Prabha Jagota, Director : was awarded "LUPIN-TAI ORATION" for the paper titled "Revised National Tuberculosis Control Programme : A Success story" at the 56<sup>th</sup> National conference on Tuberculosis and Chest diseases held at hotel Le Royal Meridien, Chennai from 9<sup>th</sup> to 12<sup>th</sup> October 2001.

Dr (Ms). Prabha Jagota, Director : was awarded The first Dr K. Nagappa Alwa Oration for the paper "Genesis of Directly Observed Treatment Short Course (DOTS)" , delivered in the 12<sup>th</sup> Karnataka State Tuberculosis and Chest diseases conference held at Bidar , Karnataka from 4<sup>th</sup> to 6<sup>th</sup> January 2002.

Dr. V.K. Chadha, Sr. Epidemiologist : was awarded "Dr. C. Srinivasa Rao award" for the paper "The Annual Risk of Tuberculous Infection in a south Indian Metropolitan city" (presented in the 55<sup>th</sup> National Conference on TB & Chest Diseases) during the 56<sup>th</sup> National Conference on TB and Chest Diseases held at Hotel Le Royal Meridien, Chennai from 9<sup>th</sup> - 12<sup>th</sup> October 2001



## **ACKNOWLEDGEMENTS**

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