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# ACTIVITY REPORT

## 2004







## Preface

*We are living in an increasingly complex world in which target exerts a strong influence on the character of actions and events and often becomes more important than accomplishment. As we approach the target date of elimination one is constantly buffeted by numbers. One should remember that fractions are no more important than patients and behind every number there is a patient live with feelings. Dr. Claire Vellut, the founder member of Damien Foundation India Trust, once remarked that the activity report should be a good mix of statistics and stories delineating our fight against the scourge. That is what we have done in this activity report for the year 2004. We have depicted in the report the accomplishments and shortfalls, stories of triumph and sadness. All these have been made possible owing to the committed involvement of my colleagues, responsive encouragement from the members of the trust and unstinted support from Damien Foundation Belgium, DGDC and European Union. A big thanks to innumerable persons afflicted with the disease and numerous health professionals for the generosity in allowing us to be associated with them. I solicit your critique.*



**P. Krishnamurthy**  
Secretary,  
Damien Foundation India Trust

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### ***About the picture on the front cover.....***

It is interesting to note that in north Bihar one often finds people with tattoo marks on their body, which on careful scrutiny show that they are made along the border of a hypo-pigmented patch with sensory deficit. The belief is that by placing the tattoo along the border of leprosy patch it acts like a 'barrier' preventing its spread. One can see the tattoo mark on the hand of the lady (from Dharbanga district in Bihar) in the picture.

## **1. Introduction:**

Ever since Damien Foundation India Trust made the first sortie into the world of leprosy it has been a story of rewarding and refreshing trip down the challenge lane: from area-specific dispensation to specialized projects to functional support to the Government. Especially, the last three years have been invaluable for the organization and invigorating for its personnel. The year 2004 opened up new vistas of collaboration and reinforced partnership with major players in the programme and unfolded new insight into intricacies of implementation problems. Concerted effort of all the partners has resulted in considerable reduction in the problem of leprosy and remarkable achievement in DOTs coverage.

## **2. Trust:**

Mr. Muthumalla Reddiar whose association with Damien Foundation has been long (more than 50 years) and extremely valuable retired from the membership of the trust on 9<sup>th</sup> October 2004. Mr. R. Subramanian, a widely acclaimed Chartered Accountant, became a member of the trust which now consists of the following members:

Mr. Marcel de Doncker	Chairman
Dr. Claire Vellut	Vice Chairman
Mr. Rigo Peeters	Member
Professor Lakshmanan	Member
Mr. A.L. Somayaji	Member
Mr. R. Subramanian	Member
Dr. P. Krishnamurthy	Secretary

## **3. Aim and Strategy:**

The aim is to accomplish sustainable Leprosy and Tuberculosis control that deliver quality service in supported areas. The principle strategy of DFIT is to strengthen and support Government infrastructure and help in augmenting the competence of the General health system in implementing Leprosy and Tuberculosis control. Through consultation areas of need are highlighted and appropriate support activities and mechanism are identified. In leprosy control, the projects provide secondary and tertiary care services (management of complications and reconstructive surgery among cases referred to them) and/or support activities aimed at developing the capacity of Government infrastructure in implementing primary care service (diagnosis and management of leprosy) in either a district as a whole or part of a district. In tuberculosis control, the projects offer a range of services from direct implementation in populations ranging from 100000 to 2 million to support Government programme in either a district as a whole or part of a district. Information



dissemination, knowledge building and awareness generation are directed at not only the programme staff but at the general practitioners, postgraduate and undergraduate medical students.

#### **4. Projects:**

Damien Foundation India Trust supports Leprosy eradication and Tuberculosis control in three kinds of projects: Non Government Organisation (NGO)-operated (10), directly run (2) and District Technical Support (36). The projects, which are located in 6 States, provide technical support to the general health staff of the Government in building their competence in managing leprosy cases including those with disability. They also offer secondary and tertiary care services to leprosy cases in need and extend diagnostic and treatment service to patients with Tuberculosis in defined populations. Of the 36 Technical support teams two provide support only to Tuberculosis control (Revised National Tuberculosis Control Programme- RNTCP) and the rest to both Tuberculosis and Leprosy control. Additional staff in the form of a core team consisting of experienced health professionals takes care of the needs of training, supervision and monitoring where RNTCP support has been taken up. In addition, DFIT has succeeded in developing the capacity of Medical College Hospital at Patna in Bihar to start reconstructive surgery service. The workforce of DFIT consists of 37 Doctors, 77 Supervisors, 2 Senior Laboratory supervisors, 2 Senior TB Lab Supervisors, 18 Laboratory technicians, 6 Physio technicians, 19 hospital staff, 63 drivers and 49 administrative staff.

##### **4.1. NGO projects:**

These projects, which are 12 in number, are situated in 6 states. Some of them provide specialized service exclusively for leprosy while others provide service to TB cases in addition as Microscopy centre of TB unit. The principle aim of these projects is to support and strengthen Government infrastructure. The projects were evaluated in 2004 by teams identified from centres supported by DFIT.

##### **A. Ambalamoola (Nilgiris Waynad Tribal Welfare Society hospital):**

The project at Ambalamoola located in Nilgiris district of Tamilnadu manages Leprosy and Tuberculosis control in a predominantly tribal population of about 100000. DFIT provides grant-in-aid to the project to manage leprosy and TB inpatients at its hospital. In 2004 a total of 14 leprosy and 44 TB patients were treated as inpatients in the project.

##### **B. Amda (Claver Social Welfare Centre):**

This project located in Saraikeela in Jharkhand is involved in providing technical assistance in Leprosy and Tuberculosis to general health staff in the district as

part of the District Technical Support team. The centre has a hospital to take care of patients with complications. It managed 34 patients with reaction in 2004.

##### **C. Arisipalayam (St. Mary's leprosy and TB centre):**

The project provides support to leprosy control in Salem town. It has assisted the General health staff in the main hospital and 21 Corporation health facilities to manage leprosy cases. It manages complicated cases including those in reaction referred by the Government health centres. It also assists the Government in disseminating correct information about leprosy and Tuberculosis through well-trained volunteers from the society. The project has trained the district staff in managing leprosy cases with disability and assists the programme officer in monitoring the POD programme. About 811 health staff were trained in Prevention of disability. The district has about 900 patients with disability. The project has been given two more urban areas (Namakkal and Rasipuram) for assisting the Government in establishing MDT service in these towns. The project also manages Tuberculosis cases from 100000 population allotted to it in addition to providing TB unit support to the whole town. It has one MO, one STS and one STLS who report directly to the DTO. Involvement of the Medical practitioners and community in the programme is very good. In 2004 general practitioners referred 170 leprosy suspects and 109 TB suspects out of which 10 leprosy and 30 TB cases were diagnosed. Community volunteers referred 1890 leprosy and 182 TB suspects out of which 20 leprosy cases and 42 TB cases were diagnosed.

##### **D. Aundipatty (Arogyaagam):**

The project located in Aundipatty in Theni district manages leprosy cases with complications and supports RNTCP in 8 PHCs. It assessed 432 leprosy cases living in the area from which 96 patients with trophic ulcers were identified. These cases were provided footwear, counseling and monitored for self-care practice. It runs a microscopy center and assists the Government staff in identifying DOTs providers for TB cases. Training has been given to 32 Village Health Nurses (VHN) to manage patients with plantar ulcer.

##### **E. Delhi (Leptra-DFIT leprosy and TB control project):**

The project located in Southwest Delhi supports Leprosy control in 2 million population and manages Tuberculosis control in one million population. It has 10 centres (2 TB units) in the project area with each centre having one experienced and well-trained microscopist-cum-field worker who does sputum microscopy for respiratory symptomatics referred to or coming voluntarily to the centre, provides treatment to TB cases and disseminates information to the community about leprosy and tuberculosis. Four of the ten centres were established in 2004. Each centre has on an average about 100 TB cases under treatment. Each worker is provided with a motorbike for mobility. For every 5 centres there is a supervisor.

A Medical Officer coordinates the project. Support to leprosy is in the form of supervisory visits to Government units for verification of diagnosis and records. One of the positive features of the project is the involvement of 64 General practitioners and community volunteers in leprosy and TB control for referral of suspects, follow-up treatment and DOTs supervision. In the district 511 leprosy cases were detected in 2004 of which only 12 were detected by the project, the remaining by the Government centres. The ten centres reported 27657 outpatient attendees out of which 3235 were symptomatic and 618 were positive (19.5%). A total of 1211 TB cases were detected in 2004. The cure rate for sputum positive cases was 88%.

#### **F. Dindigul (Poornasukha leprosy and TB project):**

The project located in the town has developed the capacity of the general health system to manage both leprosy and tuberculosis cases. The 5 municipal health centres manage leprosy cases on their own and send Respiratory symptomatics to the district hospital or the project hospital for sputum microscopy. The patients with diagnosis of tuberculosis are referred back and treated by the health centres. The project has also been recognized by state government for establishing MDT service in urban areas - Palani, Karur, Kulithalai and Kodaikanal. The municipal health centre staff (32) in Dindigul and Karur was given orientation training on management of leprosy and its complications. Awareness training was held for municipal councilors in Kulithalai, for community organizers in Palani and Kulithalai. 30 General Practitioners were trained out of whom 14 were involved in RNTCP – suspecting and referring, and providing treatment. In Palani, Multipurpose health workers diagnosed and managed leprosy cases in the absence of Medical Officer. In Karur the MDT service was established with the help of School health Officer. There is no Municipal Health centre at Kulithalai. A Paramedical worker provided MDT service. Training was given to 30 General Practitioners on RNTCP.

#### **G. Fathimanagar (Holy Family Hansensorium):**

The Holy Family Hansensorium project which is located in Fathimanagar in Trichy has multifarious activities. It provides mainly secondary and tertiary care for leprosy. Patients with severe disability or reaction referred from districts are managed. The project also provides reconstructive surgery service to patients with disability. Every year about 30 patients undergo surgery at the centre. In 2004 a total of 24 patients with disability underwent reconstructive surgery. It has also taken upon itself to train the PHC staff in Pudukottai and Trichy districts in managing leprosy cases including those in reaction and with plantar ulcer. In all 139 village health nurses in 6 blocks were trained in managing patients with disability. It is really heartening to note that all of them are actively involved in guiding and monitoring patients with disability. A total of 41 patients with reaction and 598 patients with plantar ulcer were managed in 2004. The project

also takes care of TB cases reporting to the centre. It is also recognized as a zonal training centre by the state for training of various cadres of Government staff in leprosy. The positive feature of this project is its adherence to the true spirit of collaboration with the Government. It remains a standing example of the concept of technical support to the general health system.

#### **H. Kavali (Asanikethan):**

The project in Kavali is recognized as TB Unit covering a population of 500000. The unit which has one MO, one STS and one STLS functions under the direct control of DTO. It also offers support to leprosy programme in the Kavali urban (100000 population) by way of training, verification of diagnosis and records.

#### **I. Nagepalli (Assisi Sevasadan Hospital):**

The project is located in one of the tribal districts of Maharashtra- Gadchiroli. It supports leprosy and TB control activities in 5 PHC areas in addition to managing cases, both leprosy and TB, reporting at its hospital from 100563 population surrounding Nagepalli. Forty traditional healers were trained to provide treatment (DOTs), suspect and referral.

#### **J. Nellore (DFIT Urban Leprosy and TB Centre):**

The project operated directly by DFIT supports leprosy and TB control in urban area. Urban health centres manage leprosy cases. Those with complications are referred to the centre. The project is also a microscopy centre for Tuberculosis. It has facility for inpatient management of cases. The project offers reconstructive surgery service to patients with disability. It has taken upon itself to provide support to POD component of the programme in the district. Multipurpose health workers were trained to offer counseling to patients with disability and monitor them for self care practices. Facilities of this centre (including personnel) are utilized for training of government health staff in leprosy and RNTCP including laboratory aspects.

#### **K. Pavagada (Swami Vivekananda Integrated Rural Health Centre):**

The project located in one of the backward areas of the district of Tumkur is recognized to function as TB Unit covering two taluks. It offers diagnostic and treatment service to patients with leprosy or tuberculosis referred to or reporting voluntarily to its centre. It also has facility for inpatient management of complicated cases and reconstructive surgery.

#### **L. Wazirganj (BAM India):**

The project provides inpatient care to leprosy cases with complications. It will cease its activities from March 2005.

#### 4.2. District Technical Support Team (DTST):

The team in each district consisting of a Medical Officer and two to three supervisors is responsible for identifying problems in specific areas and assisting the DTO in taking corrective actions. The team identifies the training needs of different cadres involved in RNTCP and improves their capacities either through short time job oriented formal trainings or coaching the individual staff in the field. The team is also responsible for identifying problems in functioning of the labs and assisting the DTO in taking measures to correct them. The aim is to enable the district staff to become fully competent to provide quality services.

##### A. South:

There are 6 teams covering 6 districts, 3 in Andhra Pradesh, 2 in Karnataka and 1 in Kerala. The districts covered in Andhra Pradesh include Anantapur, Kadapa and Nellore. Each district has a team consisting of a Medical Officer with two to three supervisors with extensive experience for supporting both Leprosy and Tuberculosis control in the district. In Karnataka, teams are placed in Bangalore urban and Tumkur districts and in Kerala in Trivandrum. The teams in these districts support only RNTCP. The team was placed in Anantapur in 2002, in Nellore, Bangalore urban, Tumkur and Kadapa in 2003 and in Trivandrum in 2004.

##### B. North:

In Bihar and Jharkhand, DFIT has placed teams in 22 and 8 districts respectively and they support both NLEP and RNTCP. There is also a core team with members identified from projects supported by DFIT. The core team consisting of experienced doctors, lab supervisors and field supervisors is mobilized to support training and monitoring activities. Among the districts in Bihar supported by DFIT only Vaishali was under RNTCP in the beginning and Katihar was added towards the end. Among 8 districts in Jharkhand supported by DFIT, RNTCP was started in 7 districts. The projects in Bihar are cofinanced by DGDC, Belgium and the projects (teams) for TB in Jharkhand by European Union (EU).

### 5. Activities and outcome in 2004:

#### 5.1. Leprosy:

##### A. NGO Projects:

Five projects (Arisipalayam, Dindigul, Fathimanagar, Nellore and Delhi) took up the task of establishing MDT services in 10 urban areas. They identified service points and community volunteers, trained them and provided the necessary supervisory inputs. Eight projects provided service to leprosy cases with complications like reactions and trophic ulcers. Totally 852 patients were managed as inpatients in the eight projects, 68 for reactions and 784 for plantar ulcers. In three projects (Nellore, Fathimanagar and Pavagada), 32 patients underwent reconstructive surgery. Total number of new cases detected in the projects was 214 (MB 77).

### COMPETENCE AND COMMITMENT

Mr. Jesuraj, aged 40, from a village 10 kms from Dindigul visited Kamala Nehru Municipal Health Centre in Dindigul Urban with a complaint of severe itching all over the body. Dr. Silambu Selvi, Medical Officer of the Municipal Health center noticed the shininess of the face and the thickening of the earlobes. She examined the body and found multiple ill-defined patches with normal sensation, and both his Lateral Popliteal nerves were thickened. She prescribed Anti histamine tablets for itching and asked the patient to come for review after a week.



The patient visited the health center as advised by the Medical Officer. The Doctor examined him again and diagnosed Leprosy. The patient was referred to St. Josephs Hospital for skin smear test. The result was bacteriologically positive (Left ear lobe = 3+, Right ear lobe = 4+, Right eye brow = 2+). Patient was referred back to the Municipal health center with skin smear result. Patient had never been treated before. The Medical officer wished to treat the patient though he did not belong to her area of operation. MB MDT treatment was started on 27-9-04.

The Municipal Health Centre, which has been involved only in Maternity and Child health programs, has shown that with the proper guidance it can accept the responsibilities under NLEP and help in the integration of Leprosy services in the general health setup.



##### B. Districts in the South (DTSTs):

The District Technical Support Teams in the three districts in Andhra Pradesh have been supporting NLEP for the past three years. Even though the mandate was to place one team for the three districts, DFIT placed one team in every district. Each team has one Medical Officer and two to three Supervisors with mobility. This is to enable them to support both leprosy and tuberculosis control. Vertical staff who have been posted at the PHCs is still carrying out leprosy activities to a large extent. There was undue emphasis on case detection that resulted in quite a large number of PB cases including Single lesion cases being



detected in the year. The vertical staff indulged in what is called rapid enquiry survey in specific areas where the prevalence was found to be rather high. In Nellore and Kadapa about 80% of the new cases detected in 2004 were PB. In Anantapur where there was no regular DLO and no routine surveys the MB proportion was 40%. The teams validated the new cases detected during the year. Wrong diagnosis was found to be 0.6%, 1.7% and 1.9% respectively in Anantapur, Kadapa and Nellore respectively. The re-registration of cases was also found to be 3.2%, 0.7% and 3.3% in the three districts. Discharge of cases was as per expectation in Anantapur and Nellore but in Kadapa as against 700 cases that should have been there on record only 371 were there indicating that a large number of cases must have been released as otherwise deletions. PHC involvement in diagnosis and management is satisfactory. Involvement of the subcentres in the programme is less than expected. It varies from 14% (Anantapur) to 88% (Nellore). MDT services are available on all days at all the PHCs in the three districts. Total number of leprosy cases detected in the three AP districts was 3092 (916 MB). The PR in the three districts was 1.73 and NCDR 3.37.

### C. Bihar (DTSTs):

#### i. Prevalence:

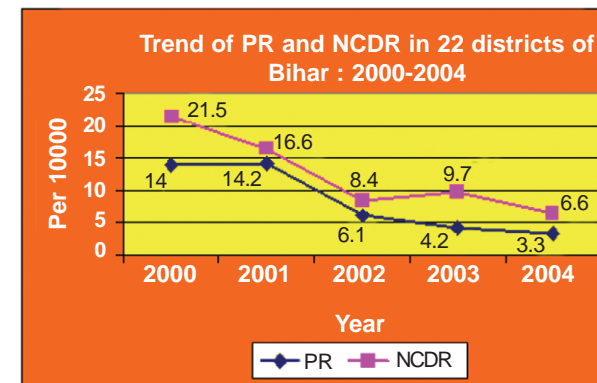
The overall prevalence of leprosy in the 22 districts was 3.33 per 10000 at the end of December 2004. The prevalence for Bihar state with 37 districts at the same point of time was 3.52 per 10000. None of the districts had a prevalence of more than 5 per 10000. There were 7 districts with a prevalence of less than 3 per 10000. The highest prevalence (4.89) was in Kishanganj followed by Nalanda (4.49) and the lowest prevalence was in Khagaria (1.85) followed by Vaishali (2.40). Discharge of cases in all the districts was within the expected level as indicated by the fact that PD ratio in any of the districts did not exceed 0.80.

#### ii. New cases:

In the 22 districts 36891 new leprosy cases were detected in 2004 of which 9726 were MB (26.36%), 7069 were children (19.16%), and 320 (0.86%) had disability. A high level of new cases was reported in Siwan, Sitamarhi, Purnea, Araria, Kishanganj, Katihar, Madhepura, Saharsa, Supaul and Rohtas. This is correlated by very low MB proportion and high proportion of wrong diagnosis and re-registration in these districts indicating a large contribution of active case detection activity to new case detection. Frequent mass case detection campaigns and involvement of large number of vertical contractual staff contributed to the situation. With the decision to stop LECs and SAPELs and retrenchment of contractual staff the situation is bound to improve.

#### iii. Trend of disease:

A look at the trend of the disease over the last five years shows a 77% reduction in prevalence and 57% reduction in NCDR. Highest reduction (86.1%)



was seen in Katihar followed by Madhepura. Lowest was in Gaya (62.9%). The base prevalence was very high in Purnea (23.7), Madhepura (21.2) and Supaul (20.2). The reason for such a large reduction in PR in Madhepura, Khagaria, Saharsa, Araria, Purnea and Sheohar could be due to a large decline in new case

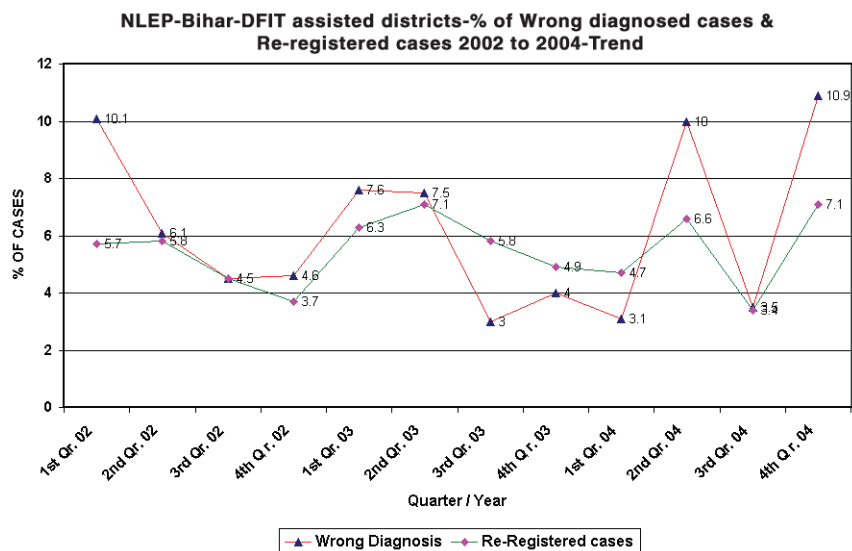
## TO ERR IS INHUMAN !



Mrs. Annesha Khatoon, a 30 year old lady, a resident of Rajjak Babu Tolla under Pandalu PHC in Madhubani district of Bihar, reported to the PHC with an erythematous and anaesthetic patch over right leg, on 01-03-03. The MO i/c of PHC confirmed it as a case of leprosy and started PB-MDT. On 25-4-03, a validation team examined her and declared as not a case of leprosy and MDT was stopped. A couple of months later she developed pain and burning sensation over the right leg and sole and consulted a physician at Dharbanga Medical College on 26th August 2004. She was diagnosed there as a case of MB leprosy and MB MDT was started. One month later she developed right foot drop. Steroid was started on 26th Oct'04. When we saw her (in December) she said that pain and burning sensation were reduced. On examination the right lateral popliteal nerve was found to be thickened, nodular but not tender. The weakness in the foot was still there.

detection. In Supaul it could be due more to better discharge of cases. New case detection in the 22 districts fell by 50% in 2002 and has remained almost around 40000 ever since. The reduction of PR in 2002 was predominantly due to decline in new case detection. Subsequently it was mainly due to better case holding as shown by low PD ratio (0.7, 0.9, 0.7, 0.4 and 0.5 in the year 2000, 01, 02, 03 and 04 respectively).

**iv. Wrong diagnosis and re-registration:**



An analysis of the trend of wrong diagnosis (WD) and re-registration (RR) in the districts over the two-year period from January 2002 to December 2004 indicates close correlation between peaks of WD and RR and case detection campaigns. Of the 17024 new leprosy cases validated during the year by the teams in 22 districts 1329 (7.8%) were found to be wrongly diagnosed and 977 (5.7%) reregistered. Wrong diagnosis was highest (19.4%) in Araria followed by Purnea (18.3%). It was lowest in Kishanganj (2.5%) followed by Madhubani (2.7%). Eleven districts had a wrong diagnosis of more than 5%. Similarly, re-registration was highest in Araria (16%) followed by Purnea (11.8%) and Katihar (11.7%). It was lowest in Madhubani and Saharsa (2.2%). There were 9 districts with re-registration of more than 5%.

**v. Treatment completion:**

Treatment completion for MB (2002 cohort) was 90% and for PB (2003 cohort) was 88%. There were only two districts with less than 80% treatment completion

for MB and three districts for PB. In two of these districts (Madhubani and Vaishali) treatment completion for both MB and PB was less than 80%.

**vi. Integration:**

Involvement of the PHC and Subcentres in Leprosy programme was good in all the districts. MDT services were available in all the districts on all working days.

**PRIMARY HEALTH CENTRE WITH A DIFFERENCE.....**

Sukkampatti PHC covering a population of 49000 is one of the PHCs in Trichy district in Tamil Nadu which is providing quality MDT service including POD care. Dr.Sumathi and her team of 9 village health nurses manage not only simple

cases of Leprosy but also patients in reactions and with disabilities. Sukkampatti PHC is an example of how the functionaries at health facilities with some guidance can make a world of difference to the community.



Dr.Sumathi and her team at Sukkampatti PHC



Palaniswamy who had ulcers in the feet doesn't have ulcers nor scars following intense monitoring of self-care by VHN, Mrs.S.Saroja.



Mrs.Saroja, VHN, counseling an MB Patient, Mrs.Chinnammal.



**D. Jharkhand:**

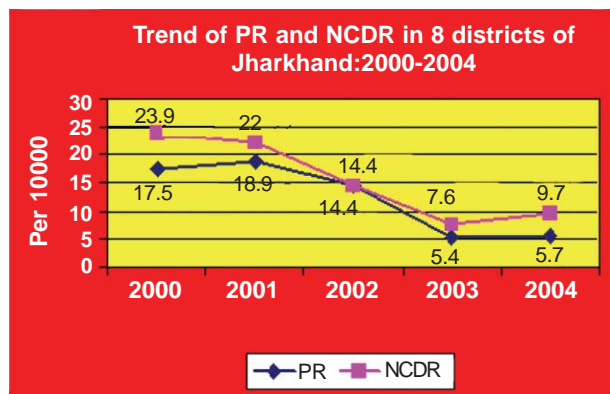
**i. Prevalence:**

The overall prevalence of leprosy in the 8 districts was 5.6 per 10000 at the end of December 2004. The prevalence for Jharkhand state with 22 districts at the same point of time was 4.52. Six districts had a prevalence of more than 5 per 10000. There were two districts (Simdega and Gumla) with a prevalence of less than 3 per 10000. The highest prevalence (12.55) was in Saraikela followed by East Singhbhum (6.05) and the lowest prevalence was in Simdega (1.45) followed by Gumla (1.80). Discharge of cases in all the districts was within the expected level as indicated by the fact that PD ratio in any of the districts did not exceed 0.80.

**ii. New cases:**

In the eight districts 8158 new leprosy cases were detected in 2004 of which 2844 were MB (34.9%), 1395 were children (17.1%), and 103 (1.3%) had disability. East Singhbhum, Godda and Saraikela reported a high level of new case detection in 2004. This is correlated in at least two districts (East Singhbhum and Godda) having low proportion of MB among new cases indicating a large contribution of active case detection activity to new case detection. With more emphasis being given to case detection through voluntary reporting the situation is bound to improve. Two districts (West Singhbhum and Lohardugga) had a disability proportion among new cases of more than 2%. Simdega and Deogarh had a very high proportion of MB with a low proportion of disability which could mean either it represented the natural declining trend of the disease, or wrong classification of cases or underreporting of disability.

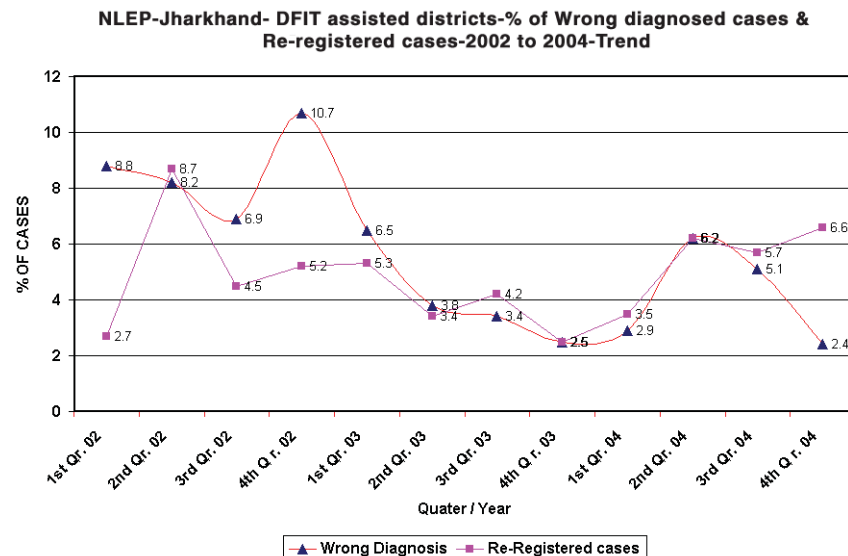
**iii. Trend of disease:**



The reduction in prevalence in 2004 compared to 2000 in the eight districts was 68%. Reduction in new case detection was about 60%. Highest reduction in prevalence was seen in Sighbhum districts from about 21 to 6. The reduction

was small in Lohardugga and Gumla. This was due to lower prevalence base in these districts. Unlike in Bihar the reduction of PR in 2002 compared to 2001 was small. The decline became apparent only in 2003. This reduction was due to decline in both new cases and also better discharge of cases. The PD ratio was 0.7, 0.9, 1.0, 0.7 and 0.6 in the year 2000, 01, 02, 03 and 04 respectively.

**iii. Wrong diagnosis and re-registration:**



Like in Bihar, the trend of wrong diagnosis (WD) and re-registration (RR) in the districts over the two-year period from January 2002 to December 2004 shows close correlation between peaks of WD and RR and case detection campaigns. Totally 3240 new cases were validated by the teams in 8 districts in 2004 and 125 (3.9%) were found to be wrongly diagnosed and 129 (4%) reregistered. Wrong diagnosis was highest (8.3%) in Deogarh followed by Lohardugga (7%). It was lowest in Simdega (1.5%) followed by West Sighbhum (2.1%). Three districts had a wrong diagnosis of more than 5%. Similarly, re-registration was highest in Simdega (11.5%) followed by Purnea (10.8%). It was lowest in Lohardugga (2.7%). Five districts had re-registration of 5% or more.

**iv. Treatment completion:**

Treatment completion for MB (2002 cohort) was 86.1% and for PB (2003 cohort) was 86.60%. Deogarh was the only district with a treatment completion for both MB and PB of less than 80%.

**v. Integration:**

Involvement of the PHC and Subcentres in Leprosy programme was good in all the districts. MDT services were available in all the districts on all working days.

## HIDDEN CASE

Sudhir Mahato, a 42 year old male (Fig. 1) from Bankutchia village in East Singhbhum district in Jharkhand state noticed anaesthesia and tingling sensation in his left leg about 12 years back. He went to a dermatologist in Purulia. When asked why he went to him he said he had heard that he was good in curing skin diseases. He was given some drugs which he took for one month. There was no improvement in his condition. He went to him for the second time. This time he was given some other drugs which when he took caused severe skin reaction. He stopped the drugs and went to a homeopathic doctor in Bardhwan in Purulia. He took treatment from him for 5 years. He stopped the treatment after he found no improvement in his condition. He consulted the Paramedical Worker from Ramakrishna mission hospital who asked him to go to the PHC for treatment. He did not go to the PHC because of the fear that he might be scolded by the doctor for not visiting the PHC before. He knew right from the beginning that he had leprosy. He had heard about the disease through publicity



Fig. 1 Man being tested for sensory loss.

carried out by Ramakrishna mission. Six months back Mr. Biswa Mahato, Project Officer from Telco Society for Rural Development saw him and took him on his bike to the PHC where treatment for leprosy was initiated. He says he gets the drugs every month from the ANM who gives it at the subcentre or sometimes at his house. On examination he had infiltration all over the body, absorption of digits in his right hand. He is regular in treatment. He knows how long to take the drugs.



Fig. 2

We asked a couple of gentlemen (Ganesh Singh (center) and Kinker Mahato (on the right) Fig. 2)) from the same village who had gathered around us. Their awareness about the disease and the programme was excellent. They knew that Sudhir Mahatto had leprosy, that it was caused by germ, that drugs were available free of cost at Government hospitals and the disease was completely curable. When asked about the source of information for their knowledge they said they had heard about them from people from Ramakrishna mission who visited the village frequently and did publicity.

## 5.2. Prevention of disability (POD):

The face and pace of leprosy work has changed with integration of leprosy and capacitisation and renewed involvement of the general health staff. The NGO projects supported by DFIT have taken it upon themselves to upgrade the skill of the general health staff in providing appropriate service to patients with disability. Only the patients with complications who require specialised care or those requiring reconstructive surgery are referred to NGO centres.

Three projects of DFIT (Fathimanagar, Nellore and Pavagada) provide secondary and tertiary care. All other projects provide secondary care (manage cases with complications, severe or recurrent reaction and plantar ulcers).

### A. Reactions:

NGO Projects reported 80 cases of reaction from MB cases and 6 from PB cases during 2004 (Type - I: 35, Type - II: 25 and Neuritis: 26). Out of these 80 cases - 2 were from the 1996 registration cohort, 1 from 2001, 7 from 2002, 5 were from 2003 and 65 from 2004. The Reaction rate for MB was 2.3% (denominator is the MB cases registered from 1993-2004). Similarly from PB cases 6 were reported with reaction (Type - I: 1 Neuritis: 5), 2 from 2002 registration cohort and 4 from 2004. The Reaction rate for PB cases was 0.05%. From Bihar 222 cases were reported as treated with steroids for reactions. Similarly from Jharkhand 107 cases were reported to have been treated for reactions with steroids.

### B. Management of persons with disability:

Even though all the projects had a programme of managing patients with disability, three projects (Nellore, Fathimanagar and Arisipalayam) had a specific plan to train the Government staff in managing patients with disability. In Nellore the NGO project at the district headquarters and the District technical support team trained the staff in four PHCs and following the directives from Government of India later extended the training to the whole district. As per the guidelines only the male Multipurpose health workers (only two from each PHC) were trained. Quite a large number of workers were not trained. Subsequent to the training programme, the staff showed less interest in patients with disability. The upshot of this was that of the 788 Multi Purpose Health Workers (MPHWs) in 491 subcentres, 270 were reviewed and only 76 (35%) of them were found to be participating in the programme. Looking at the response it was decided that the NGO project would cover the PHCs (train the staff) in the vicinity (about 20 PHCs) and monitor the programme intensely with assistance from the District technical team.

In Arisipalayam the project has been given the responsibility to initiate POD programme in the whole district as per the guideline of Government of India. The Physiotherapist (PT) from the Centre along with the Non Medical Supervisor



(NMS) has trained all the 970 Health workers and supervisors in the 398 subcentres. Out of the 70 subcentres monitored by the Physiotherapist this year, it was found that all the 70 (100%) were actually supervising self-care by patients. It was also found that workers from other centres started taking up the responsibility after seeing the success in the neighboring centres. The health workers of 2 PHCs raised funds locally and supplied footwear to patients in their area. Other PHCs have shown keen interest in emulating this.

Fathimanagar project which has helped Trichy and Pudukottai districts to establish POD programme has become a good example of effective collaboration between NGO and Government. The project has trained 114 Female health workers in 10 PHCs in Trichy district and 6 in Pudukottai district. Out of them 108 were found to be involved in POD programme. They were able to identify 22 reactions and manage them on their own. They identified 260 cases with disability and trained them in self-care. Of them 228 were found to be practicing

self-care diligently. It was gratifying to observe that 50 patients who had plantar ulcers for varying period were found to be ulcer-free. The workers also referred 8 cases for reconstructive surgery. The 16 PHCs supplied footwear to 121 patients.

### C. Reconstructive surgery:

#### i. South:

Total number of surgeries performed this year in three projects was 55 (eye-1, hands-25, feet-12, others-17 which includes decompression, amputation, post-polio contractures release, skin grafting etc.).

All the patients who were operated upon for correction of deformity were regularly followed. The parameters used for this were the appearance and function of the limb and the social and economic status of patients before and after surgery. Analysis of five year follow up data collected from patients who were operated between 1996 and 1999 and only follow up data for all cases from 1996 to 2003 was done.

From 1996 to 1999 there were 98 patients who were operated for 111 deformities and were followed for five years and above. Sixteen patients could not be followed for various reasons (4-migrated, 5-died and 7-lost to follow up). Hence there were 82 patients who had undergone 89 operations. There was improvement in 93.2% (83/89) of the limbs operated upon for both appearance and function. There was no worsening in any case. The number of patients who were socially accepted improved by 32.9% i.e from 49 before surgery to 76 after surgery. Similarly, the number of patients with improvement in earning capacity increased by 48% i.e from 23 before surgery to 63 after surgery.

From 1996 to 2003, out of 215 patients who had undergone 242 surgeries (hands-166, feet-70, eyes-6) 196 patients who had undergone 207 surgeries (hands-141, feet-61, eyes-5) were followed for at least one year. Nineteen patients were not available for follow up for various reasons. There was improvement in 91.8% (190/196) of the limbs operated upon for both appearance and function. There was no worsening in any case. The number of patients who were socially accepted improved by 17.4% i.e 149 before surgery to 183 after surgery. Similarly, the number of patients with improvement in earning capacity increased by 34% i.e from 66 before surgery to 133 after surgery.

#### ii. Establishment of reconstructive surgery facility at Patna Medical College (Bihar):

The whole-hearted support from the Government establishment, motivated involvement of the surgeons in the college, committed assistance from the State Leprosy Society and persistent efforts from DFIT led to the introduction of reconstructive surgery facility at Patna Medical College. The whole process started

## IGNORANCE IS CURSE



Mr. Dhanraj of 24 years of age from Allahabad, Uttar Pradesh, developed nodular swellings in the left arm in August 2002 for which he consulted an orthopedic surgeon. FNAC was done and a diagnosis of neurillemma was made. An excision biopsy was done which resulted in wrist drop. Histopathologist gave a report of "Tuberculoid granulama" suggestive of Hansens disease. He was put on daily ROM and advised reconstructive surgery. But the patient consulted a chest physician. He was put on anti-TB treatment for 18 months. Meanwhile, the patient developed a fresh nodular swelling on the left forearm. This time he consulted a dermatologist. A biopsy was done on 19th March 2004. Tuberculoid Hansen's disease was the histopathological diagnosis. He was put on MB MDT. The patient is responding to treatment.

## RELAPSE RESPONDS RAPIDLY TO MDT

A patient named Raju Udayar, s/o Mannappa Udayar, aged 65 years, of Neikuppi village, Ural Subcentre, Dindivanam, received PB MDT for lesion on the leg. Eight years after RFT he reported to the center at Polambakkam with florid nodular lesions, some of them histoid (Fig A,B). He was put on MB MDT in January'04. By August 2004 majority of the lesions had shrunk or had almost disappeared (Fig C,D).



Fig A



Fig B

BEFORE



Fig C



Fig D

AFTER

with dialogue with the surgeons under the guidance of the Superintendent followed by identification of surgeons and physiotherapists, and their training was done by the visiting surgeon from DFIT. Initially the visiting surgeon provided the necessary training by operating on the patients. Later, the local surgeon under the guidance of the visiting surgeon performed surgery. The college was provided with two sets of surgical instruments and also financial assistance to the tune of Rs.800 per patient by DFIT. By the end of the year the surgeons at the hospital had performed 32 surgeries on their own without any technical assistance from the visiting surgeon. DFIT is intending to extend the service to the Medical College at Dharbanga in Bihar next year.

### D. Footwear:

A total of 682 pairs of footwear were distributed to eligible patients.

### 5.3. Tuberculosis:

#### A. NGO Projects:

A total 2583 TB cases were registered for treatment during 2004, out of which 802 (31%) were new positive, 325 (12.6%) were retreatment cases, 762 (29.5%) were new smear negative, 560 (21.7%) were extra-pulmonary (EP) and 134 others. Taking the criterion of 65% of new cases to be smear positive it was only 43.6% in the projects. This is due mainly to large number of extrapulmonary cases reported at Salem. One of the reasons for the high extrapulmonary case proportion in Salem could be the possibility of HIV coinfection. Only in Salem the new case population ratio matched the expectation (225/100000 and new positive 64/100000). In Delhi it was 108/ 100000 population (new positive 37/100000). In all other projects it was less than 50. The reason is that all the projects except Salem and Delhi cover about 100000 population and the centres complement case detection in the Government setup. About 78.6% cases were within the age group of 15 to 54 years. Among total cases females were 28.4%. Sputum conversion rate at the end of intensive phase on an average was 75% with a minimum of 60% in Aundipatty, Fathimanagar and Nagepalli and a maximum of 92% in Ambalamoola and Delhi (TB unit II). Cure rate for the 2002 cohort was 85.7% which has marginally improved to 86.8% for 2003 cohort. It was 94% and 93% in Dindigul and Ambalamoola and 80% in Nagepalli.

#### B. Districts:

RNTCP is about 5 years old in Bangalore and Vaishali, 3 years in Anantapur, 5 years in Trivandrum and it was only one year since it was initiated in Tumkur and Nellore. The teams were introduced in 2002 in Anantapur, 2003 in Bangalore urban, Tumkur, Nellore and Kadapa and 2004 in Trivandrum and Vaishali. A total of 24906 TB cases were registered in 7 districts during 2004, out of which 9861 (39.6%) were new positive cases, 3052 (12.3%) were retreatment cases,



District	Case detection rate /100000	New positive detection rate	Female proportion among new SM+ve
Anantapur	145.1	65.6	27.6
Kadapa	175.9	65.9	25.5
Nellore	139.8	56.3	27
Tumkur	120.8	51.7	29.5
Bangalore Urban	118.4	46.9	33.33
Trivandrum	76.6	30.2	19.5
Vaishali	106.3	30	35.2

8175 (32.8%) were smear negative cases, 2530 (10.2%) were extrapulmonary cases and 1228 (4.9%) were others.

The case detection rate was highest in Kadapa (175/100000) followed by Anantapur (145/100000), Nellore (139.8), Tumkur (120.8), Bangalore Urban (118.4) and Vaishali (106.3). It was less than 100 in Trivandrum (76.6). About 39.5% of all cases were new sputum positive pulmonary cases. About 52% of the cases were pulmonary sputum positive. Case detection in Kadapa and Anantapur is better than in other districts. It was very low in Trivandrum and Vaishali. It is not clear whether the incidence of Tuberculosis in Trivandrum is low or if it is the case detection that is the problem. In Vaishali it is difficult to expect higher case detection because of various factors like less than optimal number of health facilities that are not easily accessible. Female cases were 30% of total cases registered. What is of interest is just 19.5% female proportion in Trivandrum. It was highest in Vaishali. Sputum conversion rate on an average was 89.6% with a maximum of 92% in Nellore and a minimum of 88.4% in Bangalore Urban. The cure rate for 2003 cohort was 83.4 with a maximum of 88.1% in Vaishali to minimum of 77.3% in Tumkur. The cure rates were 86.95% in Trivandrum, 84% in Nellore, 85.5% in Anantapur, 82.1% in Kadapa and 80% in Bangalore. Tumkur started RNTCP in 2003 and it is difficult to get 85% cure rate in one year of start of the programme. In Kadapa there were initial problems in implementing DOT supervision. Problems like lack of Laboratory technicians, STS and STLS for a long time, nonparticipation of two sanatoria in RNTCP, lack of effective monitoring were responsible for the less than adequate situation in Bangalore Urban. The situation has improved with the posting of STS and STLS and involvement of the sanatoria.

The teams in all the districts strived to improve the situation by interacting with the staff at all levels and assisting them in identifying problems and taking corrective actions. Problems like frequent change of STS and STLS (STS change occurred 25 times in Anantapur), delay in the posting of STS, noninvolvement of the General health supervisory staff had to be solved. All the staff were given reorientation training. Suitable DOTs volunteers were identified from the community for better supervision of treatment. In Anantapur 70% of the DOTs providers are volunteers from the community who are supervised by the General health workers. The teams constantly collect information on the process indicators which are very much useful for the programme and disseminate them.

Suspect referral of 2% and above was reported from more than 80% of health facilities in Trivandrum, Bangalore Urban and Nellore. It was less than 50% in Anantapur and Kadapa. Sputum positivity rate between 10 and 20% was seen in 90% of the health facilities in Nellore whereas it was 24% and 39% in Kadapa and Anantapur. Substantial proportion of cases is detected at the DTC in all the districts except Bangalore Urban. Anantapur is the only district where all the microscopes were in good condition. In all other districts 5 to 18% of the microscopes were not in working condition. In Trivandrum and Tumkur LTs were available at all the DMCs whereas in other districts 8 to 18% of the LTs were not available. Quality of smear preparation and staining was good in all the DMCs in Anantapur but it varied from 59% to 93% in other districts.

## PILLAR OF HEALTH SERVICE

Mrs. Saritha Devi, is a female health worker working in Badibhais Diyara Health Sub-centre, under Barari PHC, which is also a TU, in Katihar district of Bihar. She has been working in this sub-centre for 12 years. She was trained in RNTCP at the PHC. Now she is providing DOTS for 14 TB patients; 6 of them under Category I and 8 under Category III. All the patients are taking treatment regularly. She refers them for followup sputum examination at the stipulated time. She is also providing MDT for 3 PB leprosy patients. She has referred one TB suspect who was diagnosed as new sputum positive TB. Mrs. Saritha Devi deserves appreciation for her involvement in the RNTCP, which was implemented only in the month of March 2004 in her district.



Up- to- date maintenance of laboratory register was seen in almost all DMCs in Anantapur and Trivandrum. It was only around 70% in Tumkur, Bangalore Urban and Kadapa. Overall the quality of sputum microscopy was good in Anantapur, Nellore and Trivandrum. Categorisation was good in all the districts (above 95%). There were problems in DOTs supervision in Kadapa, Tumkur and Trivandrum.

Cure rates of 85% or more could be achieved in 5 out of 6 in Nellore, 5 of the 7 units in Anantapur, 4 out of 6 in Trivandrum, 3 out of 5 in Kadapa. None of the TB units in Bangalore urban and Tumkur could achieve expected cure rate. About 91% of the treatment cards verified were found to be up to date in Anantapur. It was 85%, 70%, 53%, 52% and 46% respectively in Bangalore urban, Tumkur, Nellore, Kadapa and Trivandrum. Drug stock adequacy was reported in only Anantapur and Trivandrum. The teams visited a total of 8946 DOT providers and 7736 (86%) were found to be functioning correctly. In all the districts it was above 80%. A total of 126 General Practitioners (GP) were involved in suspecting and referring cases and 29 were providing treatment under their supervision. Also 65 Registered Medical Practitioners (RMP) were involved in referral of suspects and 39 were providing treatment under direct supervision.

### IF ONLY YOU LOOKED FOR THEM.....

Mrs. Lakshmi, a resident of Nehru Nagar Colony in Buchi PHC area of Nellore, has a keen interest in helping people in her village. A short stint in a nursing home comes in handy for Mrs. Lakshmi to conduct delivery and treat minor ailments. Her motivation got a boost when she was trained as a DOTs supervisor by World Vision. She has responded to the needs of RNTCP by providing anti-TB drugs under direct observation to two TB patients (one each of Cat I & III). She is currently supervising the treatment of 5 patients (3 of Cat I & 2 of Cat II). All are regular. She is guided by supervisor from World Vision & local ANM. A concrete example of her motivation and interest in helping TB sufferers is seen in the way she helped a newly registered Cat II TB patient. On discovering that the patient was



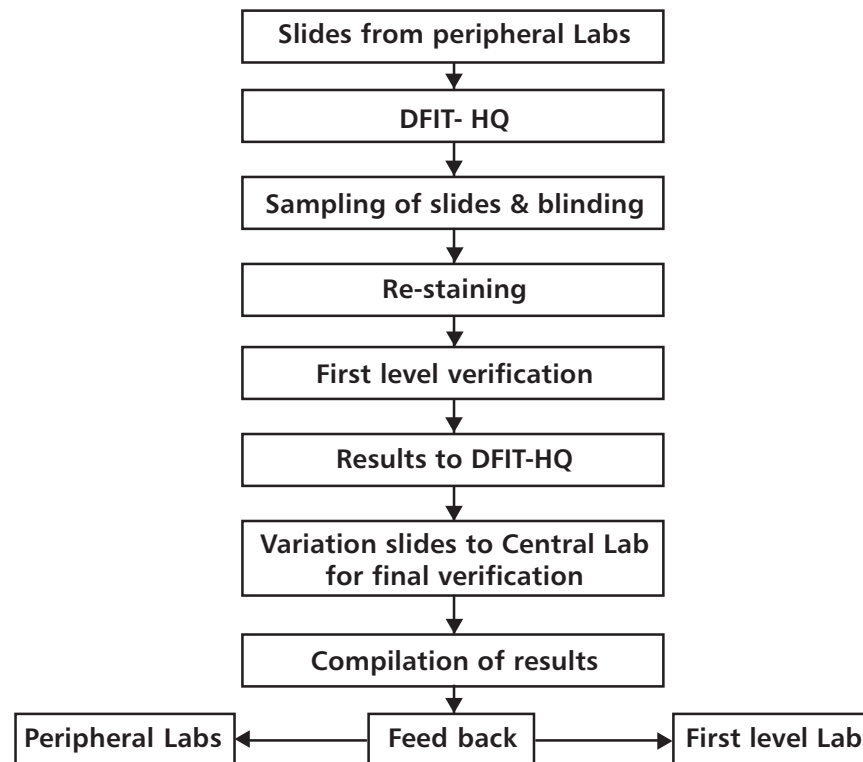
too weak, she volunteered to visit the patient and administer drugs.

She asserts that she would not allow any of her patients to default from treatment. Her commitment, enthusiasm and motivation are commendable. There are many in society like Mrs. Lakshmi. The programme needs only to look for them.

### C. Preparation of districts in Bihar:

The teams collected baseline data from all the districts about the progress in the preparation of districts for initiation of RNTCP. The core team facilitated the training of key personnel. The core team members trained 65 Medical Officers of TB centres, 39 Senior TB Supervisors (STS), 33 Senior TB Laboratory Supervisors (STLS) and laboratory technicians. The Medical Officer of the teams participated in facilitating the training of general health staff within the districts. Three PHCs with laboratory facility in Bihar and Jharkhand were constructed by DFIT in 2004.

### D. External Quality Assurance – NGO projects



Quality Assurance was carried out for 19 labs. Sample included 2564 sputum smears. High False Positive (HFP) and High False Negative (HFN) were low (0.4%). Scanty False Positive (SFP) was 16%, Scanty False Negative (SFN) was 6.5%. Two labs recorded high number of SFN at one point of time. This could probably be due to contamination of smears with atypical mycobacteria from tap water.

### Comparison of RNTCP and two level QC in Delhi project:

All 10 microscopy centres in Delhi project are managed by DFIT. RNTCP quality control system (all positives and 10% of negatives checked by STLS without



blinding) was routinely done. In addition, two-level quality control (with blinding) was done by DFIT.

The routine quality control system recommended by RNTCP detected few FN results only (0.7% and 2.3% in two TB units). Two level system indicated 3.8% and 2.7% in two TB units respectively. SFP were detected only by two level system. SFN was high especially during 3<sup>rd</sup> and 4<sup>th</sup> quarter.

Five new microscopy centres were established and microscopists were recruited. This could be the reason for errors. Majority of SFN occurred in 3<sup>rd</sup> and 4<sup>th</sup> quarter. It could be due to problems in re-staining prior to Quality Assurance.

#### E. External Quality Assurance of sputum microscopy in Anantapur district:

RNTCP method of quality control system for sputum microscopy was routinely done by STLSs. Two level quality control system was established in Oct 2002 while routine RNTCP system was continued. DTO reviewed both the results and feedback was given to Lab technicians and STLS every month during monthly review meeting of Lab technicians. TST assisted in compiling the results and feedback.

System	2002		2003		2004	
	FP %	FN %	FP %	FN %	FP %	FN %
RNTCP	0.79	0.87	1.12	1.06	0.79	0.69
Two level system	6.5	2.1	3.7	1.5	2.57	1.28

The routine quality control system did not identify significant errors in sputum microscopy. When two level system was introduced and feed back given every month there was improvement in routine quality control system. The variation was declining every year.

Periodic review, feedback and re-orientation training to Lab technicians (every year) have helped in bringing down the variations to the minimum. The results prove that it is possible to establish reasonably good external quality assurance system in the routine programme setting.

#### 6.0. Continuing Medical education (CME):

As part of continuing medical education DFIT brought out four issues of UPDATE that were distributed to Medical Officers and Supervisors in the districts supported by DFIT. Even though impact analysis was not made it was found that quite a large number of Medical Officer who were given the bulletin were keenly

### DOT PROVIDERS IN RNTCP



of Self Help Group in Sardena Halli village, Tumkur district, Karnataka. She is DOT provider for one TB patient. She knows exactly what she is expected to do as a DOT provider – how to administer TB drugs / when to refer for followup. She is willing to help any TB patient in the locality. She is yet another example of service minded innocent people.



Mr. Ramakrishna from Chinnamusthur village is a student doing 10th standard. He is one of the few literates in the backward community to which he belongs. Mr. Ramakrishna has been an effective DOT provider (cat I=3 & Cat III=2). Among the 5 patients 3 have successfully completed treatment and 2 still on treatment. He is well versed with DOT procedures and has won the confidence and respect from the community. It is not difficult to find such persons in the rural areas. DOTS is possible even in remotest areas in our country. It is not difficult to find persons willing and waiting to help patients with TB in their treatment. They are there in every village and town. Only thing we need is to do is look for them.

“Service to a TB patient is service to God” this is how Mrs. Siddagangamma describes her role as DOT provider. She is mother of two children and member

following the topics discussed therein. Interactive sessions for General Practitioners were held in all the projects and districts in the South and in some districts of Bihar and Jharkhand. This was to make them aware of the disease and the programme and promote their participation in it. Seminar on leprosy for postgraduate medical students was held at two medical colleges, one in Bangalore (14<sup>th</sup> July) and the other in Chennai (14<sup>th</sup> December). This was intended to promote correct clinical practice in the field. While 78 postgraduate students and faculty participated in the seminar in Bangalore, in Chennai it was 63. About 100 PG students and faculty each attended the guest lecture on leprosy by Dr. Krishnamurthy at Mangalore Medical College (18<sup>th</sup> April) and Patna Medical

## SERVICE WITH A SMILE



Mrs. Chandra Kalavathi of Muchukota village belonging to Peddapappur PHC of Anantapur district in Andhra Pradesh is a housewife and has involved herself in RNTCP for the past two years.

She has provided DOTs supervision for 18 TB patients so far. She has also referred 12 TB suspects among whom 5 were TB cases. She is devoting considerable part of her time to this work.

It is people like Kalavathi who can make a difference to TB control.

College (14<sup>th</sup> August). Endowment examination on leprosy for undergraduate medical students of MGR Medical University and Ramachandra Medical College was held. A total of 152 Undergraduate medical students participated in the theory examination out of which 17 were selected for practical examination that was conducted in Madras Medical College on 28<sup>th</sup> of August. Gold medal for the best student was awarded to one student.

## 7. Research:

### A. Leprosy:

#### i. Characteristics of suspects referred to health facilities in Bihar

National Leprosy Eradication Programme in Bihar envisages that peripheral health workers (mainly Auxiliary Nurse Midwife- ANM) identify persons with signs and symptoms suggestive of leprosy and refer them to health facility for appropriate intervention. It was observed that quite a good number of such suspects might not visit the health facility at all. How many of these suspects would be cases of leprosy? How many cases we would be missing in such a situation? It was also important to know how many of the suspects visiting the health facilities and diagnosed as persons affected with leprosy actually were cases? In order to answer these questions a simple study was undertaken.

#### Methodology:

List of all suspects referred by the ANMs and list of all new cases registered at the health facilities for a period of two months was obtained by DTSTs. The teams tried to contact all the suspects to find out whether they had been to the health facility, if so what was the diagnosis and if they had not been to the health facility what was their clinical status- leprosy (new or old) or not leprosy.

#### Results:

In the 22 districts ANMs had referred a total of 1409 suspects during the reference period of whom 941 (66.8%) had visited the health facility for consultation. From this group 715 (76%) were diagnosed as new cases (MB=185 [26%]) and 11(1.5%) as old cases by the health facilities. The teams were able to examine 905 suspects and their diagnosis was 575 new cases (63.5%) and 55 old cases (6%). Out of the 468 suspects not seen by the health facilities 415 were examined by the teams (88.7%) of whom 89 (21.4%) were new cases (15 or 17% MB), 26 (6.3%) were old cases.

#### Observations:

About 33% of the suspects did not visit the PHCs. One of the reasons could be that some of them (about 6%) were old cases and had already taken treatment.

The programme would have missed 89 (13.4%) out of 664 new cases and 15 (10.4%) out of 143 MB.

Wrong diagnosis was about 19.5% (140 out of 715).

Re-registration was about 6%

#### Recommendations:

- Effort should be made by the ANMs to ensure 90% or more of suspects attend PHC for consultation. Adequate counseling of suspects may improve their attendance.
- Diagnostic capability at PHC needs improvement.

#### ii. Can Health Worker (Female) in PHC diagnose and treat leprosy?

Lack of NLEP staff and lack of involvement of general health staff resulted in less than optimal coverage in Nellore district. Can we improve the situation by training of female health workers in PHC? Can we entrust the responsibility of diagnosing leprosy to female health workers?

#### Objectives:

1. To determine the efficiency of leprosy diagnosis by female health workers compared to NLEP staff.
2. To determine treatment regularity of leprosy patients diagnosed & treated by female health workers.

#### Methodology:

The district was divided into two zones (study area & control area). The female health workers in the study area were trained to diagnose and treat leprosy. Leprosy patients were counseled on following points – disease they were suffering from, duration of treatment and how to consume monthly and



daily dose. The workers in the control area referred suspected leprosy to PHC where NLEP staff did the diagnosis and treatment. Research team consisting of senior supervisors and Medical Officers identified from the Government and DTST verified the diagnosis and counseling of new cases registered. Treatment details are collected from the records.

**Results:**

- A total of 442 leprosy patients were detected in the district during the period from June to Dec 2003. Female health workers identified 75 suspects and diagnosed leprosy in 71 of them. One of them was not leprosy. They could not diagnose leprosy in one.
- NLEP staff identified 367 suspects and diagnosed 366 leprosy patients. Among these 3 were not leprosy (including 1 MB). They could not diagnose leprosy in one.
- Treatment regularity was 97% in study group and 100% in control group.
- Patients’ knowledge on points covered in counseling was good in both the groups.

**Conclusion:**

The diagnostic competence of the female health workers was as good as that of experienced NLEP staff. Their performance could be improved further by training and supervision.

**iii. Chemoprophylaxis to household contacts of leprosy patients**

**Study design:** Randomised double blind controlled trial

**Drug regimen:** Single dose of RIFAMPICIN

**Intake:** 2000 and 2001

**Annual follow up:** 5 years

Baseline information		
1	Total household contacts enumerated	8063
2	New cases of leprosy detected	124
3	# Total prevalent cases at intake	399
4	Contacts examined	7756
5	Coverage	96.2%
6	# * Gross prevalence rate (at intake)	495
7	* NCDR (initial screening)	154

# includes new + old cases

\* Rate per 10000

**Results of follow up:**

	Incidence rates		Coverage %
	Annual	Cumulative	
Year I	5.6	5.6	92.9
Year II	2.9	4.3	89.7
Year III	6.8	4.9	85.1
Year IV	3.9	4.8	85.5

All the participating centres were NGO projects implementing leprosy control programme in different parts of the country. Coverage in first and second follow up were good (90% or more). When leprosy control programme was integrated into general health services NGO projects stopped primary leprosy control activities and handed over all the remaining leprosy patients to PHC. Downsizing of manpower was done in all projects. Two NGO projects ceased all field operations. Among the original cohort only 64% could be covered.

Third annual followup examination was “complete” in remaining projects. Fourth annual followup examination was done for those who were due. There was one incident case of leprosy during 4 years of surveillance among study group whereas there were 9 new cases of leprosy among control group. All efforts are being directed to achieve a maximum coverage with the manpower that is available.

**iv. Implementation of POD in PHC settings in Nellore district**

POD activities were done by vertical staff with negligible participation from general health personnel. There was no systematic plan to implement basic POD activities in PHC setting. Is it possible to take self care activities to the patients’ homes supervised by the government general health staff?

**Methodology:**

A pilot programme was started in 4 PHCs initially. All the health workers from all subcentres within these PHCs were trained with patients being mobilised from each subcentre of the concerned PHC for demonstration and teaching self-care. DTST would assist in training and monitor by random verification of patients. Meanwhile, the Central Government also introduced this activity to be carried out in each of the districts in India. Soon this training was spread through out the district with the total of 270 Multi Purpose Health Workers (MPHW) being trained in POD.

**Results:**

The DTST could visit 218 subcentres (44.4% i.e. 218/491 subcentres) and found that 76 subcentres (34.9% i.e. 76/218 subcentres) were actually monitoring POD activities. Among 100 to 130 patients seen every quarter, 50 to 60% were found to be practicing self-care procedures.

**Observation:**

The involvement of all PHCs within a district in a comprehensive POD programme may not be prudent since the coverage and implementation of the programme may not be adequate.

**Future Plans:**

It is realistic that defined areas be taken up one after the other. Hence, the coverage of POD activities could be widened systematically, according to the success of the POD programme in ensuing areas of coverage.

**B. Tuberculosis****i. Is there transfer of bacilli in batch staining of sputum smears?**

P.Vijayakumaran, R.Jaisankar, A.Van Deun & P.Krishnamurthy (presented in TB conference at Paris Oct 2004 & submitted for publication in Int J Tuberculosis)

The general opinion is that if smears are stained in group in a stain bath there is risk of transfer of bacilli from one smear to another. This study on batch against individual processing of sputum smears was done to document transfer of bacilli during restaining of sputum smears in batches in jar, in order to assess its suitability in the process of rechecking quality assurance.

**Design:** Routine samples from microscopy centers were randomly divided over batch and individual restaining prior to first rereading. Second level reader resolved discordant results.

**Results:** Of 2655 smears from 9 microscopy centers, almost equal numbers containing similar proportions of results were processed by either restaining method. Error rates among batch and individual restaining respectively were 0.5% / 0.6% High False Positive, 16.4% / 7.1% Low False Positive (LFP), 0.6% / 1.1% High False Negative, and 2.9% / 4.1% Low False Negative. Only the LFP difference attained borderline statistical significance ( $P=0.05$ ), and total False Negative (FN) came close ( $P=0.08$ ).

**Conclusions:** If at all these differences in error rates correlated with restaining method used, they cannot be explained by transfer of bacilli from positive to negative smears during batch staining, which would have resulted in more FN. These results suggest that restaining smears in batches before rechecking does not introduce serious bias.

**ii. Additional yield of positivity in two sputum samples for follow up examination in Revised National TB Control Programme (RNTCP) India.**

M.Shivakumar, P.Krishnamurthy, P.Vijayakumaran, Y.Somasekhara Reddy, K.S.Sudhakara and S.Satheesh (presented in TB conference at Paris Oct 2004)

Two sputum specimens (early morning & spot) are collected for follow up to ensure that positive results are not missed (RNTCP guideline-India). This study was conducted in Anantapur district India, to determine the additional yield of sputum positivity in second sample of follow-up sputum examination (sputum microscopy).

**Methodology:** Follow-up sputum microscopy was done at the end of Intensive Phase, at the end of prolongation of Intensive Phase, end of second month of Continuation Phase and at the end of Continuation Phase. All these results were considered for this study for new sputum positive Pulmonary TB patients registered during the year 2002.

**Results:** There were 5086 follow up sputum examinations done for new pulmonary sputum positives registered during the year 2002. Among these 416 (8.9%) were positive in first (early morning) sample. Only 6.1% were positive in second (spot) sample. None of the sputum negatives in the first sample showed positivity in the second sample.

**Conclusion :** Examination of second (spot) sample of sputum for follow up does not yield additional positive results and hence may not be useful.

**iii. Two sputum sample examinations for follow up: Is it useful to do second sample?**

Prabhakarareddy.B, Koteeswararao.S and Vijayakumaran.P (presented in National TB conference at Delhi)

Two sputum specimens (early morning & spot) are examined for follow up as per Revised National TB Control Programme (RNTCP) guideline-India. This is to ensure that positive results are not missed. This study was conducted in Nellore district, Andhra Pradesh, India to determine the magnitude of additional yield of sputum positivity by sputum microscopy of second sample of follow-up sputum examination in RNTCP.

**Methodology:** Follow-up sputum microscopy was done at the end of Intensive Phase, at end of prolongation of Intensive Phase, end of second month of Continuation Phase and at the end of Continuation Phase. All these results were considered for this study for new sputum positive Pulmonary TB patients registered during the year 2003.



**Results:** There were 1028 follow up sputum examinations done for new pulmonary sputum positives registered during the year 2003. Among these 82 (7.9%) were positive in first (early morning) sample. Only 5.8% were positive in second (spot) sample. One of the sputum negatives in first sample revealed positivity in the second sample (0.1%).

**Conclusion :** Examination of second (spot) sample of sputum for follow up does not yield significant positive results and hence may not be useful.

#### 4. Characteristic of DOT Providers and treatment out come

RNTCP was introduced in Anantapur in 2001 when only 60% to 70% of patients were on DOTS. This had adverse effect on cure rate (cure rate=76.4% and defaulter rate=5.6%) in 2001. The cure rate improved to 83.5% and defaulter rate came down to 3% in 2002. The reason for this achievement could be that more than 90% of patients were put on real DOT during 2002. Usually health workers are designated as DOT providers. Involvement of community members is minimal. A large number of community members participated as DOT providers in Anantapur district. A retrospective analysis of treatment out come of sputum positive patients put on DOTS under different type of DOT Providers is presented.

#### Objectives:

1. To determine the effectiveness (in terms of cure rate) of different types of DOT Providers

#### Result:

Community volunteers included cured TB patients, students, Registered Medical Practitioners (RMP), NGO, neighbours, teachers.

Type of DOT provider	Cure rate among Cat I	Cure rate among Cat II
Government health workers	526/629= 83.6%	124/186= 66.7%
Community volunteers	866/1032= 83.9%	186/279= 66.7%

#### Conclusion:

Volunteers are as effective as Government health workers in functioning as DOT Providers.

#### 5. Survey on diagnosis and management of TB by General Medical Practitioners

National TB Control Programme has been implemented since 1963. Different treatment regimens were used. The success rate was not satisfactory. Revised National TB Control Programme (RNTCP) introduced in 1993 with DOTS strategy

has yielded high success rates. Still there are considerable problems - failures, relapses and non-responders. The threat of drug resistance continues. This is further aggravated by use of second line TB drugs as antibiotics to treat common respiratory ailments. This may lead to primary resistance to these drugs. Dependence on chest x-ray for diagnosing TB still continues.

TB patients receive treatment from many service providers including General medical Practitioners (GP) with different combinations of anti TB drugs.

This study is aimed at determining the common practices for diagnosis and management of TB and drugs used for treatment of respiratory illness.

#### Methodology:

A questionnaire survey was done in areas where DFIT supported projects (NGO or District Technical Support Team (DTST) were functioning (5 taluks by 4 NGO projects and 3 districts by 3 DTST).

#### Observations:

Respondents included a total of 339 General medical Practitioners (GP).

- Majority of GPs did not seem to rely on cough for suspecting TB.
- There was considerable opinion to rely on x-ray and other investigations to confirm diagnosis of TB.
- Quinolones and macrolides were widely used to treat respiratory illnesses.
- Different treatment regimens were employed for treatment of TB.
- Majority of GP showed interest in participating in RNTCP.

Even though there were several limitations in the study the results indicate that suspecting (TB), diagnosing and management practices of GP were inadequate. Immediate need is to familiarise GP on the latest concepts on management of Tuberculosis.

#### vi. The problem of Tuberculosis and utilisation of services by the community in Koramangala slum in Bangalore city

Revised National TB Control Programme (RNTCP) introduced in 1993 with DOTS strategy yielded high success rates. Coverage with DOTS has been increasing. RNTCP has been implemented in Bangalore since 1996. There is a general opinion that residents of slum are not covered. The health system seemed to be inadequate and unreachable for this group. When there is effective coverage in the urban district the slums are said to remain as "uncovered" islands.

This study is aimed at determining the magnitude of undetected TB cases, health care providers preferred by this population and awareness on symptoms of TB.

**Methodology:** Koramangala slum has 60000 inhabitants situated in Bangalore city. The houses are made of cement and bricks with a tiled roof. There is one government dispensary (India Population Project Centre – IPP Centre) with one Medical Officer and 4 ANMs.

A sample of 15% of households (among total of 12000) were interviewed by two Senior TB Supervisors employed for the survey. A questionnaire was designed. Respiratory symptomatics (cough for 3 weeks) were subjected to sputum microscopy for AFB (three samples as per RNTCP guidelines). Information was obtained from TB unit on number of TB patients registered in this slum.

The survey team covered 1800 families and interviewed 1800 residents (one from each family).

**Observations:**

- Awareness of early symptom of TB was grossly deficient.
- Majority of residents utilised services of private health facilities.
- New case of TB and new sputum positivity rate were very much less when compared to overall situation in the district.
- Existing TB patients were receiving treatment.
- Five private health facilities near the locality seemed to attract majority of respondents (55.5%) in Koramangala slum.

**Recommendations:** This area requires no additional inputs in terms of additional personnel to implement RNTCP. Provision should be made for microscopy facilities. The five private health facilities should be motivated to participate in RNTCP.

**vii. What is the additional yield of positivity (for AFB) in examining 3 samples of sputum for respiratory symptomatics?**

RNTCP recommends examination of 3 sputum samples for all respiratory symptomatics suspected as having Tuberculosis. The first sample usually is spot collection when respiratory symptomatic reported to health facility. The second sample is early morning collection. When the patient reports to microscopy centre with 2<sup>nd</sup> sample another spot collection (3<sup>rd</sup> sample) is done.

There is wide variation of quality of sputum microscopy including sputum collection technique. There are problems of availability of personnel. With all these limitations they manage to do 3 sample examination. What is the advantage in this system?

Data is collected from lab registers of 5 microscopy centres in 2000-2002, 15 microscopy centres in 2003 and 20 microscopy centres in 2004 supported by DFIT.

**Results:**

Examination of first sputum samples (n=1435) yielded 1310 (91.2%) positive results in 2004. Second sample examination yielded additional 118 positives (8.3%). Additional positive results were observed in 7 (0.5%) smears in third sample examination.

Similar findings were also observed in previous years. The additional yield of positives was considerable (8.8%) in second sample (2000 – 2004). It was minimal (0.3%) in 3<sup>rd</sup> sample. The quality of microscopy was good in all these microscopy centres. Probably the first examination itself could identify maximum number of positives thus reducing the chance of finding additional positives in subsequent examinations.

Only 9 (0.3%) positives were detected on examination of 3<sup>rd</sup> sample of 13570 respiratory symptomatics examined during 2003-2004. Total number of symptomatics with positive results in one of the first two samples was 269 among whom 207 (77%) were found to be positive in 3<sup>rd</sup> sputum sample. This group amounts to 2% of total respiratory symptomatics. Third sample examination may be required to this group for confirmation of diagnosis (two positive results).

**Conclusion:**

- Third sputum sample examination for all respiratory symptomatics is not useful.
- Third sputum sample examination may be done for a small group who has positive results in one of the first two samples.

**8. Chantiers:**

Chantiers Damien, building groups organised within Damien Foundation, has been supporting the infrastructure needs of projects working in the field of Leprosy and TB in India. Projects supported by DFIT have been benefited immensely by Chantiers Damien through its contribution towards the construction of wards, training centers, vocational rehabilitation centers, Primary Health Centres, and Additional Primary Health Centres. The philosophy of Chantiers Damien is to not only support financially the construction but also participate physically in the activity. Volunteers from different fields





(Doctors, engineers, teachers etc) from Chantiers who have contributed to the raising of the building visit the site and take part along with laborers in the construction.

For the last three years the emphasis of Chantiers has been on strengthening physical infrastructure in the general health set up in Bihar and Jharkhand. At the request of district level officers, DFIT, with the assistance from Chantiers, supported the construction of new PHC/APHC building at Riga in Sitamarhi district, Sadhebujur and Pakuali in Vaishali Bihar; Kurdesh in Simdegha district, Bandagaon in West Singhbhum district and Sindhurguri in East Singhbhum in Jharkhand.

## 9. Evaluation:

### A. Evaluation of V MLEC:

#### i. Bihar:

In the 22 districts the Government staff had screened 5840 suspects out of 9247 suspects detected during the MLEC and reported detection of 503 MB and 1799 PB cases (2302 total) during MLEC out of which 390 MB and 1386 PB cases were evaluated by DTSTs. Of the 390 cases 210 (54%) were MB, 43 (11%) were actually PB, 47 (12%) were not cases, 83 (21%) were old cases and 7 (2%) were inactive cases. From the 3115 suspects screened by the Government staff and reported as not cases 2477 were assessed out of which 8 were found to be MB and 53 PB, a total of 61 cases (2.5%). From the 3427 reported as not screened 2251 were assessed out of which 191 (8.4%) were found to be cases (26 MB). Totally 294 new cases (47 MB) were detected by the teams during the evaluation process. *The programme had missed about 12% of the cases or 9% of MB cases detected.*

#### ii. Jharkhand:

Seven districts out of the eight were evaluated. Total number of suspects detected during MLEC was 2912 out of which the programme reported to have screened 1394 (47.88%). The districts detected 207 MB and 476 PB cases during the campaign out of which the evaluators assessed 160 MB and 364 PB cases. *Wrong diagnosis was 13% (21), re-registration was 18.8% (30) and wrong typing was 8.75% (14).* From the suspects reported as not cases (650) about 496 were examined and 28 (MB 4) were found to be cases. From the 1518 suspects reported as unscreened 873 (57.5%) were examined and 129 cases (MB 15) were detected. *Totally 64 cases (13 MB) had been detected by the teams during evaluation. The programme had missed about 9.3% of the cases or 6% of MB cases detected*

## B. Leprosy Elimination Monitoring (2004):

### I. Bihar:

As part of Leprosy Elimination Monitoring evaluators identified by Government of India reviewed the programme in Araria, Dharbanga, Kishanganj, Jehanabad, Katihar, Nalanda and Saran. The median delay in detection of cases was 11 months as compared to the national average of 7 months. About 39% of the new cases detected were females. The reported prevalence in the districts was 5.2 and the prevalence obtained after applying standard definition was 5.1 indicating that register maintenance was good. About 90% of health facilities were providing MDT service on all working days. About 82% of the health facilities followed flexibility in administering MDT or delivering it. Adequate stock of drugs was available in all the health facilities. Treatment completion for MB and PB was 88.6% and 96.4% respectively. About 65% of the people interviewed were found to be aware of the disease and the programme. Wrong diagnosis was found to be 4.6% and re-registration 15.2%.

### ii. Jharkhand:

One district in Jharkhand (West Singhbhum) supported by DFIT was among the 7 districts chosen for monitoring by GOI. For validation of leprosy case diagnosis West Singhbhum had been selected. Wrong diagnosis was 6.7% (2.7% for PB and 9.4% for MB). Re-registration was 8.3% (6.5% for PB and 9.5% for MB). Wrong grouping for both PB and MB was 8.5% (9.8% for MB). About 3.1% of the cases were not existent (could not be traced).

## C. Independent evaluation (Bihar):

Dr. B. Sekar, Joint Director from Central Leprosy Teaching and Research Institute (CLTRI) evaluated the involvement of DFIT in Bihar towards the end of last year. Data was collected by observation and interview of personnel from the Government and DFIT.

The involvement of the General health staff in NLEP and RNTCP was good. All the Medical Officers and other staff were trained and were competent to diagnose and manage leprosy and Tuberculosis cases. All of them were aware of their roles and responsibilities. The teams were aware of their role. They assisted the District Leprosy officer (DLO) and District Tuberculosis officer (DTO) in planning, capacity building, and Monitoring. Teams could identify problems and suggest suitable solutions. They were found useful in tracing of absentees, in managing problematic cases, in assisting the PHC/NLEP staff in the preparation of reports, maintenance of records, validation of cases, on-the-job training of General Health staff.



Among the leprosy cases examined by the evaluator no case had deformity. Duration of disease ranged from 6 months to 5 years (mostly within 1 to 2 years). Wrong diagnosis and re-registration were a problem. All the patients were found to be regular. Most of the patients had been given accompanied MDT. Majority of patients knew about the period of treatment. All of them admitted that the service provided was good.

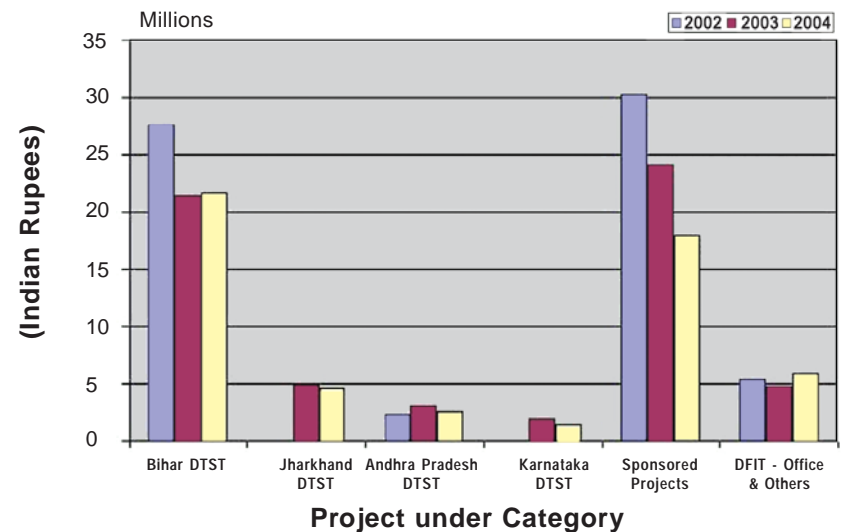
Involvement of civil Surgeon was poor. The programme officers at all levels were not accustomed to reviewing the programme. They were also not comfortable in interpreting the data and reports. They seemed to be totally dependent on the DTST. Drug stock management was not good in some PHCs. Monthly progress reports were prepared only by NLEP staff. GH staff rarely participated in validation. There are many areas in the district which are generally inaccessible. Coverage of MDT service in these areas needed to be assessed.

In RNTCP, in Katihar district, categorization of cases was found to be a problem. Drug stock was inadequate. Majority of Microscopy centres (MCs) did not have functioning microscopes. A few MCs had only monocular microscopes. Most of the DOT providers were government staff (80%). The stock of sputum cups, slides, spirit was inadequate. Sputum cups were not provided to DOT providers. Water for injection and syringes were not supplied to Cat- II patients. Cross verification of slides by STLS was incomplete and not reliable. Majority of the TB patients interviewed knew that they were suffering from TB and knew the duration of treatment, the consequences of not taking treatment. All of them admitted that the drugs were available free of cost. Very few knew about follow-up sputum examination. Almost all the patients were found to be regular in treatment.

## 10. Finance:

Income:	(INR)
Contribution from DGDC	18,722,687.21
Contribution from European Union	15,463,820.12
Contribution from Chantier Damien	209,730.70
Contribution from Lepira India for Delhi Project	935,321.00
Interest received from Fixed Deposit / Savings a/c	421,989.66
Donation / Fund raising	13,976.00
Staff Benefits	284,902.00
Miscellaneous Income	627,236.00
Opening Balance of Fixed Deposit	495,592.60
Opening Balance for the year 2004	5,677,907.53
	<b>75,362,010.11</b>
Expenditure:	
Fund transferred to Projects	17,941,615.12
Bihar Activities - Technical Teams	21,728,347.00
Jharkhand Activities - Technical Teams	4,723,894.00
Andhra Pradesh - Technical Teams	2,621,527.51
Karnataka - Technical Teams	1,519,764.00
DFIT Office, Field, POD	5,987,908.37
Training & Workshops	396,033.25
Miscellaneous Expenses	3,795,786.70
Chantier Damien activities	1,642,232.00
Closing balance for the year 2004	15,004,902.16
	<b>75,362,010.11</b>

### Damien Foundation India Trust - Year Wise Expenditure



\* Jharkhand was part of Bihar expenditure in the year 2002.



## 11. Activities 2004:

### Training Programmes:

	Particulars	Venue	Participants
1	Seminar on Leprosy- by Postgraduate Medical Students.	Karnatka Medical College,Tumkur	Students & Faculty.
2	Training on Lab aspects of RNTCP	Ranchi	55 - DFIT DTST staff - Bihar and Jharkhand.
3	Evaluation of RNTCP in TST districts of Andhra Pradesh and Karnataka	Andhra Pradesh & Karnataka	23 - DTST staff - Bihar and DFIT.
4	Guest Lecture on "Elimination of Leprosy in India Modern Strategies and Implementation' at Govt.Wenlock Hospital	Mangalore	PG students & faculty of Mangalore city Medical Colleges
5	Endowment Prize Exam - (Theory)	Medical Colleges in Tamil Nadu	152 – Under Graduate students.
	Endowment Prize Exam -(Practical)	Madras Medical College, Chennai	17 – Under Graduate students.
6	Seminar on Leprosy- by Postgraduate Medical Students.	M.S.Ramaiah Medical College Bangalore	78 Students & Faculty.
7	Management aspects of NLEP and POD Training for TSTs in Bihar and Jharkhand	Ranchi	86 - including 14 from LEpra.
8	Seminar on Leprosy- by Postgraduate Medical Students. Patna Medical College	Patna Medical College, Patna.	65 – PG Medical students & faculty.
9	Training on Microscope maintainance	Delhi	5 - Microscopists.
10	RNTCP training for new entrants of Bihar and Jharkhand Tech. Support Teams	DFIT, Anantapur	12 participants.
11	Seminar on Leprosy- by Post graduate Medical Students	Mangalore Medical College	78 – Medical students & Faculty.
12	Seminar on Leprosy- by Post graduate Medical Students	Sri Ramachandra Medical College, Porur.	63 – PG students & Faculty.
13	Training on two level Quality Control	Anantapur	Government RNTCP staff of Kadapa and Nellore.

### Meeting and Conferences:

	Particulars	Venue	Participants
1	WHO Workshop on Leprosy Research	Rio-de-Janeiro, Brazil	Dr.P.Krishnamurthy.
2	WHO – Technical Advisory Group	Geneva	Dr.P.Krishnamurthy
3	ILEP Technical Commission (ITC)	London	Dr.P.Krishnamurthy
4	ILEP Technical Commission (ITC)	Hyderabad	Dr.P.Krishnamurthy
5	IAL Conference	Haldia	28 – DFIT Medical Officers & staff.
6	IUATLD – Conference	Paris, France	Dr.P.Vijayakumaran & Dr.M.Shivakumar.
7	National TB Conference	Mumbai	Dr.M.Shivakumar & Dr.Vishnuvardhan.
8	National Conference on Leprosy	Raipur	Dr.P.Krishnamurthy, Dr.P.Vijayakumaran, & 6 DFIT Sponsored participants.
9	Role of NGOs in Social Mobilisation for TB control.	Bangkok	Dr.P.Vijayakumaran
10	Trust Meeting – (Three)	DFIT, Chennai	Trust Members
11	Action Plan Meeting – South	Kodaikanal	34 - Project & DFIT Staff
12	Action Plan Meeting - North	Ranchi	63 - Project & DFIT staff

STATISTICS

S.N	Project Name	Population	New Cases			G2 Deformity		Child Cases		MB
			MB	PB	TOT	No.	%	No.	%	%
<b>I PROJECTS</b>										
1	Ambalamoola	70000	1	1	2	0	0.0	0	0.0	50.0
2	Arisipalayam	756140	24	63	87	1	1.1	14	16.1	27.6
4	Dindigul	428288	7	28	35	0	0.0	6	17.1	20.0
5	Delhi	1957166	6	12	18	0	0.0	2	11.1	33.3
6	Fathimanagar **		30	22	52	11	21.2	2	3.8	57.7
7	Nagepalli	100563	9	11	20	1	5.0	0	0.0	45.0
8	Pavagada	248779	14	16	30	1	3.3	2	6.7	46.7
<b>PROJECTS - TOTAL :</b>		<b>3560936</b>	<b>91</b>	<b>153</b>	<b>244</b>	<b>14</b>	<b>5.7</b>	<b>26</b>	<b>10.7</b>	<b>37.3</b>
<b>II TST - SOUTH</b>										
1	Ananathapur	3735032	440	602	1042	11	1.1	157	15.1	42.2
2	Kadapa	2675157	226	805	1031	9	0.9	203	19.7	21.9
3	Nellore	2764742	250	769	1019	10	1.0	164	16.1	24.5
<b>TST(South) - TOTAL :</b>		<b>9174931</b>	<b>916</b>	<b>2176</b>	<b>3092</b>	<b>30</b>	<b>1.0</b>	<b>524</b>	<b>16.9</b>	<b>29.6</b>
<b>III TST (NORTH) - BIHAR</b>										
<b>Muzaffarpur Zone</b>										
1	Darbhanga	3591022	666	1828	2494	14	0.6	510	20.4	26.7
2	Madhubani	3849162	624	1411	2035	24	1.2	306	15.0	30.7
3	Siwan	2912003	556	1666	2222	28	1.3	507	22.8	25.0
4	Gopalganj	2316992	414	1070	1484	23	1.5	311	21.0	27.9
5	Saran	3505089	703	1355	2058	16	0.8	351	17.1	34.2
6	Sitamarhi	2934206	524	1830	2354	23	1.0	442	18.8	22.3
7	Sheohar	569831	105	280	385	1	0.3	67	17.4	27.3
8	Vaishali	2923955	399	742	1141	8	0.7	135	11.8	35.0
9	W.Champaran	3316918	512	1183	1695	34	2.0	209	12.3	30.2
10	E.Champaran	4275862	547	1773	2320	28	1.2	460	19.8	23.6
<b>SUB TOTAL :</b>		<b>30195040</b>	<b>5050</b>	<b>13138</b>	<b>18188</b>	<b>199</b>	<b>1.1</b>	<b>3298</b>	<b>18.1</b>	<b>27.8</b>
<b>Purnea Zone</b>										
11	Purnea	2807571	653	1997	2650	7	0.3	500	18.9	24.6
12	Kishanganj	1414411	369	1031	1400	12	0.9	296	21.1	26.4
13	Araria	2328815	363	1558	1921	3	0.2	388	20.2	18.9
14	Kathihar	2611760	380	1357	1737	3	0.2	365	21.0	21.9
15	Madhepura	1657236	240	764	1004	8	0.8	198	19.7	23.9
16	Kagharua	1387748	193	324	517	1	0.2	96	18.6	37.3
17	Saharsa	1655553	254	672	926	11	1.2	174	18.8	27.4
18	Supaul	1902126	266	1329	1595	6	0.4	298	18.7	16.7
<b>SUB TOTAL :</b>		<b>15765220</b>	<b>2718</b>	<b>9032</b>	<b>11750</b>	<b>51</b>	<b>0.4</b>	<b>2315</b>	<b>19.7</b>	<b>23.1</b>
<b>Gaya Zone</b>										
19	Gaya	3776831	754	1790	2544	33	1.3	471	18.5	29.6
20	Jehanabad	1642898	247	559	806	16	2.0	177	22.0	30.6
21	Nalanda	2503322	618	1187	1805	19	1.1	365	20.2	34.2
22	Rohtas	2654458	339	1459	1798	2	0.1	443	24.6	18.9
<b>SUB TOTAL :</b>		<b>10577509</b>	<b>1958</b>	<b>4995</b>	<b>6953</b>	<b>70</b>	<b>1.0</b>	<b>1456</b>	<b>20.9</b>	<b>28.2</b>
<b>BIHAR - TOTAL :</b>		<b>56537769</b>	<b>9726</b>	<b>27165</b>	<b>36891</b>	<b>320</b>	<b>0.9</b>	<b>7069</b>	<b>19.2</b>	<b>26.4</b>
<b>IV TST - JHARKHAND</b>										
1	Lohardagga	393762	62	131	193	8	4.1	12	6.2	32.1
2	W.Singhbhum	1292737	456	728	1184	26	2.2	210	17.7	38.5
3	Gumla	876650	101	197	298	3	1.0	47	15.8	33.9
4	Simdega	539385	63	40	103	1	1.0	9	8.7	61.2
5	E.Singhbhum	2109058	722	1628	2350	19	0.8	498	21.2	30.7
6	Godda	1116383	325	772	1097	1	0.1	162	14.8	29.6
7	Saraikela	905149	686	1295	1981	33	1.7	401	20.2	34.6
8	Deogarh	1262409	429	523	952	12	1.3	56	5.9	45.1
<b>JHARKHAND - TOTAL :</b>		<b>8495533</b>	<b>2844</b>	<b>5314</b>	<b>8158</b>	<b>103</b>	<b>1.3</b>	<b>1395</b>	<b>17.1</b>	<b>34.9</b>
<b>GRAND TOTAL</b>		<b>77769169</b>	<b>13577</b>	<b>34808</b>	<b>48385</b>	<b>467</b>	<b>1.0</b>	<b>9014</b>	<b>18.6</b>	<b>28.1</b>

\*\* Referral Hospital — PR: Prevalance — NCDR: New Case Detection Rate — PD Ratio: Prevalance Detection Ratio

AT A GLANCE ( NLEP ) : 2004

Annexure 1

Cases On Record			PR	NCDR	PD Ratio	% of W D	% of R-R	Cohort (%)	
MB	PB	TOT	/10000	/10000				PB %	MB %
1	0	1	0.1	0.3	0.5	0	0	100.0	100.0
18	15	33	0.4	1.2	0.4	5	0	100.0	88.4
5	14	19	0.4	0.8	0.5	0	0	100.0	100.0
5	5	10	0.1	0.1	0.6	0	0	100.0	66.7
						0	0		
9	8	17	1.7	2.0	0.9	0	0	100.0	100.0
14	6	20	0.8	1.2	0.7	0	0	100.0	100.0
52	48	100							
		604	1.6	2.8	0.6	2.9	2.6		
132	239	371	1.4	3.9	0.4	1.7	0.7		
234	378	612	2.2	3.7	0.6	1.9	3.3		
		1587	1.7	3.4	0.5				
582	850	1432	4.0	6.9	0.6	4.7	2.9	91.8	83.7
		1233	3.2	5.3	0.6	2.7	2.2	70.9	65.6
485	512	997	3.4	7.6	0.4	13.8	5.3	96.3	84.5
359	414	773	3.3	6.4	0.5	4.5	3.1	80.9	86.6
587	397	984	2.8	5.9	0.5	4.2	4.1	88.0	93.0
		1057	3.6	8.0	0.4	12.1	9.1	91.8	88.3
87	106	193	3.4	6.8	0.5	2.2	7.5	81.8	91.5
409	292	701	2.4	3.9	0.6	4.1	2.7	68.5	75.7
		1024	3.1	5.1	0.6	12.4	5.7	82.0	85.0
513	743	1256	2.9	5.4	0.5	7.9	4.3	89.3	83.9
		9650							
		1106	3.9	9.4	0.4	18.3	11.8	92.2	99.9
335	356	691	4.9	9.9	0.5	2.5	4.3	93.8	92.5
308	514	822	3.5	8.2	0.4	19.4	16.0	72.2	100.0
327	360	687	2.6	6.7	0.4	16.4	11.7	90.6	90.0
221	234	455	2.7	6.1	0.5	5.3	3.4	92.0	85.4
167	90	257	1.9	3.7	0.5	6.9	4.8	91.8	97.0
		426	2.6	5.6	0.5	3.7	2.2	96.8	87.5
229	477	706	3.7	8.4	0.4	13.4	6	99.4	85.0
		5150							
		1490	3.9	6.7	0.6	4.7	6.5	71.6	98.7
		598	3.6	4.9	0.7	10.0	4.0	97.1	98.9
558	566	1124	4.5	7.2	0.6	3.8	5.6	97.4	89.1
		818	3.1	6.8	0.5	3.4	5.4	96.6	94.1
		4030	3.8	6.6	0.6			88.5	95.3
		18830	3.3	6.5	0.5			87.9	89.7
65	39	104	2.6	4.9	0.5	7.0	2.7	96.0	95.1
423	327	750	5.8	9.2	0.6	2.1	3.7	87.0	89.0
94	64	158	1.8	3.4	0.5	2.2	5.0	98.2	94.6
61	17	78	1.4	1.9	0.8	1.5	11.5		
772	504	1276	6.1	11.1	0.5	3.9	3.9	89.0	86.9
297	320	617	5.5	9.8	0.6	5.7	7.5	81.0	86.3
579	557	1136	12.6	21.9	0.6	4.0	5.0	86.7	80.0
382	258	640	5.1	7.5	0.7	8.3	10.6	78.4	79.2
2673	2086	4759	5.6	9.6	0.6			86.6	86.1
		25276							

WD: Wrong Diagnosis — RR: Re-Registration



## Newly Registered Tuberculosis Patients in NGO Projects and Districts ( TST ) - 2004

Name of the NGO Projects	Total Cases	New cases								* Re-Treatment Cases	%
		New Pulmonary Positive	%	New Pulmonary Negative	%	Extra Pulmonary	%	Total New Cases	%		
Arisipalayam	1142	323	28.3	471	41.2	264	23.1	1058	92.6	77	6.7
Aundipatty	55	29	52.7	6	10.9	3	5.5	38	69.1	15	27.3
Ambalamoola	41	18	43.9	3	7.3	13	31.7	34	82.9	7	17.1
Delhi (TU I & II)	1211	369	30.5	249	20.6	260	21.5	878	72.5	208	17.2
Dindigul	62	33	53.2	12	19.4	7	11.3	52	83.9	10	16.1
Fathimanagar	27	8	29.6	5	18.5	6	22.2	19	70.4	8	29.6
Nagepalli	45	22	48.9	16	35.6	7	15.6	45	100.0	0	0.0
<b>Total</b>	<b>2583</b>	<b>802</b>	<b>31.0</b>	<b>762</b>	<b>29.5</b>	<b>560</b>	<b>21.7</b>	<b>2124</b>	<b>82.2</b>	<b>325</b>	<b>12.6</b>
<b>TST-Districts - South:</b>											
Anantapur	5281	2388	45.2	1642	31.1	302	5.7	4332	82.0	825	15.6
Kadapa	4624	1733	37.5	1993	43.1	259	5.6	3985	86.2	486	10.5
Nellore	3797	1530	40.3	1113	29.3	172	4.5	2815	74.1	651	17.1
Bangalore	2859	1134	39.7	661	23.1	622	21.8	2417	84.5	333	11.6
Tumkur	3165	1354	42.8	751	23.7	493	15.6	2598	82.1	399	12.6
Trivandrum	2297	906	39.4	644	28.0	478	20.8	2028	88.3	153	6.7
<b>TST - Vaishali - Bihar:</b>	<b>2883</b>	<b>816</b>	<b>28.3</b>	<b>1371</b>	<b>47.6</b>	<b>204</b>	<b>7.1</b>	<b>2391</b>	<b>82.9</b>	<b>205</b>	<b>7.1</b>
<b>Total</b>	<b>24906</b>	<b>9861</b>	<b>39.6</b>	<b>8175</b>	<b>32.8</b>	<b>2530</b>	<b>10.2</b>	<b>20566</b>	<b>82.6</b>	<b>3052</b>	<b>12.3</b>

\* "Other" is not included

## STATUS OF RNTCP IN 6 DISTRICTS IN THE SOUTH (DEC 2004)

Districts	Anantapur	Kadapa	Nellore	Bangalore urban	Tumkur	Trivandrum
2% suspects referral	16/39 (41%)	9/21 (43%)	30/36 (83%)	9/11 (82%)	15/27 (56%)	38/46 (82%)
Microscope in good condition	39/39 (100%)	18/21 (88%)	34/36 (95%)	9/11 (82%)	23/27 (85%)	41/46 (89%)
LT available	32/39(82%)	17/21(81%)	33/36(92%)	10/11(91%)	27/27(100%)	46/46(100%)
Lab register maintained upto date	39/39 (100%)	15/21 (71%)	32/36 (89%)	8/11 (73%)	19/27 (70%)	43/46 (93%)
Good Quality of smear	39/39 (100%)	15/21 (71%)	32/36 (89%)	8/11 (73%)	16/27 (59%)	43/46 (93%)
Good Quality of staining	39/39 (100%)	15/21 (71%)	32/36 (89%)	7/11 (64%)	15/27 (56%)	43/46 (93%)
Sputum positive 10-20%	15/39 (39%)	5/21 (24%)	33/36 (92%)	6/11 (55%)	15/27 (56%)	29/46 (63%)
Follow up sputum done	37/39 (95%)	17/21 (81%)	46/61 (76%)	9/11 (82%)	15/27 (56%)	43/46 (93%)
Categorization correct/seen	4919/4982 (99%)	3180/3228 (98.5%)	2386/2412 (99%)	2162/2180 (99%)	2576/2612 (99%)	1420/1464 (97%)
Patients on DOTS/Seen	4812/4982 (97%)	1944/3228 (60%)	2196/2412 (91%)	1968/2180 (90%)	1932/2633 (73%)	951/1464 (65%)
Cure rate > 85%	5/7 (71%)	3/5 (60%)	5/6 (83%)	0/5 (0%)	0/5 (0%)	4/6 (67%)
Treatment card Updated/verified	21943/24114 (91%)	4107/7899 (52%)	2271/4286 (53%)	10200/12118 (85%)	3784/5406 (70%)	660/1440 (46%)
TB register updated	7/7 (100%)	3/5 (60%)	6/6 (100%)	3/5 (60%)	3/5 (60%)	3/6 (50%)
Drug stock adequate	7/7 (100%)	3/5 (60%)	1/7 (14%)	0/7 (0%)	1/5 (20%)	6/6 (100%)
DOT providers functioning correct/seen	2728/2889 (94%)	966/1180 (82%)	1020/1260 (81%)	1080/1386 (78%)	1080/1320 (82%)	862/911 (95%)
GPs Involved in suspect referral	35	21	37	25	8	--
GPs DOT providers	0	0	7	19	3	--
RMPs involved in suspect referral	25	9	25	0	6	--
RMPs as DOT providers	14	6	17	0	2	--

## Results of Treatment ( Sputum Conversion) - ( Cure Rate-2003)

## New Sputum Positive Patients on DOTS in RNTCP

NGO PROJECTS	Total New Positive cases	Sputum Conversion	Rate	Total New Positive cases	Cured	Cure Rate	Defaulter Rate	Death Rate	Failure Rate
Arisipalayam	326	290	89.0	299	261	87.3	1.0	5.4	6.0
Aundipatty	41	26	63.4	48	40	83.3	10.4	6.3	0.0
Ambalamoola	14	13	92.9	14	13	92.9	0.0	7.1	0.0
Delhi (TU I & II)	299	258	86.3	111	98	88.3	5.4	1.8	3.6
Dindigul	19	14	73.7	16	15	93.8	0.0	6.2	0.0
Fathimanagar	10	6	60.0	6	5	83.3	0.0	16.7	0.0
Nagepalli	15	9	60.0	10	8	80.0	0.0	0.0	10.0
<b>Total</b>	<b>724</b>	<b>616</b>	<b>85.1</b>	<b>504</b>	<b>440</b>	<b>87.3</b>	<b>3.2</b>	<b>5.6</b>	<b>4.3</b>
<b>TST-Districts- South :</b>									
Anantapur	2484	2276	91.6	2811	2404	85.5	2.6	6.9	4.1
Kadapa	1811	1610	88.9	2131	1750	82.1	5.1	6.1	4.1
Nellore	1440	1328	92.2	995	836	84.0	4.0	6.4	2.7
Bangalore	1064	941	88.4	896	716	79.9	12.2	4.2	1.4
Tumkur	1397	1186	84.9	1456	1125	77.3	10.2	7.5	4.5
Trivandrum	911	835	91.7	915	797	87.1	5.3	3.7	2.2
<b>TST-Vaishali-Bihar</b>	<b>818</b>	<b>760</b>	<b>92.9</b>	<b>1116</b>	<b>983</b>	<b>88.1</b>	<b>6.2</b>	<b>2.0</b>	<b>1.4</b>
<b>Total</b>	<b>9925</b>	<b>8936</b>	<b>90.0</b>	<b>10320</b>	<b>8611</b>	<b>83.4</b>	<b>6.0</b>	<b>5.5</b>	<b>3.3</b>

## SPUTUM SLIDES DONE IN NGO PROJECTS DURING 2004

Projects	Neg	%	Scanty	%	Positive	%	Total
Ambalamoola	410	87.4	12	2.6	47	10.0	469
Arisipalayam	2136	85.4	93	3.7	272	10.9	2501
Aundipatty	1580	87.3	56	3.1	174	9.6	1810
Dindigul	1930	90.4	10	0.5	196	9.2	2136
Delhi	4509	78.7	193	3.4	1028	17.9	5730
Fathimanagar	276	80.2	6	1.7	62	18.0	344
Kavali	1825	78.0	55	2.4	459	19.6	2339
Nellore	1290	76.1	82	4.8	324	19.1	1696
Nagepalli	615	76.0	37	4.6	157	19.4	809
Trivandrum	503	92.8	13	2.4	26	4.8	542
<b>Total</b>	<b>15074</b>	<b>82.0</b>	<b>557</b>	<b>3.0</b>	<b>2745</b>	<b>14.9</b>	<b>18376</b>

## VARIATION IN SPUTUM MICROSCOPY IN NGO PROJECTS – 2004

Projects	Slides selected for QC				HFN	%	SFN	%	HFP	%	SFP	%
	Neg	Scanty	Positive	Total								
Ambalamoola	67	3	8	78	0	0.0	9	13.4	0	0.0	0	0.0
Arisipalayam	93	4	24	121	1	1.1	3	3.2	1	4.2	0	0.0
Aundipatti	81	6	16	103	0	0.0	4	4.9	0	0.0	0	0.0
Dindigul	238	2	29	269	1	0.4	29	12.2	0	0.0	0	0.0
Delhi	1183	72	279	1534	2	0.2	36	3.0	1	0.4	14	19.4
Fathimanagar	52	0	14	66	3	5.8	5	9.6	0	0.0	0	0.0
Kavali	84	2	27	113	0	0.0	7	8.3	0	0.0	0	0.0
Nellore	59	4	31	94	0	0.0	4	6.8	0	0.0	2	50.0
Nagepalli	43	3	16	62	0	0.0	5	11.6	0	0.0	0	0.0
Trivandrum	111	3	10	124	2	1.8	28	25.2	0	0.0	0	0.0
<b>Total</b>	<b>2011</b>	<b>99</b>	<b>454</b>	<b>2564</b>	<b>9</b>	<b>0.4</b>	<b>130</b>	<b>6.5</b>	<b>2</b>	<b>0.4</b>	<b>16</b>	<b>16.2</b>

## DAMIEN FOUNDATION INDIA TRUST - DISTRICT TECHNICAL SUPORT TEAMS

TST	ADDRESS	TST	ADDRESS	TST	ADDRESS
<b>Andhra Pradesh - Support to NLEP &amp; RNTCP- Training, Supervision &amp; Monitoring</b>					
<b>Anantapur</b>	D.No. 6-3-17, Ramnagar Extension, Ananthapur - 515 001. Ph: 08554 – 243591 E.Mail - dfittstatp @ yahoo.com	<b>Kadapa</b>	7- 201- A, NGO.Colony, Kadapa –516 002 (A.P.) Ph: 08562-253285	<b>Nellore</b>	Urban Leprosy Centre, A.K.Nagar Post, Bakhavatchala Nagar, Nellore - 524 004. Ph: 0861- 2325163 E.Mail - dfulcnlr@sancharnet.in
<b>Karnataka &amp; Kerala - Support to RNTCP- Training, Supervision &amp; Monitoring</b>					
<b>Tumkur</b>	District Laboratory Building, District Hospital Compound, Tumkur, Karnataka. Ph: 080-3445303 ( R ) E.Mail - swajapa @ yahoo.com	<b>Bangalore Urban</b>	32/35, I Floor, II Cross, K.R. Road, 7th Block, Jayanagara (W) Bangalore – 560 070 E.Mail - swajapa @ yahoo.com	<b>Trivandrum</b>	St.John's Hospital Pirapencode Post, Trivandrum District, Kerala- 695 607 Ph: 0472-2872047 Fax: 0472-2872378 E.mail; stjpp@vsnl.net
<b>Bihar - Support to NLEP &amp; RNTCP - Training, Supervision &amp; Monitoring</b>					
<b>Araria</b>	C/o. Sri Batech NathJha East to Viyapar Mandal K.Basthi, Ward No. 10 Araia 854 311 Ph: 9431412493	<b>Dharbanga</b>	C/O Pallavi STD Booth, Khaja Sarai, Iaharia Sarai Dharbanga, Bihar- 846004 Ph: 06272-242008	<b>Madhubani</b>	C/O District Leprosy Officer, Sadar Hospital, Madhubani, Bihar Ph: 06276-222156 C/o Hotel Sumanta, Room No:107.
<b>Siwan</b>	C/O Sri.Chandeshwar Prasad Singh (Rtd.CID Inspector) Fatepur, Durga Mandir, Siwan, 841 226. Ph:06154 – 223951	<b>Kathihar</b>	C/o Jawaharlal Yadav, Parabandan, Bari, Durga Asthan, Kathihar 854105 Ph:06452 – 234704	<b>Gopalganj</b>	C/o Narendra Kumar, Bikram Sadan, Thane Road, Gopalganj. 841428 Ph: 06156-226322
<b>Saran</b>	C/o Ashok Kumar Dubey, Rathanpura, Jaiprakash Nagar, Chapra, Saran 841301. Ph:06152-236081	<b>Nalanda</b>	C/o Mr.Ramachandra Prasad, Rajgir Block North, Saidpur, Rajgir 803 116 Ph: 06112-255898	<b>Gaya</b>	C/o Dr. Ashok Kumar Sinha Quarter No. 361, Subhadra Bhavan Near Asha Singh More A.P. Colony, Gaya – 823 001 Ph: 9431289676 (Dr.R.K.Mishra)

TST	ADDRESS	TST	ADDRESS	TST	ADDRESS
<b>Sitamarhi &amp; Sheohar</b>	C/O Shri.Laxman Singh, Bank colony, Anand Nagar Dumra Road, Sitamarhi 843 302 Ph: 06226-21949	<b>Jehanabad</b>	C/o District Leprosy Officer Sadar Hospital Campus Jehanabad 804408 Ph: 06114-222205	<b>Purnea</b>	C/O Dr.Arjun Prasad Sinha, Sepahi Tola, Chunapur, Street No.1, Purnea- 854301 9431284876
<b>Rohtas</b>	C/o. Sanjay Kumar Singh Next to Prakash Pump G.T. Road, Sasaram – 821 115 06184-224159	<b>Madhepura</b>	C/OMr.Chandan KumaYadavTeacher, Nia Toli,Near Block Office, Madhepura –Bihar Ph: 06476-224233	<b>West Champaran</b>	C/o. Jagdish Narayan Shukla, New Colony,Dack BungalowRoad, Bettiah, West Champaran– 845438 Ph: 06254-234362
<b>East Champaran</b>	C/o. Dr.Harikishore Verma, Agarwa, Motihari, East Champaran- Bihar Ph: 06252-223710 (PP)	<b>Supaul</b>	C/O Rasbihari Choudari, Ward.No.2 , Kachari Road, Supaul- Bihar Ph: 06473- 223055	<b>Saharsa</b>	C/o. Dr.C.M.Choudhary, Gangila,PanchavadiChowk Saharsa Ph: 06478-224173/ 228536
<b>Khagaria</b>	C/O Shri. Lalbabu, Advocate, Near Town Hall, Chitragupta Nagar,Khagaria Ph: 06244-229047	<b>Kishanganj</b>	C/o. Azad Razak, Milanpalli Village, Kajala Mani, Kishanganj-855107 Ph: 06456-223816	<b>Vaishali</b>	C/O Sri.A.K.Sinha, S.D.O.Road, Near toVeterinary Hospital, Hajipur, Vaishali – 842101 Ph: 06224-273864

#### Jharkhand- Support to NLEP - Training, Supervison & Monitoring

<b>Gumla</b>	C/o.O Sri.Bendheshwar Prasad, Teacher, Lohardagga Road Dunderiah,P.O. & District Gumla - 835207 Ph: 06527-221839	<b>Deoghar</b>	C/o.Sri.Dilip Jha'sNew Building Shivapuri,Bilasy Deoghar- 814117. 06432-225627 06432-220973(DLO)(O) Cell: 09431157880	<b>Lohardagga</b>	Power Ganj Chowk, Katechery Road, Near Harijan School Lohardagga
<b>Singhbhum West</b>	C/o. Binod Kumar Gupta New Colony, NIMDIH, Chaibasa – 833 201 West Singhbhum Dist. Ph: 06582-258826	<b>Singhbhum East</b>	C/o. Abhijeeth Chandra Chanda Qr. No.18, Gandhi Marg Devnagar, Near Bharadwari, Jamshedpur 9431380296	<b>Godda</b>	C/O Shanthi Niketan, West Side of DC Office, Godda – 814113 Ph: 06422-220656

PROJECT	ADDRESS	AREA OF OPERATION	ACTIVITIES		Specialities	Personnel
			LEPROSY	TUBERCULOSIS		
<b>DAMIEN FOUNDATION INDIA TRUST HEAD OFFICE: CHENNAI.</b>	New No: 14 (Old No:27) Venugopal Avenue, Spur Tank Road, Chetput, Chennai- 600 031 Ph: 044- 28360496 044- 28361910 Fax: 044- 28362367 E. Mail : damienin@vsnl.com	12 Projects, District Technical Support Teams: South: Andhra Pradesh: 3 Karnataka:2 North:Bihar: 22 Jharkhand : 6	Support to NLEP in Planning, Training and POD programme Supervision and monitoring, Evaluation and Research.	Support to RNTCP in Planning, Training, Supervision, Monitoring, Evaluation and Research.		Office: 19
<b>DAMIEN FOUNDATION INDIA TRUST - NORTH OFFICE RANCHI, JHARKHAND.</b>	Indian Medical Association Campus, Near Karamtoli Chowk. Morabadi, Ranchi, Jharkhand - 834008 Ph: 0651-2360714 Fax: 0651-2360315 E.Mail: rch_dfitran@sancharnet.in rch_dfitjar@sancharnet.in	District Technical Support Teams: Bihar: 22 Jharkhand: 6	Support to NLEP in Planning, Training and POD programme Supervision and monitoring, Evaluation	Support to RNTCP in Planning, Training Supervision, Monitoring, Evaluation in Vaishali District.		Office: 08 Tech.Team Staff: 109
<b>DAMIEN FOUNDATION INDIA TRUST - PATNA, BIHAR.</b>	House No: J-13, P.C.ColonyKankarBagh, Patna,Bihar - 800020 Ph: 0612-2343841 0612-2367183 (R) E.Mail: dfitpat@sancharnet.in					Office: 1
<b>Arogya Agam, Aundipatty, Tamilnadu.</b>	Theni District Tamilnadu 625512, Ph: 04546-242306 Fax: 04546-244311 E.mail: info@arogyaaagam.org	6 Municipalities (Theni, Cumbum, Bodi, Periakulam and Kodaikanal.)	Support to NLEP in Urban & Rural, Training and POD programme Supervision and monitoring.	RNTCP Microscopy Centre for TB Resource Organisation for 4 NGO run Microscopic Centres Supervision and Monitoring.	In-patient care facilities for leprosy and Tuberculosis No of beds: 35.	6
<b>St.Mary's Leprosy Centre, Arisipalayam, Tamilnadu.</b>	Salem - 636009 Ph: 0427-2352645 E.mail: smlcslm @ eth.net	Salem Corporation, Namakkal Urban & Rasipuram Urban	Support to NLEP Training, POD activities, Supervision and monitoring	Microscopy Centre, Tuberculosis Unit covering 500000 population , Support to RNTCP in Training, Supervision and Monitoring.	In-patient care facilities for leprosy and Tuberculosis No of beds:22	14
<b>Purna Sukha Leprosy Project St. Joseph Hospital, Dindigul, Tamilnadu.</b>	Post Box No.75, Trichy Road, Dindigul Tamilnadu -624001 Ph: 0451-2430399 0451-2430998	Dindigul Urban, Palani Urban, Karur Urban & Kulithalai Urban	Support to NLEP Training, POD activities, Supervision and monitoring	Microscopy Centre, Support to RNTCP in Training, Supervision and Monitoring the programme.	In-patient care facilities for leprosy and Tuberculosis No of beds:10	7
<b>Holy Family Hansenorium, FathimaNagar, Tiruchirapalli, Tamilnadu.</b>	Fathima Nagar, Thiruchirapalli - 620012. Ph: 0431-2680222 0431-2680033 holyfamilyhansenorium@yahoo.co.in	Tiruchirapalli and Pudukottai	Out patient and Inpatient care ; Training in leprosy and POD; Technical Support to Urban Health Post ; Reconstructive Surgery and Rehabilitation. Support to NLEP	Tuberculosis treatment Programme for 35000 population around Project area	Inpatient care for leprosy and Tuberculosis, Reconstructive Surgery for leprosy Patients. No of beds:70	10



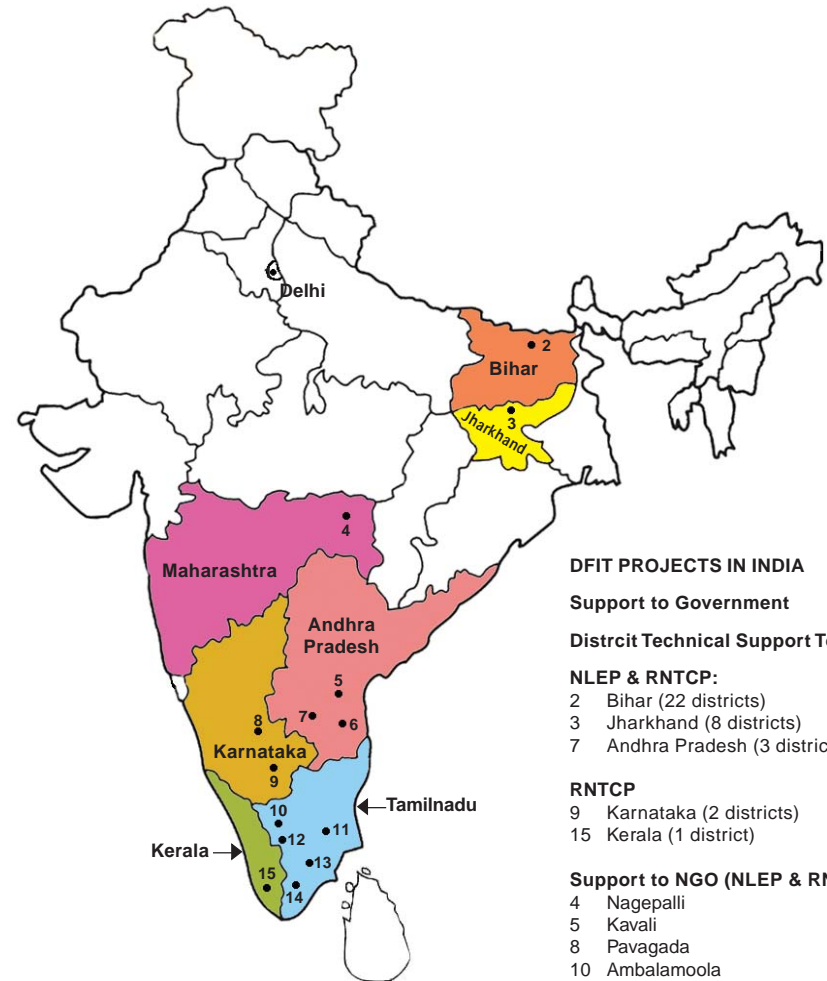
PROJECT	ADDRESS	AREA OF OPERATION	ACTIVITIES		Specialities	Personnel
			LEPROSY	TUBERCULOSIS		
<b>Assisi Seva Sadan Hospital, Nagepalli, Maharashtra.</b>	Allapalli Post, Gadchiroli District Maharashtra - 442703 Ph: 07133-266461	Rural Nagepalli	Training and POD activities.	Microscopy Centre, Support to RNTCP in Training, Supervision and Monitoring the programme.	Inpatient care facility for Leprosy and Tuberculosis No of beds:4	10
<b>Damien Foundation Urban Leprosy and Tuberculosis Centre, Nellore Andhra Pradesh.</b>	Bakthavatchala Nagar, A.K.Nagar Post, Nellore 524004 Ph- 0861-2325163 E.mail: dfulcni@sancharnet.in	Nellore Urban	Support to NLEP Training and POD activities.	Microscopic Centre Support to RNTCP in Training Supervision and Monitoring the programme.	Inpatient patient care facility for leprosy and TB,Reconstructive surgery. No of beds:10	11
<b>Rural Health Centre- Asaniketan - Kavali Andhra Pradesh.</b>	Vengal Rao Nagar, Kavali- Andhra Pradesh 524 202 E.mail: asanikethan2netlinx.com	Rural Kavali	Support to NLEP Training and POD activities, Supervision and monitoring	Tuberculosis Unit,Support to RNTCP in Training, Supervision and Monitoring the programme.	Inpatient patient facility for leprosy and Tuberculosis No of beds:6	11
<b>Swami Vivekananda Integrated Rural Health Centre, Pavagada, Karnataka.</b>	Sri Ramakrishna Sevashram, K.R. Extension, Tumkur-Pavagada -Karnataka 561202 Ph: 08136-244548 08136-244030 E.mail: swajapa@yahoo.com	Pavagada Taluk, Tumkur District	Support to NLEP Training and POD activities, Supervision and monitoring.	Tuberculosis Unit,Support to RNTCP in Training, Supervision and Monitoring the programme.	Inpatient patient facility for leprosy and Tuberculosis, Reconstructive surgery facilities for Leprosy patients. No of beds:25	15
<b>Nilgris-Wyanad Tribal Welfare Society, Ambalamoola Tamilnadu.</b>	Ambalamoola PO via:Bitherkad, GudalurTaluk, Nilgris-643240 Ph: 04262-22455 E.mail: nwtws@hclinfinet.com	Ambalamoola Rural	Support to NLEP in Training and POD activities, In-patient care for Leprosy	Tuberculosis treatment programme	Inpatient patient facility for leprosy and Tuberculosis No of beds: 12	3
<b>Margaret Leprosy &amp; TB Centre Damien Foundation India Trust, New Delhi</b>	Qutub Vihar Main Road, near Police Check Post Najafgarh, New Delhi-110071 Ph: 011-25319112 011-25319123 011-55492609 E.mail: difitlepdelhi @ vsnl.net	South & South West Districts, New Delhi	Support to NLEP Training Supervision and monitoring.	Tuberculosis Unit, for 500 000 population, Microscopy Centre, DOTS Centre, Support to RNTCP in Training, Supervision and Monitoring the programme	In-patient care facilities for leprosy and Tuberculosis No of beds: 10	16

## GLOSSARY

<b>AMDT</b>	: Accompanied Multi Drug Therapy
<b>APHC</b>	: Additional Primary Health Centre
<b>CLTRI</b>	: Central Leprosy Teaching & Research Institute
<b>CME</b>	: Continuing Medical Education
<b>DFIT</b>	: Damien Foundation India Trust
<b>DGDC</b>	: Directorate General for Development Co-operation
<b>DLO</b>	: District Leprosy Officer
<b>DMC</b>	: Designated Microscopy Centre
<b>DTO</b>	: District Tuberculosis Officer
<b>DOT</b>	: Directly Observed Treatment
<b>DTST</b>	: District Technical Support Team
<b>EP</b>	: Extrapulmonary
<b>EQA</b>	: External Quality Assurance
<b>GP</b>	: General Practitioners
<b>HFN</b>	: High False Negative
<b>HFP</b>	: High False Positive
<b>HIV</b>	: Human Immunodeficiency Virus
<b>ILEP</b>	: International Federation of Anti-leprosy Associations
<b>ITC</b>	: ILEP Technical Commission
<b>IUATLD</b>	: International Union Against Tuberculosis and Lung Diseases
<b>LEC</b>	: Leprosy Elimination Campaign
<b>LEM</b>	: Leprosy Elimination Monitoring
<b>LEPRA</b>	: Lepra India
<b>LT</b>	: Laboratory Technician
<b>MB</b>	: Multibacillary
<b>MC</b>	: Microscopy Centre
<b>MDT</b>	: Multi Drug Therapy

- MLEC** : Modified Leprosy Elimination Campaign
- MO** : Medical Officer
- MPHW** : Multi Purpose Health Worker
- MPR** : Monthly Progress Report
- NCDR** : New Case Detection Rate
- NGO** : Non Government Organisation
- NLEP** : National Leprosy Eradication Programme
- NMS** : Non Medical Supervisor
- PB** : Paucibacillary
- PD Ratio** : Prevalence Detection Ratio
- PHC** : Primary Health Centre
- POD** : Prevention of Disability
- PR** : Prevalence Rate
- PT** : Physio Technician
- QC** : Quality Control
- RFT** : Released From Treatment
- RMP** : Registered Medical Practitioners
- RNTCP** : Revised National Tuberculosis Control Programme
- RR** : Reregistration
- SAPEL** : Special Action Project for Elimination of Leprosy
- SC** : Sub-centre
- SFN** : Scanty False Negative
- SFP** : Scanty False Positive
- STS** : Senior Tuberculosis Supervisor
- STLS** : Senior Tuberculosis Laboratory Supervisor
- TU** : Tuberculosis Unit
- VHN** : Village Health Nurse
- WD** : Wrong Diagnosis
- WHO** : World Health Organisation

## Projects Supported by Damien Foundation India Trust



- DFIT PROJECTS IN INDIA**
- Support to Government**
- District Technical Support Teams :**
- NLEP & RNTCP:**
- 2 Bihar (22 districts)
  - 3 Jharkhand (8 districts)
  - 7 Andhra Pradesh (3 districts)
- RNTCP**
- 9 Karnataka (2 districts)
  - 15 Kerala (1 district)
- Support to NGO (NLEP & RNTCP)**
- 4 Nagepalli
  - 5 Kavali
  - 8 Pavagada
  - 10 Ambalamoola
  - 11 Fathimanagar
  - 12 Arisipalayam
  - 13 Dindigul
  - 14 Aundipatty
- DFIT Own projects (NLEP & RNTCP)**
- 1 Delhi
  - 6 Nellore

NOTES

