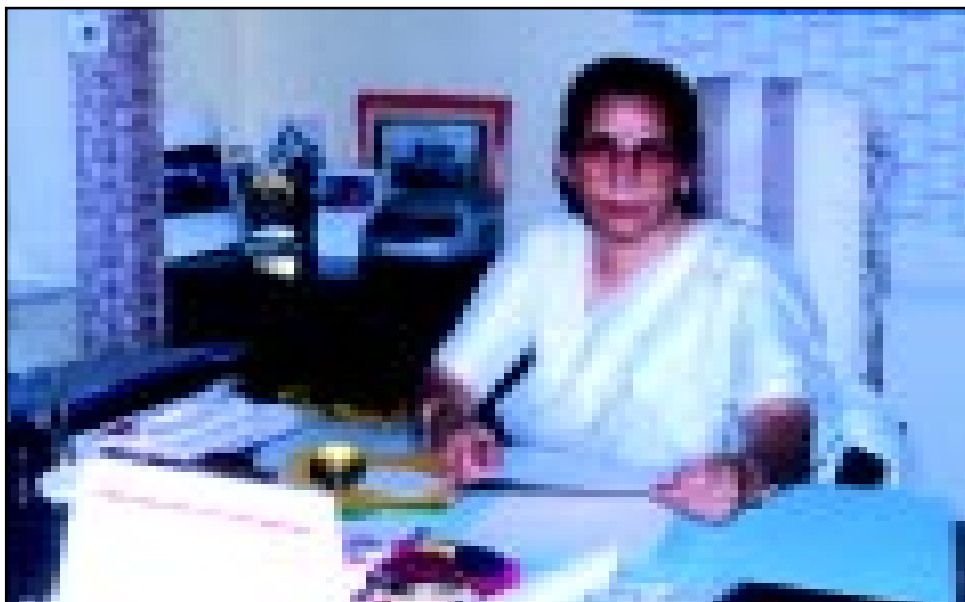


5. IN THESE TIMES



Dr. (Mrs) P Jagota,
Director (1997-)

5.1. There is more to TB than scientific discoveries

The year, Koch discovered the bacillus, G.Bacelli reportedly remarked: “The *bacillus is not yet all there is to TB*”. The relevance of this remark continues to hold even today. Technology has been developed to harness the fruits of research at different places and make these ubiquitously available. Yet in 1993, WHO declared that TB was a global emergency. In 1994, Dr Arata Kochi, Director of the Global TB Programme, WHO, lamented: “*TB is one of the most neglected health crises. In spite of its alarming dangers surprisingly little action has been taken to address the TB epidemic. Is it possible that no one really cares*

whether 30 million people will die in the next decade from TB?... How can TB be such a neglected priority, when TB is one of the most cost-effective adult diseases to treat?... How can one ignore a germ that infects a third of the world's population¹³⁰? WHO listed India along with Zambia, Bolivia, South Africa, Nigeria and other countries where situation continues to be grave.

According to the editorial of Tubercle & Lung Disease : *"If the number of victims that a disease claims is the measure of its significance, then all diseases, particularly the most dreaded infections such as bubonic plague, Asiatic cholera etc.,... must rank far behind TB"*¹³¹. TB was described as an epidemic of injustice, in 1998, by the editors of the International Journal of TB and Lung Diseases. They believe that *"the prevalent political trends that place economic exigencies before human health and quality of life"* are the main structural barriers inhibiting the conquest of TB¹³². The International union against TB and lung diseases (IUATLD), comprising 138 constituents, intends to establish a united front to

*spearhead public health advocacy on behalf of the millions of sufferers of TB*¹³².

In a scathing attack, nailing complacency and inappropriate treatment for the resurgence of the disease and emergence of drug resistant strains, Reichman of the National Tuberculosis Centre, New Jersey, USA exhorted: *"The failure to eliminate this easily eliminatable scourge, ranks as one of the human race's most serious ongoing blunders. TB is different from almost any other disease, in that, cases of TB must be actively sought to keep them from spreading the disease to others. In most diseases, the untreated or improperly treated cases die and harm nobody. In TB, these cases become resistant and spread drug resistant TB. We physicians blame our patients for non-compliance in taking drugs. However, our failure to deal with TB rests with a lack of compliance at several levels. TB will never be eliminated until this is corrected...The problem with TB control is a global co-operative effort, the operative word being "cooperative" and as such a team effort."* Reichman emphasised these concerns while

addressing the conference on global lung health and 1996 annual meeting of the IUATLD, at Paris¹³³.

It seems he was restating the trials and tribulations of the NTI, while elaborating on global worries. The NTI had also discovered that the solution lies not in accumulating further knowledge, but in working with it and in dealing with the providers, end users and managers of the system. Its experience of four decades chronicles how problematic it was to adopt scientific rigour and to follow the technical guidelines.

As already stated in the earlier chapter the review of Indian TB Programme carried out in 1992 by, WHO, GOI and SIDA revealed that India's NTP had many basic strengths. The team observed in its report that a sound revitalisation of National TB strategy was in order. An updated and strengthened RNTCP could reduce the magnitude of the problem by half every 10-15 years. This would require political commitment, initial investment and strong leadership¹²⁴.

In the light of the above

recommendations and concern expressed by Central Health Council, **RNTCP was introduced in 1993 in some selected areas of the country** with World Bank assistance. The main thrust of RNTCP was to give priority to the sputum smear positive pulmonary TB cases by quality diagnosis (three smear examination, use of binocular microcope), by giving Directly Observed Therapy Shortcourse (DOTS) with at least four drugs in the intensive phase, and two drugs in the continuation phase, intermittently. Operations research was also envisaged as an integral part of RNTCP to evaluate its performance and obtain base line epidemiological information to measure reduction in the risk of infection¹²⁵.

Operational studies and on the job experience guided the NTI not to design the methodology of NTP with a separate vertical framework but to merge it with the country's vast GHS network. NTI knew NTP will "sink or sail" with the efficiency of the GHS which was and continued to be low. It also knew that the performance of NTP would be totally

dependent on the efficiency and priority given to it by the GHS, yet it did it not develop alternate plans? It seemed convinced that there was no better alternative plan for the country. Perhaps health being a state subject came in the way of proper implementation and performance of the NTP. Judith Margaret Brown in her book on "Profiles in Power: Nehru", says that the Constitution which gave the states power over subjects like agriculture, education and health - also inhibited social change. Nehru was a visionary but had no power to implement his ideas. I quote "It would almost be a mistake to call him a figure of power because he never really had power"¹³⁴. Had these been central subjects, there was a chance of controlling TB effectively and NTI would have an opportunity. For controlling TB, the execution of control programme through health services was crucial and social development was equally vital.

If these are the core issues then what is the fate of RNTCP, as it is also integrated with GHS? At the initial stage, there is a central

thrust but plans have to be developed to keep the states committed before leaving the programme entirely in their hands. DGHS and NTI realised this and gave top priority to monitoring and supervision on regular basis.

No doubt the new strategy requires skill and hard work to succeed. Dr Nagpaul wrote in 1997: *"The NTP, introduced in the country in 1962, started showing signs of bureaucratic and professional inertia with passage of time. Doctors of GHS remained unconvinced that they could diagnose and treat TB patients, DTOs and other TB specialists continued to believe that they alone could handle TB patients properly and not necessarily through standardised procedures and regimens; and bureaucrats running the NTP loved their office chairs more than the nitty-gritty of a public health oriented programme"*¹³⁵.

Writing on the 24th March 1998, World TB Day from Kathmandu (Nepal) in the Rising Nepal, Dr P Kumar, Deputy Director, South Asian association for regional co-operation (SAARC) TB Centre ,

says: *“TB is a major public health problem in the SAARC region with the burden of occurrence of more than three million TB cases each year and one million deaths... This serious situation will worsen further with TB-HIV co-infection and multi-drug resistance (MDR) TB. Recognising the already serious situation, which is reportedly worsening, in both developing and developed countries due to insufficient priority being given to TB control programmes and noting the lack of adequate political will and resources for operating effective programmes, the World Health Assembly endorsed a global TB control strategy, which is to provide adequate and efficient treatment...¹³⁶”*.

It is hardly surprising in 1998 for Dr Jagota to stress: *“TB control is likely to take long in India... It will take a minimum of three to five years before the RNTCP is implemented in the entire country. Till such time, the districts operating under NTP, specially using SCC for treatment, should be strengthened by following the guidelines¹³⁷.”* She is not alone in her concern.

5.2. The work continues

There is one refrain that emerges: NTI is a great operations research centre with an international reputation. It has now become a sleeping giant. It must awake. It must emerge stronger than before to enliven that image of olden times and to scale newer heights!

At the time of writing these lines, Dr Prabha Jagota is the Director. Two major advantages occurred, one administrative and the other technical. Some of the recommendations of the Fifth Central Pay Commission were ordered to be implemented with effect from 1.1.1996. Dr BT Uke, the predecessor, had taken efforts to prevail upon the NTI staff and officers to draft a common proposal for the benefit of the entire non-gazetted staff and forwarded it to the pay commission. The pay commission revised scales only for a few cadres. The extension of these benefits to other similar cadres came through the efforts of Dr Jagota. For the first time, the technical cadres with requisite qualifications and technical

competence who had been neglected received some attention. Yet, a lot needs to be done, especially the revision of recruitment rules which is under process. However, the future of some of these cadres seems brighter than earlier. On the technical front too, there have been changes. This can largely be attributed to Dr Jagota who has worked with a number of stalwarts. She has also had 23 years of service in the NTI in different capacities.

It augurs well that in the recent past, most of the top brass from DGHS, Ministry of Health i.e., Health Secretary, Director General of Health Services, Addl. Secretary, Deputy Director General (DDG) (TB), Joint Secretary, Assistant Director General (ADG) (TB) visited

NTI. Equally important are visits made by officers from WHO, World Bank, IUATLD and SAARC TB Centre. These interactions have contributed to the growth of NTI. The visit of Dr DS Bam, Director, SAARC TB Centre, Kathmandu initiated the process of training participation between the two institutions. On 26th July 1998, Dr P Kumar, Deputy Director, SAARC TB Centre, arrived to explore collaborative possibilities for the participating countries. One of which was the expansion and modernisation of the library and information wing. He held discussions with key officers and also with the editorial committee of the NTI Bulletin¹³⁸.

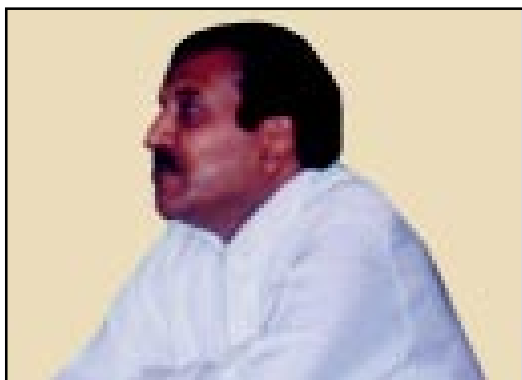
Since 1993, NTI was asked to conduct training courses on RNTCP in addition to its regular



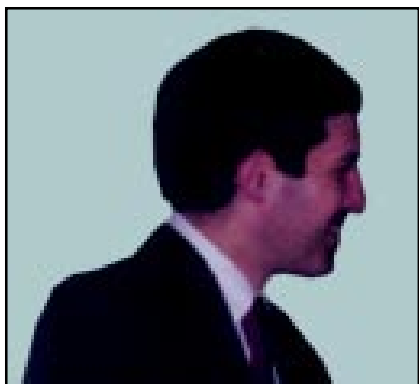
Dr. S.P. Agarwal
DG, DGHS, New Delhi



Dr. GR Khatri
DDG (TB) New Delhi



*Mr. Deepak Gupta
Joint Secretary (Health), GOI, New Delhi*



*Dr. Thomas R Frieden
Present SMO, WHO, SEARO, New Delhi*



*Dr. Icchpujani
ADG (TB) New Delhi*

activities¹²⁶. It trained key personnel e.g., MOs, Sr. LTs, Sr. TB Supervisors as per the revised modules. The *Reorientation Workshop for DTOs of SCC districts on RNTCP* was conducted in July 1997. It had 34 participants who were senior state level officers from different states. The second training course for STOs/Directors of different states in RNTCP, was held in December 1997. The faculty from the Central TB Division, DGHS viz., Drs GR Khatri, DDG, RL Ichhpujani ADG, and TR Frieden, WHO MO came to NTI to guide the officers¹³⁹. In the next two to three years, its involvement in training is scheduled to increase with expansion of RNTCP. It was also given the responsibility to make supervisory visits to selected RNTCP areas. NTI is experiencing the second wave of excitement after 1960s by imparting such intense modular training courses along with conducting other regular training programmes. More work is anticipated in the coming years because of new operations research related to the RNTCP.

Since the decision to resume the

regular training courses was taken, the participation of the DTC key personnel has increased from 30 to approximately 80-100 per course. The courses of eight weeks duration are organised twice a year in the months of January and July. The contents of the training course are under constant revision to suit the requirement of the programme with induction of revised strategy. Key officers conducting TB work must therefore have adequate expertise in NTP and RNTCP methodologies. The NTI continues to set high standards illustrated by the presentations made by the trainees in the concluding weeks of the course. The suggested readings, supplied to the trainees, lists about 300 important citations in 20 branches of TB work. Training activities in other categories like PGs, and undergraduates continue as usual.

Karnataka, on operations research, Epidemiology of TB and Epi-info training, ranging from two to twelve days. These were largely sponsored by WHO, World Bank and Department for International Development – India (DFID). Top brass from ministry, DGHS, WHO, IUATLD, DFID and international facilitators participated in these workshops. Besides, several modular training courses in RNTCP were organised during 1998-99 for STOs/DTOs belonging to DTPs which would be implemented under RNTCP in the next few years. These courses were of seven to ten days duration with the purpose to create a large number of trained TB key personnel for implementing RNTCP in their areas for rapid implementation. Efforts were made to impart as much insight and skill as possible. These programmes were extremely labour intensive¹³⁸.

Various workshops were organised in 1998-99 for key medical college professors, administrators on improved coordination between RNTCP officials and jail authorities, policy on participation of NGOs in RNTCP, NGOs participation in

There have been excellent technical achievements. NTI has put into operation **Quality Assurance in Sputum Microscopy under RNTCP**. Modalities have been developed and tested to send a set of hundred blinded slides to

be examined by the STCs and DTCs once in six months and returned. Data forms have been designed for direct computer entry, facilitating immediate analysis. Results can be computer generated quickly and corrective action taken immediately thereafter. In a large country like ours, periodic supervision by such a method can assure a quality control check on the working of STCs and DTCs. For this purpose NTI has eight of the sixteen centres (Bangalore, Ajmer, Agra, Patiala, Ahmedabad, Calcutta, Simla and Srinagar) under its jurisdiction. This work will also be carried out by the TRC, which has been allotted eight other centres. The laboratory at the NTI has been identified as National TB reference laboratory along with the laboratory of TRC. It is participating with the Supranational Reference Laboratory, Brisbane, Australia for external quality assurance. There will be a system of constant and periodic checks on the standards maintained and accreditation by certification. The section has also conducted studies to develop the use of different media for preparation of routine culture, and

to identify prevalence of environmental mycobacteria in soil¹³⁹. MB-Bact-240 system is installed. This system has the advantage of accelerating the recovery and identification of TB bacilli from the specimens within three to four weeks as against the conventional methods which take eight to twelve weeks. This is a step forward to move with time¹³⁸.

During 1997-98, 15 research studies were undertaken and three more were proposed¹³⁹. During 1998-99 14 research studies were undertaken and eight more have been proposed. The studies undertaken during earlier years are under progress¹³⁸. NTI faculty also participated in about 60 seminars, conferences, workshops and CMEs at different places from 97-99, to enhance the general awareness on the TB programme and their work. A few more cohort studies to assess the status of patients treated under DTP and RNTCP have been initiated. Plans are under way to conduct studies in collaboration with National Institute of Mental Health and Neuro Sciences (NIMHANS), and

IISc, Bangalore in the field of economic loss due to TB and testing of vaccine candidate respectively^{138,139}.

The NTI computer facilities continue to be upgraded. In addition, NICNET and INTERNET facilities have been provided. It has now an E-mail facility: **address ntiindia@blr.vsnl.net.in**. To enhance facilities to users, the library is now equipped with “5223-T Zoom” Modi Xerox Copier; a new PC-Pentium with MMX technology, to which all databases have been loaded. Action has been initiated for activating retrieval services from MEDLINE through NICNET. Clearly, learning by research and dissemination of knowledge acquired continues to be NTI’s forte.

The monitoring section has been given an additional thrust. All the posts of the section have been filled. Greater attention is being given to supervision of DTCs needing NTIs intervention. The Director is regularly reviewing both the implementation and supervision work to strengthen the NTP at the grass root level. It is extremely

important to increase the efficiency levels of the NTP and to network with NGOs and private practitioners. Its publications wing has brought out the highly acclaimed “*Summaries of the NTI Studies*”, a goldmine collection of operations research conducted from its inception. It has also brought out a booklet: “*Childhood TB*” and the manual “*Isolation, Identification and Sensitivity Testing of Mycobacterium TB, Ed.2*” During 1997, eleven papers have been published and five papers were presented in the 52nd National Conference on TB and Chest Diseases held at Ahmedabad¹³⁹. During 1998, eight papers were published and nine papers are under publication. Also, two papers in the 53rd National Conference on TB & Chest Diseases at Bhubaneswar, Orissa, and one paper each at IUAT Conference, Bangkok and National Congress of respiratory diseases, Jalandhar, were presented¹³⁸.

5.3. In prospect

The expression “In prospect” used for the subheading here, is

indicative of the future. What are the future plans of NTI? With the ushering of the revised strategy what type of operational research NTI will undertake? NTI intends to focus on operational research to improve the networking of the DOTS. The problem areas identified concern treatment adherence and successful implementation of DOTS. NTI envisages intensified communication, collaboration and coordination between the government, NGOs, private practitioners and other institutions. DGHS has also given priority to short and long term operations research. Rupees 26 crores have been allotted for this purpose by the ministry as announced in the Central Steering Committee meeting held by DGHS on 16.2.99¹⁴⁰. However, experimental research continues to be an integral part of NTI laboratory.

NTI has been awarded two highly ambitious projects in collaboration with TRC and concerned states by the central coordination committee headed by DGHS: “*A National Sample Survey to estimate the ARI in different parts of India*” and “*Assessment of*

TB trends by estimating ARI by repeat tuberculin surveys in different parts of rural India”. These investigations are critical in estimating the extent of TB and pinpointing the results of programme implementation. To determine the appropriate dose of tuberculin for the above research projects, a comparative study of 1TU and 2TU doses of PPD RT23 has just been completed. The results have indicated that in Indian situation, it would be appropriate to continue using 1TU¹⁴¹. The Institute continues to work on problem solving strategies to conduct tuberculin surveys where BCG vaccination coverages are high.

Another important protocol, *Surveillance of drug resistance* has also been awarded to NTI and TRC. The protocol seeks to determine the proportion of patients with initial and acquired drug resistance. This is an indicator of programme quality. The World Bank assisted project includes increasing the availability of highly potent drugs, particularly rifampicin, as part of SCC in both RNTCP and SCC areas. It therefore becomes essential to

be conversant on the epidemiology and trends of drug resistance. This has been recommended earlier by the expert group meeting on drug resistance surveillance in TB¹⁴². This proposal should be examined in coordination with the already approved drug resistance surveillance projects through NTI at Mayurbhanj, Hooghly and Nowgaon, and TRC at Raichur, N.Arcot, Pune and Jabalpur with the assistance from JALMA for Agra and the involvement of other nodal institutions. These initial steps have been followed but the size of the country compounded by heterogeneity in drug resistance pattern, necessitate additional steps. These will ensure that thorough interviews are undertaken to determine the history of previous treatment.

NTI is interested in undertaking research projects dealing with a changing environment. The establishment of a Bio-safety level III for animal experiments, involving a low dose aerosol infection system, which simulates the conditions for TB in humans is underway. If any new vaccine for

TB is developed, this new system will also help in its testing. Many organisations are trying to develop a new vaccine for TB in India. Six new projects have been contemplated. One of these is: Invivo studies on non-tuberculous mycobacterial disease in a rational animal model keeping in view its likely emergence due to partnership with HIV. The status of the main laboratory will be changed from P1 to P2 in near future and then attempts will be made to raise it to P3 status by installing upgraded instruments. These will facilitate further sophistication.

NTI will intensify the training programme as the expansion of RNTCP will demand a huge trained staff in the country for next five to six years. This will require more: (i) Modular training programmes, (ii) Workshops and (iii) Seminars on RNTCP. The regular training course of eight weeks will be continued without reducing the duration. This programme is essential for newly appointed DTC teams for skill development, indepth knowledge of TB control aspects and management of programme. The DTC key

personnel will thus possess the skills to train the whole PHI staff working in general health institutions, for conducting TB work.

Monitoring of the DTPs will be reinforced with supervision and corrective actions in order to get the feed back on DTP reporting and improvements in the programme. NTI would be strengthening by providing extra staff and funds for it.

5.4. Introspection

Perhaps a universal tendency of any problem is to escalate. The government now faces another, perhaps bigger impediment. India's ever increasing population is aging. It is among the aged that TB is rampant. There will be a corresponding increase in the number of cases. Additional threats are imposed by HIV and MDR-TB. Its socio-economic milieu is changing. It is much more mobile than before. Not much is being done to increase the efficiency levels of the GHS with which the NTP is linked. These will have their own

repercussions on the programme and people's perceptions. This was seen in the early 60s, when the classic sociology studies were conducted by NTI. Efforts have been made by NTI to highlight these issues to the higher authorities. Strangely, even the problems with the knowledgeable continue as before or sometimes problems are so vast that if any improvement does occur it is neither perceptible nor measurable. Population explosion continue to retard not only TB control but other development activities too.

When NTP was introduced, it was hailed as the biggest scientific intervention meant for a country like India with limited resources. It earned the respect of the whole world as the first major effort amalgamating preventive aspects of medicine with peoples perspectives. Even though shortcomings hindered its efficiency, a better programme could not have evolved under the given situation. India is better placed than most countries as it has a sound health infrastructure with which the NTP is integrated.

In the past 36 years, the NTP has been implemented in most parts of our country and a large number of key personnel have been trained in TB control. The slow gait of this giant work force needs only to be accelerated. Perhaps, this fact alone would render the future TB fight in India easier. Equally important is huge private health sector, which treats nearly 50% of the TB cases. They along with NGOs have to work in coordination with government health sector. It is not an easy task to network them. With regard to the RNTCP, its main thrust has been strengthening the GHS infrastructure. Its formulation might imply that the NTP could not be revised. This is not true as in the words of Dr Chakraborty, former Additional Director: *The NTP is not after all scripted in unalterable terms.* The NTI at no time thought that the programme once formulated was sacrosanct and unchangeable. It continued its operations research, remained devoted to correcting the programme as and when required, based on objective analysis. However, it was not easy to introduce changes continually

because of inherent implications, mostly administrative in nature. It is true that the NTP did not sustain the levels of efficiency expected due to apathy and perhaps ignorance that prevailed outside the programme's ambit. The RNTCP itself was an outcome of such introspection. However, the RNTCP currently covers less than 20% of the country. As it is a phased programme the NTI and both DGHS & Ministry of Health & Family Welfare believe that it will be necessary to strengthen and revitalise the NTP simultaneously. At this juncture consolidation rather than diversification is the real need.

Despite going a lull for almost a decade, the NTI did not cease to adapt. It was clear that its role has to relate to the TB situation in the country.

It has now been shaken out of its lethargy to implement the TB control programme with redoubled force. The NTI is entering the millenium with the knowledge that the battle is not over but with the confidence that it is in a position to tackle the situation.

*Group Photo of Bacteriology Staff with trainees of 71st Batch
16 January to 24 March 1995*



Sitting L to R 1. Mr. Rajan Mathew, 2. Mrs. Bhagirathi,
3. Dr. Sujatha, 4. Dr. B.T. Uke (Dir), 5. Mr. Chavhan,
6. Mr. H.D. Surendra, 7. Mr. D.P. Sharma (Sikkim),
8. Mr. P.K. Maity (W.B.)

Standing L to R 1. Mr. Sattigeri (Kar) 2. Mr. K. Vasudevan (Ker),
3. Mr. P. Bista (Sikkim), 4. Mr. R.L. Jat (Raj),
5. P. Jagannath (Ker), 6. Mr. B. Matlai (Meg),
7. Mrs. Satyabhama (Ker), 8. Mr. B. Alphonsa (A.P.)