actually masquerading as TB patients in order to get additional benefits. I came back completely confused, frustrated and somehow convinced that we were not doing the right things for TB patients. Dr Benjamin listened to my account in silence: He neither endorsed my view nor contradicted me. However, a few months later, I was asked to work with two WHO experts, Dr Mahler and Mr Stig Andersen, a Sociologist, in order to prepare a plan for control of TB and care of TB patients which is more suitable for Indian conditions. At the end of three or four months of continuous application, we came up with a plan of operations which could be submitted to the GOI and the WHO as well as the UNICEF for approval and support. The Plan centred around the creation of an institute to provide the required answers.

Secretary wanted the impression to be checked that a considerable

number of the TB patients were

1.3. The early days

Dr Benjamin may have been dissatisfied that he could not send national officers to Bangalore to set up the NTI; or at least somebody with Dr Mahler and Mr Andersen. The latter may have felt that the government was being tardy. In fact, the contrary was true. By the inauguration day, most sections were operational. A tuberculin survey in Bangalore city and surrounding areas was in full swing and the next operational study was being planned. Many new recruits had received field training. A methodology to train key personnel was being evolved. These tasks were not easy.

Further, Avalon was not really built for a TB institute, but for the princely family members to live in. Though the campus was adequate for the present needs of the institute, certain modifications were needed. This was a time consuming process because the architects had to come from Delhi and their plans had to be approved and sanctioned by the government. They commissioned suitable alterations in the main building so that it became more functional, and drew up plans for the conversion of the entire single storied rear block to house the laboratory. This proved

to be a very difficult task because, it had to accommodate a national laboratory consisting of an incubation chamber, a cold room, a sterilisation room and a gas plant hut, amongst other things. In front of the main building on the slopes of the southern side, they planned a temporary hostel to accommodate about sixty trainees who would be deputed shortly by the various state governments. These plans were approved, necessary budgets sanctioned, modification work began late in 1959 and was completed by August 1960. A remarkable achievement considering that even a direct telephone connection Bangalore to New Delhi did not exist in those days29.

Since the NTI would be unique as compared to other institutions engaged in TB work anywhere, the organisational set up would have to differ. It would have a national director who would be in-charge of all operations, would represent the GOI and would execute the objectives as envisioned in the plan of operations. There would be an epidemiologist, for studying the

disease dynamics of TB as it existed in the community. A control officer would be appointed to devise the means to seek out the patients rather than await their arrival at the hospital. He/she would formulate a methodology to enlist sustained cooperation of the patient and the family during the prolonged treatment period. A bacteriologist would head research oriented needs of a national laboratory. Training was also the responsibility of the control officer assisted by all the concerned sections. The director would also be assisted by a sociologist, so that the social ramifications would be understood and if feasible, woven into the strategy. This proved to be the most radical inclusion of all. There would also be a full fledged statistics, X-ray, administrative and transport sections. Library and hostel facilities would also available (Annexure I, p 3).

Getting suitable persons for key positions was not easy even for Dr Benjamin who had perhaps the full support from the government. The concept of fighting a disease with the community as the basis,

was just taking root. So, even in the late fifties it was far easier to find experts in clinical medicine; in sociology; in mathematics and statistics. It was very hard to find people with experience in public health. It was the sick and not the healthy that concerned the clinicians. The preventive aspects were neglected because most hospitals, clinics and surgeries were overflowing with the sick.

Doctors felt more important amidst such surroundings. A thoracic surgeon who drew crowds had more prestige than the physician who was advocating tablets and injections that were being developed and whose potentials were still experimented upon. Much less acclaimed were people who thought about healthy persons and preventive aspects of health.

The NTI had to develop feasible ideologies in TB control which would render justice to any person contracting TB anywhere in the country. Therefore, it needed people who could understand and develop public health methods in TB control. They would initiate research in the development of such a methodology, train large number of key personnel from various states of the country who would in turn implement and practice the methodologies taught.

While Dr Benjamin was trying to get talent from Delhi, Dr Mahler

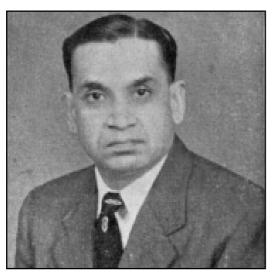


Dr. P.V.Benjamin, Adviser in TB Father of Anti-TB movement in India

and Mr Stig Andersen were trying to get it from Bangalore. While with the Director of Health Services, GOM once, they chanced upon Dr K Padmanabha Rao who had just returned from England after training in bacteriology. They seized this opportunity and arranged for Dr. K.P.Rao to join the NTI as bacteriologist without delay. This was, as later events proved, a highly wise move. Dr Rao worked very hard in setting up the laboratory which could handle a large number of specimens. His dedication was such that he would not hesitate to clean the laboratory or lift a load. As a result, the staff had no choice but to follow his lead.

Dr Rao was ably guided by Dr Nassau, bacteriologist, the WHO as а short term consultant. Mr Cobbold, laboratory scientist was also sent by the WHO to assist them in setting up the NTI laboratory. Others sent by the WHO were Dr A Geser (epidemiologist), Dr Spadoni and Dr M Piot (MOs), Mr Kroezen and Mr Ernborg (X-ray engineers), Mr HT Waaler (statistician), Mr I Thorup (field investigator - FI) and Ms I Mundt, J Mclary and D Rangaard (public health nurses - PHNs)29.

On its part, the GOI sent Dr NL Bordia, a surgeon of renown as the NTI's first director; Dr Raj Narain



Dr. NL Bordia First Director & Father of NTI 1959-1962*



Dr. Rajnarian Father of Epidemiology of TB in India & Director, NTI 1962-1963*





Dr. D Banerji Sociologist

who was working in the NDTC as epidemiologist; and Dr D Banerji, who despite being a doctor working in Himachal Pradesh had trained himself as a sociologist. In later years, both these men were destined to attain much distinction for doing original work in their respective fields. Besides doctors, several others: PHNs, X-ray technicians (XTs), laboratory technicians (LTs), HVs and others working in the NDTC or UMTS, were recruited. Dr MV Jambunathan, a professor of statistics persuaded to head the statistics section. Dr GVJ Baily, who was with the GOM, Dr P Chandrasekhar, who was working



Dr. K Padmanabha Rao Bacteriologist

at UMTS, were taken as MOs (assistant surgeons). Mr R Kapoor joined as assistant training officer and Mr KLRajan as the administrative officer (AO). Simultaneously, action was also taken to recruit 75 technical, 15 non-technical and 31 Class IV staff either through advertisement or the regional employment exchange²⁹. The GOM extended its cooperation by placing at the disposal of NTI, the services of three BCG teams, one bacteriologist, one team leader and four HVs. It also agreed to develop the Lady Willingdon State Tuberculosis Demonstration and Training Centre, later known as the Lady Willingdon State Tuberculosis

Centre (LWSTC), Bangalore under the guidance of NTI and recruited the necessary staff for it³⁰.

The government initiated action in the purchase of immovable assets like office furniture, books and special equipments. The UNICEF started sending equipments like X-ray machines, calculating machines, BCG kits, spare parts. As regards X-ray, a Siemen's mobile unit mounted on a Bedford truck and Watson mobile unit mounted on two Landrovers were imported. An old unit (IGE, mounted on a big bus) stationed at Hyderabad was requisitioned. It took a lot of ingenuity to get these machines going. The X-ray section had a tough time in repairing these units. Often the engineers had to work the whole day and late into the night to get the machines ready for the next day's field work. These machines were made in Europe and contained hundreds of small parts. Should a part fail, the machine failed. If the faulty part was not in stock, work would be stalled for weeks or months till the part was imported from the manufacturers29.

Besides the three X-ray vehicles, there were 43 transport vehicles, jeeps, landrovers, station wagons (with trailers), three wheeled lambrettas, motor cycles and a chevrolet sedan. All the vehicles were being used by the field teams and officers continuously. maintenance of such a large number of vehicles proved to be a tremendous administrative problem apart from the expenditure incurred in their upkeep. Efforts to build an automobile workshop where minor repairs, servicing could be done, were unsuccessful for want of mechanics and supervisory staff. The difficulties of establishing the Institute were truly immense. As summarised by Mr DP Karmarkar, Minister for Health, GOI: We had our difficulties in starting this Institute; we had to find suitable accommodation and to look into many details associated with starting a new institution. We are extremely grateful to the GOM for acquiring for our use a palatial building and the WHO for loaning to us the services of some of their experts. They are working side by side with our Indian staff in the field, especially rural areas, putting

up with difficult conditions without any hesitation. An institute of this type, meant to carry out a programme of community TB control, needs large supplies of equipment and transport and all these have been provided generously by the UNICEF. I would like to express my appreciation to all these bodies for the help they have rendered in making it possible for us to start this all India institution for the control of TB in the country³¹.

Finally, NTI started functioning on schedule. It is best to excerpt a quote by Dr Benjamin in the editorial of the Indian Journal of TB (IJTB)³²:

We believe, the NTI will be a landmark in the history of anti-TB movement in this country, and probably in some other countries also. Though it is well known for many years that TB is a social problem, efforts to control it were mainly directed towards diagnosis and treatment of the disease, and that too in hospitals and sanatoria. The Institute attempts a departure from this orthodox procedure.

This venture is a novel and pioneering one. There are still several hurdles to overcome. It would be appropriate in this connection to remind ourselves of a message given to the nation by Pandit Jawaharlal Nehru many years before Independence. He said: "Success often comes to those who dare and act; it seldom goes to the timid". The establishing of this Institute is a bold step, and we hope to succeed.



Mr. HT Waaler Statistician



Dr. MV Jambunathan Senior Statistical Officer

Benjamin no more

When he passed away in 1973, in an obituary, IJTB wrote: "Dr Benjamin was regarded as the 'Father' of the anti-TB movement in India and as an elder statesman among international experts³³.

Dr Benjamin was a fighter of TB. After his MBBS degree (1921) he went to Cardiff (England) to take his Diploma in TB Disease (1931). He became the Medical Superintendent of the UMTS at Madanapalle, which was destined to undertake pioneering work in TB. He conducted a TB survey in Madras as early as 1939, and presented a paper. He became the Medical Commissioner to the TAI in 1941 and later its Technical Adviser (1944). He then became Adviser in TB to the GOI (1948) and continued to inspire TB workers. As Adviser, he presented a summary paper on TB every year, and was always inspiring further research ideas. He was the Editor of the IJTB (1953-64). He was the moving force behind the introduction of the Mass BCG Campaign in India; setting up of the Mehrauli TB hospital, now known as Lala Ram Sarup Institute of TB and Allied Diseases (LRS); resource upgradation of the TB services in the NDTC; in persuading several universities to start post-graduate and undergraduate education in TB. Being a member of the Health Planning, in the Planning Commission, he was instrumental in initiating the ICMR to undertake the NSS and finalising its reports. And finally, Dr Benjamin was responsible for the establishment of the TRC at Madras and NTI at Bangalore.

No wonder he was an international figure. He was a delegate to the First Empire TB Conference held in London in 1937 and was closely associated with the IUAT of which he was a member of its executive body and was its president (1955-57). He presided over the XIV ITC held in New Delhi (1957). He was a member of the WHO Expert Committee on TB for a number of years. He was a recipient of the Kaiser-I-Hind Gold Medal (1945), Sir Robert Phillip Gold Medal (1955), Padmashree (1955), and the TAI Gold Medal (1969). In his presidential address, TJ Joseph said "Padmashree sounds like a cultural award. For a person who is the spearhead of a vigorous campaign against a virulent enemy, something like 'Veerashree' ... निरम्भी......would have been more fitting".

Even after retiring from active service (1963), he often visited NTI making enquiries on the current work in progress and offering guidance. Most of the times, Dr Benjamin was satisfied because the achievements of NTI matched his expectations. There were times too, when he would put pressure if he found the work slow or lacking in substance. Constantly remembered and revered at the NTI, the photograph of the late Dr Benjamin adorns the cherished place in the committee room of the NTI, where most technical and sometimes important administrative meetings are held.

Group Photo of XXXV Training Course (DTO's) 7th Feb - 7th May 1977



Sitting L to R

Dr. T.B. Chhetri, Mr. V.A. Menon, Mr. N. Naganathan, Dr. B.C. Arora, Dr. Kul Bhushan, Dr. N.K. Menon (Director), Dr. G.D. Gothi, Dr. K.S. Aneja, Dr. (Mrs) P. Jagota, Dr. N.M. Sudarsanam, Dr. H.R. Raj Mohan and Dr. S. Dwarakanath.

Standing (1st Row)

Dr. E. Chandrasekaran, Dr. G. Saproo, Dr. S.B. Pande, Dr. M.J. Kochak, Dr. Padmanabhan, Dr. C.L. Prasad, Dr. K.K. Paria, Dr. K.N. Rao, Dr. R.F. Jain and Dr. N.P. Dubey.

Standing (2nd Row) Mr. M. Sonappa, Dr. A. Akaram, Dr. M. Gohain, Dr. S. Prasad, Dr. M.I. Akhtar, Dr. R.C. Sharma, Dr R.K. Chaturvedi and Dr. T.B. Singh.

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