

National Tuberculosis Programme

By

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THOUGH spectacular advances have been made in the management of Tuberculosis in recent years, this disease continues to be the killer number one in India and most of the under developed countries of the world. Tuberculosis is also the most common cause of chronic invalidism. Before the National Tuberculosis Survey (1955-58) was undertaken, it was believed that Tuberculosis was mostly a problem of the urban community. But the detection of wide-spread tuberculosis infection in rural areas by tuberculin testings during the course of mass B.C.G campaign made it apparent that infection due to TB germ in rural areas is extensive and almost as much as in urban communities. The National Survey which was undertaken in six Zones in India including urban and rural areas revealed that 1.5% of the Indian population has lesions in the lungs detectable by X-ray which are likely to be due to tuberculosis. At least a quarter of these were infectious cases. There is hardly any difference between the rural and urban areas, though slum dwellers and people living in kachha houses in urban areas have the maximum disease. If we project these estimates to the present total population of India, we have more than 80 lakhs TB patients of whom more than 90 lakhs are suffering from advanced infectious stages of the disease. Prevalence of the disease in men rises with age after 15 years; in women though the disease rates are slightly higher up to the age of 35 years it tends to decrease after that age. Children between 5 to 15 years of age have the least disease.

Due to availability of treatment services and improvement in general resistance, deaths due to tuberculosis have fallen but even now it is estimated that nearly four to five lakhs of patients die every year in our Country.

Control of Tuberculosis

Attempts to reduce prevalence of tuberculosis in the advanced countries of the world have been made from the beginning of this century. Before 1947 there were no effective drugs to treat Tuberculosis. So, the control methods consisted mainly in improving the standard of living of the people by provision of improved housing, sanitation, improved nutrition and isolating the infectious cases in Tuberculosis Sanatoria out of the towns or in hills away from the homes of patients. These methods have helped the Western

countries to reduce prevalence of Tuberculosis slowly. But when anti-TB drugs were discovered and used extensively the first major change observed was reduction of death rates. Patients either got cured soon or when not fully cured they did not die but lived and worked with the disease. Age at death due to Tuberculosis rapidly rose. Prevalence of this disease has also come down. By now, many European countries and the northern areas of United States have no problem of Tuberculosis though few patients are found who need treatment.

It is extremely difficult or almost impossible to completely eradicate tuberculosis. As long as tubercle bacillus exists TB as a disease would develop. We would, therefore, be satisfied if TB is reduced to so low a level that there are less than one per cent of children below 14 years of age reacting to a standard dose of tuberculin in that country. An occasional stray case may exist without doing much harm. Such a situation has not reached in any country in the world so far though Holland, Denmark and other Scandinavian countries are fast reaching that stage. Under Indian conditions we do not expect to reach that stage in the near future. At present our aim is to reduce the prevalence to less than one case per 1000 population in the very near future.

National Tuberculosis Programme

"Nationally applicable anti-TB measures aimed at reduction of the problem of Tuberculosis in the foreseeable future and which are within the reach of the resources of the country" constitute the National Tuberculosis Programme (NTP) for that country. It should, therefore, be appreciated that the NTP of one country may vary from that of the other depending on a number of factors. Details of the programme outlined here are mainly applicable to Indian conditions and similar developing countries of South East Asia and other such countries of the world.

METHODS FOR DEVELOPMENT OF NTP : As already stated above, improvement in the standard of living of the people is an important factor in reducing the problem of TB in the long run. This is already being aimed at by launching of development plans. India has already had four five year plans. The fifth is ready to be launched which aims at improving the living standards of the people.

Basic specific factors to be kept in mind while planning the N.T.P. can be divided into two broad categories : (I) Technical and (II) Organisational.

TECHNICAL FACTORS : Use of anti-TB drugs and B.C.G vaccination of the susceptible population are the two main methods which form the effective technical tools which are nationally applicable and are acceptable to the people and which are utilised to control tuberculosis.

(i) **Anti-TB Drugs :** Standard anti-TB drugs Isoniazid, Streptomycin PAS and Thioacetazone are remarkable drugs.

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kably effective against TB. Their regular, extensive use in the treatment of freshly detected sputum positive patients forms the back bone of the N.T.P. They are as effective in the home as they are in a sanatorium or hospital. Their use in the home has made the need for admitting a patient in the hospital less important. There is no advantage to admit and treat a TB patient in a hospital if the patient (i) has a shelter to live (ii) is accustomed to eat ordinary balanced diet and (iii) can get effective anti-TB drugs from a treatment centre and take them with determination for at least 18 months continuously. What drug combination is to be administered is decided by the treating Physician depending on the status of the disease and convenience of the patient.

(ii) **B.C.G. Vaccination** : Now-a-days freeze dried B.C.G vaccine is supplied to all B.C.G. teams and TB centres engaged in B.C.G vaccination. The best groups to be vaccinated are the pre-school age and school age children below 15 years in urban areas and up to 20 years in the rural. B.C.G vaccination of the new borns is also recommended. B.C.G provides considerable degree of protection, but only to those who do not react to tuberculin, i.e., those who are not infected. However, to avoid repeated pricks, direct B.C.G vaccination intradermally to all the above categories of age groups is recommended. Freeze dried vaccine has the advantage that it can be stored without refrigeration for many weeks while the liquid vaccine readily gets deteriorated by heat and light even in a few hours. It has to be kept constantly stored under refrigeration. So far 160 million persons have been B.C.G vaccinated in India.

ORGANISATIONAL FACTORS : Far more important than technical tools are the organisational factors which must be taken into consideration before planning the National Programme. Our organisation is weak and that deserves special stress.

Following organisational factors form the basis of the National Tuberculosis Programme :

(I) Epidemiological situation in India demands that tuberculosis service must be available in both urban and rural areas as the disease is almost equally prevalent through out the country. Diagnosis and treatment must be available near the home of the patient even in rural areas.

(II) The service must be provided on a permanent basis. Mere one time campaign or occasional activity or patchy service here and there will not serve the purpose of reducing the problem of Tuberculosis in the country.

(III) 59% of the TB patients are conscious of their symptoms, 70% of them do feel worried and more than 50% actually go to general health service to seek treatment where they can be detected easily. Therefore, the N.T.P. should be "felt-need-oriented". People will come to the health service on their own accord, if proper facilities are provided to relieve their complaint and ailments, that is, if diagnosis and effective treatment is provided.

(IV) The diagnosis and treatment service must be

available from all health services of different denominations. Thus an integrated service should develop throughout the country. The main TB centre of the district can give guidance and help the peripheral centres in case detection and to organise treatment service. Merely a provision of service from a specialised TB clinic is not enough.

The programme must be within the financial resources of the Government and the people must accept the service that the programme will provide. Methods used must be applicable under local conditions. The benefit that will be derived must be on the basis of maximum return out of the rupee spent.

Keeping the above principles in mind the National Programme in India has been formulated. India has today nearly 356 districts in 19 States and 9 Union Territories. As health is a state subject, implementation of the programme is the direct responsibility of the State Governments. The Government of India assists the State Governments in establishing these district TB centres by supply of equipment like X'ray units, transport laboratory equipment and anti-TB drugs. They provide training facilities for key personnel of the district centres at the National Tuberculosis Institute at Bangalore. They have also established research centres at Madras (Tuberculosis Chemotherapy Centre) and Madanapalli.

Following schemes are included in the five year development plans :—

- (1) B.C.G vaccination of the vulnerable population (that is below 20 years of age in rural areas and below 15 years in the cities). Direct vaccination without tuberculin test is given. Newborne babies are vaccinated with B.C.G in maternity homes. B.C.G vaccination programme has now been integrated with district TB centres.
- (2) Establishment and upgrading of district TB centres, at least one in each district, for organising case detection and treatment service throughout the district. So far 280 districts have district TB Centres though there are nearly 550 TB clinics of different types in 356 districts of India.
- (3) Provision of inpatient beds for isolation of infectious seriously ill patients, for emergencies and for surgery.
- (4) Establishment of tuberculosis training and demonstration centres, one in each State to provide basic training to TB workers of various categories and other paramedical and health personnel.
- (5) Development of research facilities so that nationally applicable methods are developed to control tuberculosis. Tuberculosis Chemotherapy Centre at Madras and the National Tuberculosis Institute are examples.

Other schemes like establishment of rehabilitation centres and mobile X'ray facilities are no more being pursued as they have not been found to be profitable at present.

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