

Tuberculosis and its control in SAARC Countries

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INTRODUCTION

Tuberculosis (TB) is a major public health problem in the Region causing an immense burden of disease. As per WHO estimates, more than 3 million new TB cases occur in the region with about 1 million deaths every year due to this serious but curable disease.¹ This situation will worsen further with Tuberculosis/HIV co-infection and multi-drug resistant TB. It is of utmost importance to have Regional cooperation to control this disease which kills more adults each year than any other infectious disease.

Burden of the disease:

Forty percent of the population in the region is infected with the TB bacillus. The estimated incidence of TB cases for 1995 is 3.094 million in the SAARC Region which represents about 40% of global burden of the disease. This includes 2.3 million new cases in India, 0.36 million in Pakistan and 0.3 million in Bangladesh. The incidence rate of all forms of TB in 1995 is estimated at 241 - 254 per 100,000 of population. The majority of cases are from most economically productive age group. An estimated 1 million people died from TB in the Region in 1995.

Experts estimate that TB and HIV co-infection will contribute to sharp rise of TB cases.

Table: Estimated TB Incidence during 1995 in SAARC Countries

Country	Estimated TB Incidence in million	Rate/100000 Population
Bangladesh	0.31	241
Bhutan	0.004	241
India	2.33	246
Maldives	0.0001	241
Nepal	0.05	241
Pakistan	0.36	254
Srilanka	0.04	241
Total	3.094	

SAARC TB Centre:

Considering the huge burden of tuberculosis disease SAARC has accorded a high priority to tuberculosis control and decided to establish the SAARC TB Centre in Nepal. The centre is functioning since 1992 with the main objective to work towards prevention and control of TB in the Region by coordinating the efforts of the National TB Programme of the Member Countries.²

The main functions of the centre include:

- To act as a regional co-ordination centre for National Tuberculosis Control Programmes in the region and function as a centre for information exchange and related activities.

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- To collect, collate, analyze and disseminate all relevant information regarding the latest development and findings in the field of tuberculosis in the region and else where.
- To establish a network arrangement among the National Tuberculosis Programmes and to conduct surveys and research etc., if necessary.
- To initiate, undertake and coordinate the research and training in technical biomedical, operational and other aspects related to Tuberculosis Control Programme in the region.
- To strive for adequate supply at low cost of anti-tuberculosis drugs and other related supplies in all the member countries.
- To monitor incidence, prevalence and emergence of drug resistant strains of tuberculosis in the region.
- To carry out any other function related to tuberculosis if requested by the technical committee on health and population activities.

The centre has a governing board with eight experts in the field of TB Control, one each nominated by member countries. The director, STC works as member secretary. Professional staff work as deputy directors and are selected by open competition from experts in member countries.

SAARC TB Centre organizes seminars, workshops, training programme and research related to TB Control and informs experts and TB programme managers about recent developments in the field of TB Control in the region and out-side the region as well as information from WHO. SAARC TB Centre also arranges meetings of National TB Programme managers of member countries to discuss the problems faced during implementation of programme with probable suggestion of these problems.

Control Measures:

National Tuberculosis Control Programmes are in operation in all member coun-

tries.³ Case finding and treatment activities are integrated with general health services in all member countries. Specialized TB institutions for training and research are also functioning in the region.

Some of them, for example, National Tuberculosis Institute, Bangalore, India, National Tuberculosis Centre, Thimi, Bhaktapur, Nepal, Ojha Institute, Karachi, Pakistan, are responsible for valuable research.

Though the National TB Programmes are functioning, the achievements of these programmes have been inadequate, and inadequate control measures in the past have resulted in high numbers of treatment failures and chronic cases with multi-drug resistance.

Revised strategy of TB control:

Since the existing National TB Control Programmes are unable to make a dent in the problem of TB and the global pandemic of TB and HIV co-infection will further worsen the existing TB situation in the region, the WHO developed a revised strategy and policy package for tuberculosis control, which was adopted by all member states in 46th World Health Assembly.⁴

Objective and Targets:

Considering the seriousness of the TB situation, particularly the potential impact of HIV/AIDS, the Forty-fourth World Health Assembly (1991) urged the member countries to strengthen/augment TB Control activities to achieve these targets:

- To cure 85% of the detected smear-positive TB cases, and
- To detect 70% of existing cases by the year 2000.

Recognizing the already serious situation, which is rapidly 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 Forty-sixth World Health Assembly (1993) requested member countries to improve the

detection of smear positive cases through reliable microscopic examination, introduction of standardized short course chemotherapy, with particular emphasis on properly supervised therapy during the initial two months, introduction of standardized case registers and provision of regular and uninterrupted supplies of anti-TB drugs and promotion of public awareness on prevention of TB.

Strategies:

The World Health Assembly endorsed a global TB control strategy, which is to provide adequate and efficient treatment, i.e. short course chemotherapy to at least all smear-positive TB cases identified. Accordingly, the revised strategies adopted by WHO are as follows:

- a) All countries with TB problem must provide standardized short course chemotherapy to all TB cases. If resources are scarce, priority must be given to sputum smear-positive cases and seriously-ill smear-negative cases (e.g. cases of TB meningitis or miliary TB) because this will have the greatest impact on reducing mortality, morbidity and transmission of TB. It has been estimated from the data from developing and industrialized countries that an untreated smear-positive case would infect annually 10 to 14 healthy persons. A smear-positive case usually excretes bacilli for about two years. Thus before a patient dies or becomes smear negative, he would have infected 10-28 new persons. Therefore priority attention should be given to smear-positive cases. However, ideally, all TB cases should receive SCC, which is one of the most cost-effective interventions so far identified.
- b) WHO recommends BCG vaccination in early childhood for TB high prevalence countries.

Policy Package:

The success of this strategy depends on the implementation of a TB control policy package

(this policy package remains unaltered even in the presence of HIV infection) which includes the following five elements:

- a) Government commitment to a TB control programme aiming at nationwide coverage, which should have an integrated activity within the health system infrastructure, with technical leadership from a central technical unit. Also, effective leadership, which requires a permanent team qualified in the management of TB control.
- b) Case detection through predominantly passive case-finding. Active case-finding is not cost-effective with the present load of TB cases in the region. Those persons presenting themselves to a health worker with symptoms indicative of TB should be referred to appropriated health facilities for confirmation of diagnosis, primarily by microscopy examination.
- c) Administration of standardized short course chemotherapy to at least all confirmed sputum smear-positive cases of TB under proper case management conditions. Proper case management ensures patient compliance by supervised administration of the recommended short-course chemotherapy with at least four drugs in the initial phase (two to three months) in order to avoid the emergence of resistant strains and, further, to ensure that the patient undergoes a full course of treatment (6-8 months) to avoid relapse.
- d) Establishment of a system of regular supply of essential TB drugs (isoniazid, rifampicin, pyrazinamide, streptomycin, ethambutol and, in some areas, thiacetazone). Advance planning for drug procurement and timely delivery should be based on the number of cases registered during the last complete six-month period, and stock levels.
- e) Establishment and maintenance of a monitoring system to be used both for programme supervision and evaluation. This system is based on recording

individual patient information in registers at the district or the country level and on regular reporting, preferably on a quarterly basis, from the same level. Information must be obtained, firstly, on new cases and relapses and secondly, on treatment outcome.

The adoption of this framework is particularly urgent in countries confronted with an HIV epidemic, which will result in an increasing number of TB cases and specific operational problems.

The revised strategy has been based on the objective of TB control to reduce, mortality, morbidity and transmission of the disease until it no longer poses a threat to public health.

Bangladesh, India, Nepal and Pakistan⁵ have established pilot projects based on revised strategy while other countries are also working to implement the same.

Summary:

The burden of tuberculosis in the region is immense. This serious situation will worsen further with Tuberculosis/HIV co-infection and multi-drug resistant tuberculosis. Regional cooperation is an urgent need for TB control and SAARC Tuberculosis Centre could play a vital role in this direction.

All member states need to implement the revised strategy and establish effective NTPs to achieve the targets for cure and case-finding. Achieving high cure rate will result in reduction in tuberculosis mortality, morbidity as well as prevent the emergence of drug resistance.

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