SAARC GUIDELINES FOR PARTNERSHIP WITH

Schools

IN PREVENTION & CONTROL OF TUBERCULOSIS

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FOREWORD

TB is considered as a global problem with 8-9 million of new cases and almost 2 million deaths occur each year. While the world comes together to deal/tackle this major public health emergency on war footing, the challenges remain daunting. The SAARC Region with 22% of global population bears 29% of the global burden of TB, with 2.5 million new cases and 0.6 million deaths occur every year.

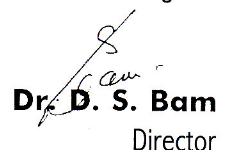
All member countries of the region have adopted DOTS strategy; the best available and cost-effective strategy for control of tuberculosis by 1996. Since then, considerable progress has been made in the region. Overall cure rate in the region is very near to global target but case detection rate is still low. The member countries are strengthening their TB control activities, initiating new approaches and developing partnership to curb epidemic.

In order to sustain the achievements and expand the partnership activities, the SAARC Tuberculosis Centre has identified schools as one of the potential partners to be involved in this mission along with others like media, industries, and medical colleges. Young people (school children) make up a significant proportion of a country's population and they are in the process of learning. Therefore school children can be regarded as a potential group who could spread/propagate the messages on tuberculosis and its control and prevention among peer groups, families and community at large.

I would like to appreciate the efforts made by **Dr. Rano Mal Piryani**, Deputy Director, STC to produce this "SAARC Guidelines for Partnership with Schools in Prevention & Control of Tuberculosis". I also like to thank to the other professionals and staff of STC for providing valuable inputs to produce this document.

I hope this document will provide technical information on TB to update students knowledge and will also help NTP to build partnership with Schools in prevention and control of TB.

We look forward to your valuable comments/suggestions and urge to collaborate in fight against TB.



Dr. D. S. Bam
Director

ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
DOTS	Directly Observed Treatment Short- course
HIV	Human Immunodeficiency Virus
MDR	Multi Drug Resistance
NTP	National Tuberculosis Control Programme
STC	SAARC TB Centre
SAARC	South Asian Association for Regional Cooperation
SS+	Sputum Smear Positive
TB	Tuberculosis
TB/HIV	TB and HIV co-infection
TV	Television
WHO	World Health Organization
IEC	Information, Education and Communication
INGOs	International Non-Governmental Organizations
NGOs	Non-Governmental Organizations

Section - I

Tuberculosis & its Control

CHAPTER - One

BURDEN OF TUBERCULOSIS IN SAARC REGION

1.1 Introduction

Dr. Robert Koch discovered TB bacillus on March 24,1882 in Berlin, when TB was raging through Europe and the Americas, killing one in seven people. Koch's discovery paved the way for the potential elimination of this fearsome disease. Since that land mark discovery, many great technological developments like invention of many anti-TB drugs, implementation of principles of National TB control programmes as well as DOTS have been taken place. However, TB is still the number one killer among curable infectious diseases and has claimed the lives of millions of people centuries back.

1.2 Tuberculosis: the scale of the problem:

Nearly one-third of the global population (2 billion persons) is infected with Mycobacterium tuberculosis bacillus and is at risk of developing active clinical TB disease. Globally, approximately 16 million people are suffering from active TB disease, with an estimated 8.5 million persons developing active disease each year, resulting in approximately 2 million deaths. The fact is that deaths from TB are avoidable and the number of annual deaths would be higher if increasing deaths among HIV infected persons are included. TB is the leading infectious killer among people living with HIV/AIDS. In the developing world, 26% of avoidable adult deaths are due to TB. Globally, TB is still the leading infectious disease cause of death among women of childbearing age and killing more women than all combined causes of maternal mortality. Each year approximately 2.5 million women get ill from TB and over one million die. Moreover, world-wide, more than 100,000 children die needlessly from TB every year.

1.3 Tuberculosis Burden within SAARC Countries

With 22% of global population, SAARC region bears 29% of global TB burden with approximately 2.5 million new cases and 0.6 million deaths per year. More than 1.1 million new persons develop infectious (SS+) pulmonary TB each year in this region. Three SAARC countries-India, Bangladesh, and Pakistan are

occupying the 1st, 4th and 6th position respectively in the list of 22 WHO designated high burden nations (according to estimated incidence of TB: high burden countries.2001) with India revealing the highest (22%) global absolute burden of TB. These 3 SAARC nations account for more than 28 % of global TB burden. Despite the establishment of national TB programs for over 3 decades along with the existence of cost-effective TB control strategies, TB remains a prevention and control challenge within SAARC region. The emergence of HIV/AIDS within the region, migration, and drug resistant forms of TB impose tremendous constraints and complexity to TB control programmes.

CHAPTER - Two

NATIONAL TUBERCULOSIS TB CONTROL PROGRAMME

2.1 National TB Control Programme:

The NTP is an approach within the national health system to control TB.

2.2 The Aims of the NTP:

The Aims of the National Tuberculosis Control Programme are;

(i) to decrease the spread of TB infection in the community, thereby expediting the elimination of TB from society.

(ii) to cure the individual patients effectively, restore their capacity for activities of daily living, and to allow them to remain within their family and community enabling them to lead a active productive life.

2.3 The Goal of the NTP:

The goal of the NTP is to reduce the mortality, morbidity and transmission of tuberculosis, until it is no longer a public health problem.

2.4 The Activities of the NTP

- ✓ Provide effective *chemotherapy* to all diagnosed TB patients, in accordance with national treatment policies.
- ✓ Promote early diagnosis of people with infectious pulmonary TB by *sputum smear examination*

- Establish a network of *microscopy* centres, and a system of quality control of sputum smear examination.
- Organise and expand *DOTS treatment centres* within the existing primary health care system.
- Provide a continuous *drug supply* to treatment centres,
- Maintain a standard system for *recording and reporting.*
- Monitor the results of the treatment and evaluate progress of the programme.
- Provide regular training and supervision for all staff involved in the NTP, at different level.
- Develop IEC materials and methods to improve community awareness about TB.
- Strengthen cooperation between INGOs & NGOs.
- Carry out research activities regarding TB.
- Develop partnership with other sectors.

CHAPTER - Three

GENERAL INFORAMTION ON TB

3.1 What is Tuberculosis?

Tuberculosis is a communicable disease caused by an organism called Mycobacterium tuberculosis. This organism is also called as tubercle bacilli. Usually they affect the lungs.

3.2 How Does TB spread?

When a person with pulmonary TB coughs, sneezes, laughs, or talks tubercle bacilli are spread into the air in tiny droplets. People who are in close contact can breathe in these droplets and become infected.

3.3 What is a case of TB?

A patient in whom TB has been bacteriologically confirmed or diagnosed by a clinician.

3.7 How is TB detected?

Pulmonary TB can be detected by sputum examination. Chest X-ray also helps in detection of TB of the lungs. At present, bacterial examination of sputum is the best method of diagnosis of pulmonary TB. The smear microscopy is better method of diagnosis than X-ray because it is simple, easy to perform; less expensive and reliable.

3.8 Impact of HIV/AIDS on TB

HIV infection increases susceptibility to TB. A person with HIV infection is up to 30-50 times more likely to develop active TB than a person with a healthy immune system. Consequences of this epidemic of TB/HIV co-infection on national TB programme are increased caseloads, low TB cure rates, high case fatality rates during treatment, under diagnosis of TB, the potential of high default rates and the accelerated emergence of drug resistant TB. Hence, early detection of TB & HIV, treatment of TB under DOTS, prevention of HIV & care of AIDS cases are vital in the management of the dual epidemics.

CHAPTER - Four

TREATMENT OF TUBERCULOSIS

4.1 How is TB disease treated?

Tuberculosis is a curable disease and treated with the oral drugs sometimes together with injections. TB drugs are available at free of cost in all government health facilities. The total duration of treatment is 6 to 8 months. Treatment should not be discontinued before completion of full course. If treatment is interrupted before completion of full course the drug resistance will develop which is dangerous to patient as well as to the community. Drug resistance TB is difficult to treat.

4.2 Available effective anti-TB drugs:

Following are the main anti -TB drugs available everywhere. (in all TB treatment Centres)

- Isoniazid (INH)
- Rifampicin (RFP)
- Pyrazinamid (PZA)
- Ethambutol (EB)

Oral Drugs

- Streptomycin (SM) - Injection

4.3 What are the adverse effects of anti-TB drugs?

Drugs used in the treatment of tuberculosis may sometimes cause side effects/adverse effects, such as Anorexia, Nausea, Abdominal Pain, Joint Pains, etc. These may cause the patients to stop taking medicines. Most TB patients complete their treatment without any significant adverse effects of drugs. However, a few patients do experience adverse effects. It is therefore important that patients be clinically monitored during treatment so that adverse effects can be detected promptly and managed properly. Health personnel can monitor adverse effects of drugs by teaching patients how to recognize symptoms of common adverse effects.

4.4 How one can help TB patients understand more about their disease?

Patients are more likely to successfully complete their treatment if they understand about their disease and treatment. Patients are often afraid when they learn of their diagnosis, because they harbor misbiliefs such as TB is an incurable disease. Reassure them and provide them with proper and relevant information;

- TB is a curable disease and it not a hereditary disease.
- TB is caused by an organism/bacillus
- TB spreads by air through coughing, sneezing.
- Investigation of TB suspects and treatment of TB cases are free of cost.
- If there is a side effect, inform health workers as soon as possible.

Talking to an individual patient or patients in groups and distribution of pamphlets and brochures containing basic TB information, should help to improve the patients' knowledge on TB.

CHAPTER - Five

DRUG RESISTANCE TUBERCULOSIS

5.1 What is Drug Resistance?

Drug resistant bacilli are the Mycobacterium tuberculosis bacilli, which are resistant to anti-tuberculosis drug and Multi-Drug resistant (MDR) bacilli are the bacilli that are resistant to more than one anti-tuberculosis drugs, specially the two main drugs- Isoniazid and Rifampicin. MDR is currently the most severe form of bacterial resistance.

5.2 How is MDR TB produced?

As with other forms of drug resistance, the phenomenon of MDR tuberculosis is entirely man-made.

Drug resistant bacilli are the consequences of human error in any of the followings:

- Prescription of chemotherapy → wrong combination, inadequate dosages
- Management of drug supply → Irregular supply
- Case management → Irregular treatment, lack of monitoring & supervision.
- Process of drug delivery to the patient → Irregular delivery, lack of supervisory visits

CHAPTER - Six

DOTS: THE STRATEGY THAT ENSURES CURE

6.1 What is DOTS?

DOTS stands for Directly Observed Treatment, Short-course, and it is the proven cost-effective strategy to control TB by giving drugs to patients under direct observation of health workers/treatment supporter. DOTS has been found 100% effective to cure TB and to prevent multi-drug resistance. Only DOTS ensures cure of diagnosed TB patients. It can also prevent relapse and death.

6.2 What are the essential elements of DOTS strategy?

- Government commitment to sustain TB control
- Sputum smear microscopy to detect the infectious cases among those people attending health care facilities with symptoms of pulmonary TB.
- Standardized short-course anti- TB treatment with direct observation.
- Uninterrupted supply of anti-TB drugs and diagnostics, and
- Monitoring and accountability.

6.3 What are the evidence that DOTS works?

In areas where DOTS was implemented, cure rates of up to 95% have been recorded, even in very poor countries. More over DOTS prevents transmission of new infections and the development of multi-drug resistant TB. The DOTS strategy has been ranked by the World Bank as one of the most cost-effective of all health interventions.

6.4 DOTS success stories in SAARC

The following are some of the success stories in the SAARC region;

- Bangladesh adopted the DOTS strategy in 1993. Currently, it is being implemented in over 95% of the country. By 2001, as many as 80% of the patients receiving treatment were cured in areas of the country where the strategy was being used. In 1997, WHO described Bangladesh's TB control programme as a model for the entire world.
- Bhutan has achieved complete population coverage; improving the delivery of ambulatory DOTS in the difficult terrain is under way.
- Maldives achieved and has maintained global targets since 1995.
- Nepal has implemented DOTS successfully and achieved these targets in mid-2002. More than 89% of patients in DOTS sites have been cured compared to less than 50% before the DOTS strategy was adopted.

6.5 What are the benefits of DOTS?

The benefits for patients themselves are the increasing treatment completion resulting in rapid cure. Furthermore, case management under DOTS strategy can prevent death, sequel & relapse. Moreover, DOTS can reduce community transmission of tubercle bacilli as well as emergence of drug resistance strains.

DOTS can:

- Prolong life and improve its quality
- Stop the spread of TB
- Prevent emergence of multi-drug resistance TB
- Reverse the trend of multi-drug resistance TB

Section – II

Guidelines for Partnership Programme

CHAPTER- Seven

TB CONTROL A SHARED RESPONSINBILITY

7.1 Partnership is most essential to stop TB

A substantial period has been spent since the discovery of tuberculosis bacillus in 1882, invention of first anti-TB drugs in 1944, implementation of National Tuberculosis Programme in 1960s, declaring TB as a global emergency in 1993 and introduction of DOTS; however, TB still remains a serious health problem in South Asia. Our experience shows that it may not be possible to expand and sustain TB control activities and to achieve desired success without partnership. Therefore, the partnership is very vital to combat TB.

7.2 Why to develop partnership with schools

In the context of strengthening National Tuberculosis programmes through development of new partnership, SAARC TB Centre has identified school children as one of the potential groups to be involved in this mission along with other partners like media and industry workers. Young people (school children) make up a significant proportion of a country's population and they are in the process of learning. Therefore school children can be regarded as potential group who could spread/propagate the messages on Tuberculosis and its control and prevention among peer groups, families and community at large.

7.3 General Objective of the Partnership with schools

Enhancement of public awareness on TB disease and its control and prevention

7.4 Specific Objectives:

1. Educate school children on TB disease with regard to general information and its prevention and control.
2. Build a cadre of child ambassadors, committed to spread messages on TB awareness to the community.

7.5 Strategies to fulfill objectives:

1. Organize brief awareness raising programmes for school children and teachers.
2. Organize various competitions such as drawing, essay, quiz for school children on the theme of prevention and control of TB.

7.6 How to organize awareness raising programmes for school children and teachers

7.6.1 Responsibility:

The primary responsibility in organizing such programmes lies with the NTP Director/ Manager of the country

Director/Manager should formulate a planning team for overall organization of partnership programmes in the country

At the periphery these programmes should be organized at the district level and main responsible person should be the district TB coordinator.

7.6.2 About the programme:

i. Participants –

School children of secondary and higher secondary level and teachers. Number of participants would depend on the available facilities. However arrangements should be made to involve a fair number of schools (10-15). At least 3-5 students from each school should participate.

ii. Type of programme-

Interactive programme with presentations (power point/overhead) on following;

1. TB information

- Global and Regional situation of TB
- Identify TB as a major public health problem
- Country situation of TB
- History of TB
- Causative agent and how it is spread
- Who are at risk
- Symptoms of TB
- How it is diagnosed

- TB is curable if treated properly
- Importance of DOTS
- Detrimental effects of irregular treatment
- Impact of HIV/ AIDS on TB
- Preventive measures

2. Students role in TB control

Presentations should be attractive and be made in a simple understandable way.

iii. **Assessment of students' knowledge and success of the programme**

Arrange for pre- test and post- test – a questionnaire with 10-15 multiple choice questions on general information on TB should be given prior to and at the end of the programme.

iv. **Distribution of a booklet or brochure on TB disease**

A booklet/brochures containing information on TB disease and its control should be distributed among the students at the programme. The booklet/brochure should include general information on TB, as well as other information specific to the country.

7.6.3 Follow-up and Feed back of the programme

Report of the programme should be sent to the participatory schools.

A request should be made to the school authority to organize a similar type of programme in the school. In this regard, school authority shares the responsibility. Trained students and teachers may play the lead role in organizing and facilitating such programmes in their institutions.

Trained students may seek the opportunity to deliver speech/s on TB and its control at appropriate meetings in the school such as general school assembly, literary association meeting, school health society meeting etc.

A request should be made to the school authority to prepare a report on the performed activities in relation to TB awareness and send it to the concerned authority (district TB coordinator).

District TB control coordinator should compile a report on school partnership programme in his district and submit it to the Director/Manager of the National TB Control Programme.

7.7 How to organize various competitions

After completion of awareness raising progrmmes for the school children throughout the country, this activity should be planned.

i. Theme

Selected for World TB Day

ii. Participants

School children of secondary and higher secondary level

iii. Procedure

First Phase

At District Level:

Selection of students

Ten schools from each District will be selected randomly.
One competent student from each school will be nominated by the school authority.

Venue:

District Head Quarter:

Preparation of students for the competition

Distribution of booklets, brochures, documents on TB to the selected schools one week before the competition.

Awards for the Winners

Winners of competition (1st, 2nd & 3rd position) would be awarded certificates with cash/material prizes
Rest of the participants would be awarded certificates for participation.

Second Phase

At Provincial/State/Regional level

First winner at the district level competition will be qualified to enter the Provincial/Regional level competition.

Venue:

Provincial/ State/ Region Head Quarter

Awards for the Winners

Winners of competition (1st, 2nd & 3rd position) would be awarded certificates with cash/material prizes
Rest of the participants would be awarded certificates for participation

Third Phase

At National level

First and 2nd winner at the Provincial/State/Regional level competition will be qualified to enter the National level competition.

Venue:

Capital of Country

Awards for the Winners

Winners of competition (1st, 2nd & 3rd position) would be awarded certificates with cash/material prizes
Rest of the participants would be awarded certificate for participation.

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