TB is not just a health crisis but a national one. However, there is no comprehensive national plan of action as yet beyond the health delivery plan for any sustainable progress towards stopping TB in its tracks. Till date, it has dominantly remained a problem of medical service delivery but unless it becomes a subject involving every segment of society, the massive curse of TB will not disappear. Any social issue especially like TB, which is multi-dimensional in its impact, requires a multi-dimensional response.

This year's theme of the national TB Day-TB and poverty-itself indicates why the matter deserves everyone"s attention. Daily Star is also committed to the idea of social animation and change through active media support to create an enabling environment. It has therefore sponsored this special supplement to create awareness and stimulate positive action. If TB is to be stopped, it must go beyond the domain of the existing medical and service-providing establishment and become part of a national movement. To attain that objective we fully commit ourselves.

-Editor

Supervised treatment is the solution

DOTS in Bangladesh

ANOWARA KHATUN

Tuberculosis (TB) is a public health priority in Bangladesh, with more than 300,000 new cases and 69000 deaths of tuberculosis (TB) expected to occur during 2002. The National TB Control programme (NTP) was set with the specific objectives to increase the rates of cure and detection of TB infectious patients from respectively 50 and 20 per cent in 1991 to at least 85 and 70 per cent. NTP started its implementation in four pilot upazilas in November 1993 and progressively expanded to all country, including the Dhaka City Corporation during these days. From November 1993 to December 2001, NTP has taken care of 483600 TB patients, 47 per cent smear-negative or extra-pulmonary TB and 53 per cent smear-positive. NTP implements the Directly Observed Treatment Short-course (DOTS) strategy of five components: identification of TB infectious cases by microscopy; standardised short-course treatment; uninterrupted supply of drugs; patient registration and follow-up; programme support. NTP recommends a simple algorithm for the diagnosis and treatment of TB. Previous NTP treatment regimens are revised to include rifampicin in the maintenance phase as in other countries in the South East Asia region. Several options are given for the supervision of the drugs intake or Direct Observed Treatment (DOT). The last performances of NTP are 81 per cent treatment success rate (cure and treatment completion) and 31 per cent detection rate. The NTP external review in July 2001 gave a number of important recommendations in how to detect more patients and promote new partnerships with private providers and academic institutions.

The writer is, Deputy Programme Manager (TB), Directorate General of Health Services, Dhaka

TB fact sheet

How TB is transmitted and develops

TB usually spreads when contagious people cough TB bacteria out of their lungs. These bacteria remain suspended in the air for hours and they infect other people when inhaled.

A person sick with TB and not properly treated is likely to infect 10 to 15 people in a year.

Body immune defenses usually keep TB bacteria in check. Only 5 to 10% of people who become infected after breathing in TB bacteria will ever become sick with TB during their lifetime.

In those who develop TB, bacteria usually attack the lungs (pulmonary TB), gradually destroying them by making holes where pus collects as the body struggles to fight the disease.

In about 20% of patients, TB bacteria attack other organs then lungs (extra-pulmonary TB) as the spine, lymph nodes, kidneys and tissues surrounding the brain and heart.

How TB is diagnosed

To identify all infectious TB patients, sputum should be checked by microscope from all suspect patients, i.e. when cough lasts for more than 3 weeks. Sputum should be collected in special containers, 3 times during 2 days and given to the laboratory. In few days the result of the sputum investigation is ready and treatment is decided accordingly.

TB should be suspected when cough lasts for more than 3 weeks

The surest diagnosis of TB is only by identification of TB bacillus by microscope. Other tests like X-ray, blood investigation, tuberclin test, and other most recent investigations are still not enough reliable.

The surest diagnosis of TB is only by identification of TB bacillus by microscope

How TB can be cured

TB is curable. Once diagnosed, TB can be cured by a specific combination of anti-TB medicines such as isoniazid, rifampicin, pyrazinamide, ethambutol and streptomycin. Usual duration of treatment (short-course chemotherapy) in national programme is 6-8 months. By this method almost 100 percent cure of the patients drugs without fail. It is free of cost in all health facilities working for the National TB Control Programme in Bangladesh.

* TB can be cured if all drugs are taken for 6-8 months

* Treatment of TB is free of cost under the National TB Control Programme

Multiple Drug resistant TB

A TB patient may never be cured when he/she does not complete treatment or forgets to take even one of the medicines or the doctor prescribes the wrong drugs or the wrong combination of drugs. In these cases TB bacteria become resistant to the drugs. When TB patients infect other people with resistant bacteria, they will give a similar form of TB resistant to the drugs, which is very difficult to cure.

TB becomes drug resistant when treatment is not completed: cure is then very difficult

The only way to ensure regular treatment is when the patient swallows the medicines under the watchful eye of a reliable person, e.g. a health worker or community volunteer. By proper treatment, the infectious TB patient becomes non-infectious very quickly, usually within 15 days, and is no longer an infectious threat to his/her family and community.

The only was to ensure regular treatment is by directly observing patients taking the drugs every day

Tuberculosis in the world

around 8 million people develop active TB every year in the word

1.5 million people die of TB alone every year in the word

another 0.4 million people die due to HIV/TB co-infection every year in the world.

Tuberculosis in Bangladesh (estimates for 2002)

more than 300,000 new total TB cases every year (one person sick of TB every 2 minutes)

almost 70,000 deaths of TB every year (one death of TB every 10 minutes)

105 per 100,000 pop (incidence) new smear-positive TB cases per year.

234 per 100,000 pop. (incidence) new TB cases (all forms) per year

In Bangladesh, one person becomes active TB patient every 2 minutes and dies of TB every 10 minutes

Objectives of the National Tuberculosis Control Programme in Bangladesh

Aim: to reduce the incidents of tuberculosis until it is no longer a public health problem by diagnosing and treating all TB cases, especially those who are contagious and spreading the disease in the community.

The National TB Control Programme is set to provide appropriate treatment to all TB patients in Bangladesh. The minimum targets are 70% of cases detected and 85% of cases cured.

Objectives (by 2005):

1) to detect at least 70% of the contagious TB cases (sputum smear-positive)

2) to cure at least 85% of them

The DOTS strategy is adopted as the highest cost-effective to achieve

these objectives.

DOTS strategy

The DOTS strategy (Directly Observed Treatment, Short-course) is the brand name of the WHO recommended policy package of 5 components to control TB:

commitment of the government through adequate political and financial support

diagnosis of TB by microscopy investigation of the sputum of the patients attending the health facilities

standardized treatment, concentrate in less than one year and under direct observation

regular, uninterrupted supply of all anti-TB drugs and other supplies

registration and reporting of TB patients to avoid defaulters and monitoring the programme performances

Services of the programme

The national TB Control Programme follows the DOTS strategy to improve poor or uncoordinated TB services. It started in November 1993 in 4 pilot upazilas in two districts. In March 2002, the programme is rully present in 460 upazilas and 3 metropolitan cities (Chittagong, Khulna and Rajshahi). The programme recently started also in parts of Dhaka city.

Free services are offered by the National TB Control Programme in all 460 upazils and 4 metropolitan cities (now also expanding in Dhaka).

The services of TB diagnosis and treatment, free of charge, offered by the national programme are presently available in:

460 upazilas (at Upazila Health Complex or corresponding NGOs facility)

44 Chest Clinics

8 TB Segregation Hospitals attached to the chest clinics

4 TB Hospitals (Chittagong, Khulna, Rajshahi, Sylhet)

31 urban units in Chittagong city

10 urban units in Khulna

13 urban units in Rajshahi city

25 urban units in Dhaka city

In Bangladesh, the cost afforded by the government to cure a new TB patient is about Taka 900. The government has to spend the double for an old patient who was poorly treated before. Those unlucky patients who already developed multi-drug resistance because of wrong treatment, have very decreased chances to be cured.

Performances of the programme

Detection rate: 31% of the estimated patients were detected in 2001. The total of 75,353 TB cases were reported under the programme in 2001 and 483,613 from 1993 to 2001.

Cure rate: 81% of the patients were successfully treated in 2000.

Collaboration with NGOs

241 (52%) upazilas are covered through the collaboration with 6 NGOs, the other 219 (48%) directly by the government. 16 more NGOs are collaborating with the programme in the municipality and metropolitan areas:

Many NGOs are partners of the National TB Control Programme Name of NGO Area of Activity

1.ananya Samaj Kallyan Sangostha (ASKS)Rajshahi city

2. BRAC 106 upazilas

3.Bangladesh Women's Health Coalition (BWHC)Dhaka city

4.BanophulKhulna city

5.Damien Foundation83 upazilas and Rajshahi city

6.Danish Bangladesh Leprosy Mission (DBLM)10 upazilas

7.Family Planning Association Bangladesh (FPAB)Khulna city

8.Friends of Bangladesh1 upazilas

9.Health Education and Economic Dev. (HEED)25 upazilas

10.ImageChittagong city

11.LAMB Hospital3 upazilas

12.MamataChittagong city

13.Marie Stopes Clinic Society Dhaka city

14.National Anti-TB Association Bangladesh (NATAB)Chittagong city

15.NishkritiChittagong city

16.PIME SistersKhulna city

17.Population Services and Training Centre (PSTC)Dhaka city

18.Progoti Samaj Kallyan Protisthan (PSKP)Dhaka city

19.Rangpur Dinajpur Rural Service (RDRS)14 upazilas

20.The Salvation Army Jessore and Dhaka city

21.ShimantikDhaka city

22.Tilottama Rajshahi city

Tuberculosis: a disease with economic impact

Improving health is a concrete measurable way of reducing poverty and promoting economic development. This is reported in the "Macroeconomics and Health: Investing in Health for Economic Development" released on 20 December 2001 by the Commission on Macroeconomics and Health (CMH), which was established 2 years ago by the Director General of WHO.

The CMH calls for scaling up health interventions to tackle diseases related to poverty, as HIV/AIDS, tuberculosis and malaria

On average, 3-4 months of work time are lost as a result of TB; this results in average lost potential earnings of 20-30% of annual household income

A further loss of 15 years of income occurs to the families of those that die of TB

75% of TB infections and deaths occur in the 15-54 year age group, the most economically productive age group in the population

The GDP per capita in countries may reduce up to 1% per year because of TB

United Nations targets are to have the mortality of TB and malaria and reduce new HIV infections by 25% by 2010.

The National Tuberculosis Control Programme in Bangladesh

The National Tuberculosis Control Programme (NTP) falls under the Communicable Disease Control of the Essential Services Package (ESP). It is financed by the Government of Bangladesh and the World Bank/development partners supporting the Health and Population Sector Programme (HPSP) for the years 1998-2003.

NTP adopts the Directly Observed treatment Short-course (DOTS) strategy to improve tuberculosis (TB) services. Its objectives are to at least detect 70% of the TB cases and to cure 85% of them. By acieving these objectives, the number of infectious cases would be reduced and consequently the transmission of TB among the population. Controlling TB is a global target by the year 2005.

In November 1993, NTP started in 4 pilot upazilas in 2 districts. Presently, the NTP services are available in 460 upazilas and in the 4 metropolitan cities, covering all population of Bangladesh. NTP is implemented in 241 upazilas and in the metropolitan cities in collaboration with 22 NGOs.

More than 480,000 TB cases have been detected by the NTP between November 1993 and December 2001. Nearly 80 percent of the infectious cases have been treated successfully (data on treatment till September 2000). The programme is progressively strengthening quality and accessibility of its DOTS services to the community and extending partnership with medical colleges and private providers.

TB and poverty

The BRAC experience

MD AKRAMUL ISLAM, SHAMEEM AHMED, JALALUDDIN AHMED, MD. AMINUL ALAM

Research has also shown that illness is a major factor in creating economic crisis in poor families. Tuberculosis causes a high economic loss of family and the country as three-quarters of the tuberculosis patients are in economic productive age group. Thus the treatment and cure of tuberculosis is an obvious and basic requirement for people not to be poor.

To combat this, BRAC initiated a pilot community based tuberculosis control project in 1984 in Manikganj upazila (sub-district) along with its community development programmes. The aim was to make tuberculosis diagnosis and treatment available and accessible at the doorstep of people of whole community through trained community health worker (Shastho Shebika). BRAC is currently implementing its tuberculosis control programme in 106 upazilas covering approximately 30 million populations following an MOU signed with the government of Bangladesh in 1994.

Existing at the core of BRAC's health program, Shebika, woman-aged 25-35 years and a member of BRAC village organisation, is responsible for 200-300 households for providing basic health care services including tuberculosis. As the front-line service providers, they disseminate information to the community, identify and refer suspected patients to smearing centres, ensure directly observed treatment shot course (DOTS) and follow-up the patients.

Treatment for tuberculosis is started by Shebikas under the guidance of BRAC field staff. Patients receiving treatment are asked to deposit 200 Takas (about US $4), and to sign a bond to guarantee treatment completion. If the patient is too poor to pay, he/she receives a waiver for the bond. From the bond, 125 Takas are given to the Shebika and the remaining 75 Takas are refunded to the patient after completion of treatment. Patients come to the Shebikas' home at every morning for taking drugs during the intensive phase of the new treatment and the entire period for retreatment. In the case of seriously ill patient, the Shebika visits the patient's home and observes him/her to swallow the drugs until he/she is able to come to the Shebika's house.

In 2001, Shebikas treated 13,082 patients, of whom, 73% were sputum positive. The detection rate of new sputum positive cases was 45% (48/100,000 population). The BRAC program has consistently achieved a cure rate over 89% during last three years. Commitment to strict implementation of tuberculosis control programme is part and parcel of an overall strategy of development.

TB attacks the poor most

"TB is a national problem"

A discussion was held on the state of TB in Bangladesh at the Daily Star office. It was participated by Dr. Pierpaolo Colombani of WHO, Dhaka; Dr. Anwara Khatun of NTCPB; Md. Akramul Islam and Dr. Shameem Ahmed of BRAC and Dr.A M Zakir Hossain, ex-Director Primary Health Care and now with the Urban Primary Health Care Project. Daily Star was represented by reporter Naimul Huq while Afsan Chowdhury moderated the discussion.

Anwara Khatoon (AK): Slogan for this year is "Stop TB, fight poverty". TB is a national problem. The majority of the victims are poor. The government has taken measures to fight TB. Now there are 570 health centres providing free service and detection and treatment.

Afsan Chowdhury (AC): Is the TB programme strong enough to handle this crisis?

A M Z H (A M Zakir Hussain): Well, I believe that government alone can never handle everything. It needs allies. And fortunately, it has allies. It's working with NGOs. Recently this Programmes has started working in the urban areas. This is a recent development. In the rural areas government has its infrastructure which is strong compared to many other countries. In urban areas it has to catch up in terms of having structure, having allies. And very recently it also has developed alliance with the organisations that are serving in the urban areas.

AC: What value addition has BRAC made to this programme.

Akramul Islam (AI): Actually we've been working National TB Control Programme since 1994. There are two unique features: Having health volunteers close to the patients, so that the patients can get treatment without a travelling cost or even time loss.

That has increased the cure rate. And it shows the positive role of the private sector. So from this year the focus would be particularly on private sectors, particularly with the qualified private practitioners in the upazilas and district levels to involve them in the national programme through BRAC. As well as the village doctors would also be involved. That would certainly increase the rate of case detection in 2002.

AC: What about social mobilisation to ensure participation?

AK: The National programme started in 1993. Alliance with the NGOs from the year of 94-95. The prime focus was on the rural areas. NGOs were allies. And all the rural areas were covered within June, 98. The four metropolitans were gradually included afterwards. Dhaka has come under the programme this year. The programme in Chittagong, Khulna and Rajshahi is running with collaboration of NGOs, such as: Urban Family Health Partnership and Urban Primary Health Care Project. That's the way we are going closer to the people and conveying the message. The Ward Commissioners are requested to encourage people to go to the health centres and check if they are having cough for more than three weeks, by miking. There are 42 centres in Chittagang. Certain changes in the regiment are encouraging the private sectors. A DOTS corner has already started working in the Rajshahi Medical College under the National Programme.

AC: I have seen one of the things that works is when people get together and work together. What we call social mobilisation

Pierpaolo Colombani (PC): in 1993, when we introduced DOTS strategy in African countries the position was different from Bangladesh. The communication was mouth to mouth and people came to us. There was no need to promote services.

But now in Bangladesh things are different but professional social mobilisation and communication are usually very expensive too. We have to make sure that the patients are taking the full course, regularly. And that is the main challenge.

A M Z H: I am not denying the necessity of mass communication. Of course there are strategies of TB control programme. But no special and individual strategy, they are overall TB control strategies.

AC: Unless there is public participation the programme can be sustained.

AI: When we started the DOTS programme in the mid-90; our concern was more on the system and to cure at least 85% of the patients. And we did not emphasise on the social mobilisation. That made the progress slow and that is the reason why the media is so unaware of the TB facts.

AI: Actually, from the year 2001 we are focusing on the social mobilisation and the outcome is tremendous; particularly in the areas where some NGOs are working on it. The rate of case detection has increased. Now in 2002 and afterwards, our plan is to continue and strengthen the mobilisation programme. Surely that will ensure our success in case detection.

PC: In the East TB has effected more than HIV. In Bangladesh the number of population is a major cause of the disease. It is one of the top countries, but not the first. First is India, then China, Indonesia, Nigeria and then Bangladesh in the fifth position.

AC: Can we go back to the sounding question that emerged? The people would want to know about the present status; the case detection target, how far we have gone with that and if there is gap, why and what are we planning to do about it?

AK: The case detection target for the control programme was 35% and we have reached up to 32%. For 2002 we attempted for 45%, but as still we have not started working for Dhaka, the target is not close yet. If we can work in collaboration, it would be much easier to reach the target. Within 2005, hopefully the case detection would reach 70% and that is a global target.

PC: If everything goes fine as estimates are not results, by 2004 it would be 70%, 55% by 2003 and 40% by 2002.

AC: Now moving to a new area. One is urban TB, this is a real difficulty area …this is so much linked to poverty… what makes our urban programme more specific.

A M Z H: As of now 25% of the population of this country live in urban areas, and by 2010 40% of the population will be living in urban areas. This is really important and unless we do not focus on the urban situation any programme we undertake would remain half-done. Several Private organisations take care of the urban services. Urban Primary Healthcare Project is now coming for the four city corporations.

We find tremendous variation with regard to socio-economic status in urban population, from split people to people living in posh areas. And TB is a disease of poverty. It is difficult to approach the poor people: they are helpless, they are illiterate and bound in shackles of many of many beliefs and practices that are not healthy

'Stop TB, fight poverty'

The World TB Day is being observed globally on 24 March 2002 with the objective of raising the level of awareness about this deadly disease. The theme of the World TB Day this year is "**STOP TB, fight Poverty.**" It stresses on the urgency of tackling TB, one of several illnesses that affect the poor.

Tuberculosis an age old disease, known for centuries to afflict debilitate, and to impoverish large sections of the population, continues to ravage humanity, especially those in the developing world. TB is yet to receive the high priority it desperately deserves.

The facts about TB are grim. TB is today the single biggest infectious killer. TB strikes nearly eight million people each year and kills two million of them around the world. Regrettably, the SAARC region accounts for more than 38% of the global affliction by TB numbering about 2.5 million people. Of them, nearly 0.6 million die every year. Its impact in South Asia is clearly devastating.

TB is spread through infectious droplets containing the TB bacilli, transmitted from TB patient to other people through coughing, sneezing or spiting. A person with active TB can infect an average of 15 people every year. TB is known to thrive in conditions of poverty and overcrowding.

Today, we have a strategy to respond to this challenging problem. It is called DOTS Directly Observed Treatment Short Course. The DOTS strategy has been developed after years of research and experimentation, much of which done in the South Asia Region. This strategy has proved to be successful around the world, even in the developing countries wherever it has been properly implemented. The afore-mentioned theme of the World TB Day lends support to the expansion of DOTS, the cornerstone of the recently launched Global Plan to Stop TB, and urges all stake holders to accelerate action.

In the SAARC region where HIV infection is spreading rapidly, a parallel epidemic of TB is following the AIDS epidemic. TB is the biggest killer of people who are HIV positive, accounting for one third worldwide and 50% in South Asia of deaths of AIDS affected people.

The spread of multi drug resistant TB is another major concern. TB bacilli become resistant to drugs when treatment is not regular, or the drugs are taken in the wrong combinations. Therefore, implementation of the DOTS programme properly is essential.

The existence of SAARC Tuberculosis Centre (STC) has greatly facilitated our endeavour to promote cooperation among SAARC Member States in operational research, sharing experiences and capacity building of the health staff for fighting TB.

The first goal of the SAARC region's TB Control Programme is to reduce TB deaths by 50%. To achieve this target, national TB programmes must work towards ensuring 100% coverage of the population with DOTS with a high treatment success rate as early as possible.

Finally, I wish to urge every one to join the fight against TB and make the SAARC region free from the controllable disease.

(Q.A.M.A. Rahim)
(SAARC Secretary-General)