STOPPING Tuberculosis
World TB Day/SAARC TB Day

SAARC TB and HIV/AIDS Centre
Kathmandu, Nepal
2013
Stopping
Tuberculosis
World TB Day/SAARC TB Day
Special

(SAARC TB and HIV/AIDS Centre’s building located at Thimi, Bhaktapur, Nepal)

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2013
Tuberculosis (TB) is a major global health problem and a leading cause of death from curable infectious disease worldwide. The TB problem is relatively higher in Asia and in the SAARC region. I am very glad that SAARC Tuberculosis and HIV/AIDS Centre (STAC) has been supporting the National TB control programmes of its member states. The centre has been regularly observing different important days including World TB Day and publishing various valuable documents related to control and prevention of TB and HIV/AIDS.

In compliance with the recommendation of the sixth meeting of the Governing Board of STAC held on 7-8 January 1997, STAC has been observing “SAARC TB Day” along with “World TB Day” each year on 24 March to commemorate the date in 1882 when Dr. Robert Koch announced his discovery of *Mycobacterium tuberculosis* that causes TB. The theme of the world TB day 2013 is “stop TB in my life time” (Jotodin Banchbo Jakkhake Rukhbo), which underlines the fact that everyone can contribute in eliminating TB.

This year STAC has planned to publish a document titled “World TB Day Special”. On behalf of the Government of the People’s Republic of Bangladesh, I must congratulate STAC for such initiative. I hope this document will encourage people working for controlling TB in all the SAARC Member States moving forward to stop TB in this region.

I would like to express my sincere thanks to all those who are involved in preparation of this valuable document “World TB Day Special”.

I wish every success of STAC.

Joy Bangla, Joy Bangabandhu
Long live Bangladesh.
World TB Day
24th March 2013
“Stop TB in my lifetime”.

MESSAGE FROM LYONPO ZANGLEY DURPA, HONOURABLE MINISTER OF HEALTH

The 24th March of every year is commemorated as World TB Day in all over the world. Today, we are joining the global community in observing the 2013 World TB Day. This day is an important event as it reminds us that TB still remains one of the Public Health problems in the world.

World TB Day 2013 marks the second year of a two-year campaign initiated in 2012 with the theme “STOP TB IN MY LIFETIME”. This year’s theme, “Stop TB in my lifetime” calls for greater action to stop the spread of TB including TB in children. More number of children are becoming ill and dying of childhood tuberculosis.

We must, therefore, ensure that all people affected by TB including children are timely detected and put on full treatment to ensure cure. The people must come forward for availing the services as treatment is provided free of cost in all the health facilities across the country.

In Bhutan, we have made a considerable progress in TB prevention and control. The case detection rate in 2011 has been at 87% and treatment success rate at 91% which surpassed the global targets of 70% and 85% respectively. The mortality rate due to TB among long TB patients in 2011 is reduced to 3% as compared to that of 9% in 2000. The reduction is small but significant. In 2012, a total of 1145 cases were diagnosed and put on TB treatment. Sputum microscopy has improved greatly in all district hospitals thereby detection rates.

Of the 460 long TB patients (sputum positive cases) diagnosed in 2012, 11 of them developed Multi-drug Resistant TB (MDR-TB) and put on treatment. Our MDR-TB treatment success rate in 2012 is 66% and we are aiming to achieve more than 75%.

The primary cause of MDR-TB is due to TB patients defaulting in between and failing to complete full course of treatment. The duration of treatment for MDR-TB is 24 months long and it is three times longer than that of treating a non-resistant TB.

Moreover, the medicines for the treatment of MDR-TB is readily not available and the cost of treating one MDR-TB patient is 100 times more expensive than that of treating a non-resistant TB which would cost about 5000 dollars per case; Yet the outcome is uncertain. Hence we, as individuals, family members and communities have the responsibilities to advise TB patients on regular intake of treatment and serve as DOT (Directly Observed Treatment) providers.

All citizens including families affected by TB must ensure full completion of the treatment and families of the affected individuals must cooperate with health system for timely receipt of medicines and ensure that their loved ones take medicines regularly in their presence. It is also very essential that entire community support health care providers in ensuring proper follow-ups.

As we aim for elimination of TB from our country, all Health Care Providers must not be complacent with the achievements made thus far. Every new case diagnosed must be followed up individually by doctors who first diagnosed it and closely monitor until the completion of the treatment. The program at ministry must provide all possible supportive environments for effective implementation of this notion. Unless we all make these concerted efforts, our dream to ELIMINATE TB from our country will remain mere fantasy. We have at our disposal very effective drugs available, technical information and supports from UN agencies and funding backup from The Global Fund. I appeal to all our Health Professionals to give your best, as you always do, to reduce if not eliminate the suffering of our people due to TB. We can do it, it is doable. You have done it at several occasions before. We just need some reorganization for this extra mile.

There are evidences and larger fear that the emergence of Multi-drug Resistant (MDR-TB and TB/HIV) co-infections might pose a greater threat to TB prevention and control efforts. Let me remind you all that TB is a disease that can be prevented and cured with regular treatment under Directly Observed Treatment (DOT). I request all our partners for their continued support in combating TB and the Ministry of Health reaffirms its commitment to stopping TB. Lastly, I request you all to join hands and work together towards Eliminating Scope of TB in Bhutan.

“Let us unite to Stop TB”.

stop TB in my lifetime
Minister’s Statement
from Ministry of Health, Maldives

Tuberculosis control is one of the remarkable success stories of the Maldivian health sector. Since the establishment of the National TB Program in 1968, the incidence of sputum positive-TB has gone down from 279 per 100,000 to 33.4 per 100,000 population in 2012. Maldives was among the first countries in SAARC to achieve MDG goal 6. Diagnosis and treatment of TB through Directly Observed Treatment, Short-course (DOTS) is available free of cost throughout the country. Case detection rates and cure rates for TB patients have remained consistently high. These impressive results have been obtained by the hard work of the healthcare workers despite the dispersed geography of the country and limited resources.

Nevertheless, our job is far from over. Sustaining these achievements is a formidable challenge. Emergence of multi-drug and extensively drug-resistant TB, influx of a large expatriate population from high-burden countries, communication barrier and difficulty in reaching the expatriate population, increasing urban congestion and persistence of stigma associated with TB are significant roadblocks to achieving the goal of TB elimination in the country. Elimination of any communicable disease would get more difficult and challenging as we get closer to the goal. We are committed to strengthen our efforts and the National TB Control Programme, in overcoming the existing and emerging issues to ensure that TB is no longer a public health problem in the Maldives.

In this globalized world, inter-country and regional corporation and coordination in the area of public health and disease control is extremely important. A lot of challenges and issues we face are common. A robust regional mechanism needs to be in place to address some of these issues, including cross-border notifications and referral, sharing of best practices and assistance to member states with specialised diagnostic services. I am happy to note that the recently developed SAARC strategic plan for TB control outlining some of these initiatives, and the strengthening of STAC are important steps towards the vision of ‘zero deaths and zero new infections from TB’.

Dr. Ahmed Jamshied Mohamed
Minister of Health
Maldives
Tuberculosis (TB) remains one of the major public health problems in Nepal. Government of Nepal is committed to fight against Tuberculosis, and it has given the status of priority one programme and endeavours to make available all resources necessary for the National Tuberculosis Control Programme (NTCP).

National TB Programme is a permanent and continuous part of the Ministry of Health & Population and its services are available throughout the country. New Stop TB is the strategy for TB Control in the country. Nepal has achieved both the Global target of Tuberculosis i.e., 70% case finding and approaching treatment success rate of 90%. Government of Nepal is committed to sustain and improve the achievement and improve access through effective coordination and collaboration with community, private sectors, NGOs, donor agency and other stakeholders and partners.

I am pleased to see the Annual Report of National Tuberculosis Programme for the Fiscal year 2068/69 (2011/2012). It is a crucial document for programme monitoring and evaluation of the programme and a useful reference for all those involved in the fight against Tuberculosis including national level planners, implementers and researchers.

Government of Nepal has initiated free health care services at Sub Health Post, Health Post, Primary Health Center and District Hospital level in an effort to make basic health services availability to the citizens of the country as per the Interim Constitution of Nepal. In this context, Tuberculosis Control Programme is a model for delivering free health care services for new Nepal up to the sub health post level in order to provide full coverage and access.

I would also like to extend my sincere appreciation and thanks to all the development partners and others governmental and non-governmental sectors for their valuable contributions for TB control in Nepal.

March 2013
Minister for Federal Affairs,
Local Development, Health & Population
Government of Nepal
Message from Hon’ble Minister
Ministry of Health, Government of Sri Lanka

It is my pleasure and honour to deliver this massage to “World TB Day Special” published to celebrate the SAARC TB day, synchronized with “World TB Day” on 24th March.

Tuberculosis control activities in Sri Lanka have achieved remarkable success during the past decade, with the improvements in medical treatment and preventive healthcare delivery. With this comprehensive healthcare delivery, Sri Lanka has been able to outshine in TB control activities among other SAARC countries.

The National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) is the focal point for control of not only TB, but also other respiratory diseases as well in the country. It is under the guidance and supervision of Ministry of Health. The Government of Sri Lanka has extended its utmost state patronage and political commitment towards achieving the goals of the NPTCCD; technically, financially and by updating manpower from time to time. The Government of Sri Lanka continue to support the NPTCCD activities so that every case of TB will be detected, diagnosed and treated promptly.

Although the Ministry of health bears the stakeholdership for controlling Tuberculosis in Sri Lanka, this effort would not be fruitful, If it were not for the support exerted by international organizations viz WHO, SAARC TB and HIV/AIDS centre, GFATM, Global Drug Facility and Green Light Committee.

I sincerely hope that these organizations will continue to support the NPTCCD for effective control of TB, until it is no longer a public health problem in Sri Lanka.

Hon. Maithripala Sirisena
Minister of Health
Sri Lanka
MESSAGE

As we all know, progress towards attaining global targets for reduction in TB cases and deaths in recent years has been impressive. TB mortality has fallen over 40% worldwide since 1990, and the incidence is further declining. In spite of this success scenario, it is estimated that one-third of the world's population is still infected with TB.

Against this backdrop, World TB Day, which is also observed as the SAARC TB Day, is an opportunity to raise awareness about the burden of tuberculosis (TB) and to assess the status of its prevention and control efforts. It is also an opportunity to mobilize political and social commitment to make further progress in controlling TB cases. This is the second year of a two-year campaign with the slogan “Stop TB in My Lifetime” calling for a world free of TB.

Tuberculosis is a contagious and airborne disease that disproportionately affects young adults in their most productive years. According to the global report, one-third of the world's population is thought to be infected with the microbe that causes TB. Worldwide, TB is not only the primary cause of death among people living with HIV/AIDS, but also leads to infertility and poor reproductive health outcomes. It is so despite the fact that TB prevention, treatment and control are among the most cost-effective public health interventions available.

The SAARC region, with an estimated annual incidence of 2.87 million TB cases, carries 33% of the global burden of TB. Four of the eight Member States in the region are among the 22 high burden countries with the highest burden of TB with countries as Afghanistan, Bangladesh, India and Pakistan, which represents 97.6% of total new smear positive cases notified in the region. And out of the sputum smear-positive pulmonary TB patients in the SAARC Region in 2010, 89% were successfully treated. Additionally, all the SAARC Member States had achieved either close to 70% or above of case detection rate of new smear positive cases.

Established in 1992 in Kathmandu, SAARC TB & HIV/AIDS Centre (STAC) aims to support the efforts of National TB and HIV/AIDS Control Programmes through evidence-based policy guidance, coordination and technical support with an end to minimize the mortality and morbidity due to TB and HIV/AIDS in the region. With the support of STAC, the good news is that all the SAARC Member States have developed tiered strategic plans for expansion of TB/HIV collaborative activities. In addition, Member States have also initiated management of MDR-TB under the National TB Control Programmes.

As we commemorate this day, I would like to call upon national authorities and development partners to strengthen TB prevention and control initiatives in the region in order to stem the tide of this epidemic in our lifetime.

(Ashok Sateem)
Secretary-General

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National Tuberculosis Control Programme is recognized as a high priority and exceedingly successful programme by the Government of Nepal. It is focused to provide quality assured services and ensure universal access through DOTS treatment and sub treatment center based within the primary health care system of the Ministry of Health & Population.

It is a matter of pride that National TB Programme has already achieved one of the Millennium Development Goal and I am confident that it will be able to achieve all targets by 2015. However sustaining these achievements and to make further progress still remains challenges.

Government of Nepal is committed to control tuberculosis and it recognizes National TB Programme as one of the top priority programme within the Ministry of Health & Population. National TB Programme is a top performing programme within the country but also recognized as model in the South Asia.

With adoption of STOP TB Strategy in 2006 NTP has embarked on a new era for tuberculosis control under which several new initiatives have been launched successfully including Drug Resistant TB management programme and is considered a global model for ambulatory treatment.

I would also like to take this opportunity to acknowledge and extend my sincere thanks to all the development partners for their support for the prevention and control of tuberculosis and hope that this crucial support will remain available to the programme in the future as well.

Last but not least, I like to congratulate to all the health personnel working at all levels including Female Community Health Volunteers for their contribution to tuberculosis control programme in Nepal. I also like to extend my sincere appreciation to NGOs, CBOs, Community & Private Sectors and other stake holders for their valuable assistance in effective management of DOTS programme.

March 2013

Dr. Praveen Mishra
Secretary
Ministry of Health & Population
Government of Nepal
Message
Secretary Interprovincial Coordination
Pakistan

Tuberculosis, like other epidemics knows no boundaries. It is an increasing world-wide problem and one of the major public health challenges in the SAARC region.

It is a bitter reality that even though TB is a curable disease, thousands of people die of TB every year. TB kills more adults than any other infectious disease, kills more women than all causes of maternal mortality combined, and causes more orphans than any other.

It is obvious that tuberculosis is more than a health concern, and that it should be identified for what it is - a socio-economic challenge, and an obstacle to human development. TB takes its toll on young and working adults of the nation. It disproportionately affects the poor and marginalized communities of our society; 95 percent of new TB cases occur in developing countries prompting them to fall further into poverty. Also, tuberculosis carries social stigma, which is a major obstacle for treatment. Public education and building awareness can help prevent a deepening epidemic.

Pakistan being a responsible country has made major achievements in controlling TB, ambitiously and sincerely. We realize the need to meet and overcome the situation with concerted efforts. National TB Control program has made remarkable achievements towards the MDGs not merely through diagnostic & treatment facilities but providing some out of the box solutions like promoting personal hygiene, community ownership and civic responsibility.

However, TB cannot be defeated by the health sector alone. The time has come for political leadership of the region, decision makers, technical experts, healthcare providers, civil society, donors, patient groups and caregivers to stand together and come up with some out of the box solution to win the battle against TB.

World TB day which is being observed on 24th March is yet another reminder to all of us for re-dedicating ourselves to the challenging task of eliminating this scourge for health and well being of our people.

On this occasion I extend my greetings and good wishes to all those unsung heroes who are fighting at the forefront to curb this menace from our society.

Mr. Faridullah Khan
Secretary
Ministry of Inter provincial Coordination
Government of Pakistan, Islamabad
Message by the Secretary  
Ministry of Health, Govt. of Sri Lanka

I am pleased to send this message as the Secretary of Health, Sri Lanka for the "World TB Day special" published to commemorate the SAARC TB day. As the Secretary of Health, I am happy to announce that achievements of the National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) in controlling TB in Sri Lanka are appealing in comparison to other countries in the SAARC region. Nevertheless, TB still remains a major public health problem in the country, especially in the arena of social stigma and newly emerging challenges. In this complexity, TB control activities emphasize multi-sector collaborative approach. The goal of the NPTCCD is to reduce mortality, morbidity and transmission of TB, until it is no longer a public health problem in Sri Lanka and the NPTCCD has always shown preparedness for the emerging challenges.

In this context, the role played by WHO and SAARC TB and HIV/AIDS Centre towards TB control activities in Sri Lanka in terms of capacity building, technical guidance and support and sharing new knowledge is highly appreciated.

Activities taken place in commemorating a world TB day are targeted at, provision of health education to general public, stimulation of political leaders and community leaders to enroll TB control activities in their agendas in priority and mobilization of community at large, towards TB control activities. Inculcated in these objectives, the NPTCCD celebrates the world TB day every 24th March.

Considering the importance of the occasion, SAARC TB and HIV/AIDS Centre has launched the publication "World TB Day special" coupled with SAARC TB Day commemoration.

The SAARC TB Day commemoration, in par with World TB Day, will undoubtedly augment the enthusiasm of campaign managers and regional stakeholders among membership countries in TB control activities. I take this opportunity to congratulate SAARC TB and HIV/AIDS Centre for inaugurating this publication towards a TB free South Asian region.

Dr. Y.D. Niha Jayathilake  
Secretary  
Ministry of Health  
Sri Lanka
Message

The Department of Health Services has been successful in addressing the challenge of Tuberculosis in the country through the National Tuberculosis Programme (NTP) which has made remarkable progress since the introduction of DOTS in 1996.

National TB Programme has achieved both global targets for TB control and also some of the targets set for Millennium Development Goal. However, there are several critical challenges which need to be addressed namely, improving the accessibility of TB services to the poor and vulnerable population groups, delivery of TB services in remote areas, expansion of collaboration with private health care providers, promotion of International Standards of TB Care, address the issues of TB/HIV and DR TB.

The Department of Health Services is fully committed to address these challenges through continued commitment, effective collaboration with all sectors, civil societies, NGOs, donor agencies, community, private sectors, volunteers, all partners and individuals involved in TB control activities.

It is with great pleasure to release the National TB Programme Annual Report 2068/69 (2011/2012). This important publication documents the progress made by NTP, provides detailed statistical analysis of programme information against its targets and indicators. I hope this report will help organizations and individuals involved in TB control to design policy and in the preparation of plan of action for effective TB Controlled programme.

Finally, I would like to appreciate and thank the Director of National Tuberculosis Center and the team for all their work in bringing out this publication in time.

Dr. Mingmar Gyelzen Shrepa
Director General
Department of Health Services
Government of Nepal

March 2013
Message from Director General of Health Services, Ministry of Health, Govt. of Sri-Lanka

The health system of Sri Lanka has achieved applauding success, to be in par with developed countries in the world, especially in terms of preventive healthcare delivery. Albeit the disease burden of Tuberculosis as an infectious disease has a significant impact on healthcare delivery system, especially in the context that Tuberculosis is a public health predicament.

Encapsulated within the preventive healthcare delivery system, National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) of Sri Lanka too has had glorified achievements during the last decade. Nevertheless, it is detected that, Tuberculosis control programme in Sri Lanka is heading towards emerging challenges and constraints, which may hinder the succession of progress in future.

This is where a dire necessity arises for a multi-disciplinary and multi-sector approach towards continuation of the progress in TB control activities. The theme of this year for the commemoration of World TB Day “Stop TB in my life time” is a reminder for all of us that we have to act in unison to reduce mortality and morbidity of TB and make TB no longer a public health problem.

NPTCCD, the main stakeholder for TB control in Sri Lanka, has been working right throughout, in harmony with other local and international stakeholders for TB control activities in the country. WHO, SAARC TB and HIV/AIDS Centre, GFATM, GDF and local NGOs as CNAPT are to be highlighted in this context.

NPTCCD functions as a decentralized campaign with a network of twenty six district chest clinics over the country, one chest hospital, a National TB Referral Laboratory and over hundred and seventy microscopy centres. Several other advancements are to be added to the campaign in near future. Therefore NPTCCD will be a focal point for dissemination of new knowledge, planning and implementation of initiatives for TB control and policy making to combat emerging challenges.

In this regard, SAARC TB and HIV/AIDS Centre will have to play a key role in financing, capacity building and sharing new knowledge with the NPTCCD, Ministry of Health.

The decision made by SAARC TB and HIV/AIDS Centre to celebrating SAARC TB Day in accordance with World TB Day is highly appreciated in this circumstance. This will, undoubtedly, lead to strengthening of the relationship among SAARC membership countries and thereby facilitate new knowledge, strategies, experiences and other resources to be exchanged.

Dr. Palitha Maheepala
Director General of Health Services
Ministry of Health
Sri Lanka
World TB Day along with the SAARC TB Day is an opportunity to focus attention on the challenges ahead in defeating the TB epidemic at the global, regional, and national and community level. This year is also an important milestone setting year for our collective efforts, as governments of SAARC Member States have pledged to achieve targets of 70 percent case detection (of all infectious TB cases) and 85 percent cure rate (of those detected cases). Meeting these targets is essential to achieve the 2015 Millennium Development goals of reducing TB prevalence and deaths by half relative to the year 1990.

World TB Day, the event is meant at mobilizing the people who suffer from TB and the communities they breathe in and at sensitizing and mobilizing policy and decision makers, health care providers, NGOs, technical and development partners and all other stakeholders.

In 2013, we enter the second year of the two-year “Stop TB in my lifetime” World TB Day campaign.

At a time when partners are calling for zero TB deaths, we need to make a stronger statement that the world’s failure to stop deaths from TB is an outrage. TB is airborne and every day 4000 people lose their lives due to TB. It’s curable at low-cost. Each individual can do his or her part to advocate for increased commitment, visibility and funding for TB care and research.

Tuberculosis is an infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active TB disease. Tuberculosis is one of the major public health problems in the SAARC region with immense socio-economic impacts. The SAARC region accounts for 33% of the Global TB burden with nearly 2.87 million of new TB cases of which about 1.2 million are estimated to be sputum smear positive infectious cases and capable to spread the disease to others. About 1.4 million deaths occurred in 2011. More than 75% of these cases and deaths occur among 15-54 years age group, economically the most productive age group. As a result the social and economic loses due to TB are huge.

In the SAARC Region, a remarkable progress has been made for DOTS since its inception in SAARC Region. By 1997 all Member States started DOTS strategy for TB control. DOTS coverage within SAARC region has steadily increased since 2000. Population coverage in 1997 was 11%, since then it has been increasing and reached 100% in 2007.
HIV associated TB is gaining ground. Similarly, Multi Drug-Resistant TB (MDR-TB) is beginning to appear in many parts of the region. This has further added to the burden of TB control. Control of MDR-TB requires further and larger investment of resources for treatment of MDR-TB which requires special infrastructure for diagnosis, longer duration to treat and the drugs for which are comparatively more toxic. The Governments of the SAARC Member States are showing strong political commitment by making available important resources from their own funds or mobilizing the funds through other resources.

Since its inception in 1992, STAC has taken up the challenges of combating the threats of Tuberculosis and HIV/AIDS in the SAARC region, being the coordinating Centre for National Tuberculosis Control Programmes (NTPs) and National HIV/AIDS Control Programmes (NACPs) in the SAARC Member States.

The Centre has developed regional strategies pertaining to TB/HIV co-infection & HIV/AIDS, Its Vision Document, Advocacy, Communication & Social Mobilization Strategy (ACSM) and SAARC Regional Strategy on TB Control/Elimination. The STAC also organizes trainings, workshops, meetings, seminars, conferences, advocacy & awareness campaign for prevention & control of TB & HIV/AIDS, conducts research on TB & HIV/AIDS, publishes technical documents like peer reviewed SAARC Journal, disseminates the regional epidemiological information at regional and global level, supports NTPs & NACPs of Member States in review and evaluation of their programmes. The Centre is also a collaborating Centre of World Health Organization (WHO). In collaboration with UNAIDS, strategy for the control of HIV/AIDS in the region has been developed and is under implementation. Strategy for TB/HIV Co-infection developed in collaboration with Health Canada is also under implementation.

Our experience revealed that the SAARC Goodwill Ambassador Programmes have been very effective for generating Advocacy & Awareness relating to HIV/AIDS in the region. This year, SAARC has decided to confer the honorary title of SAARC Goodwill Ambassadors to Ms. Runa Laila, Bangladesh, Shri Ajay Devgan, India, and Ms. Sharmeen Obaid-Chinoy Pakistan.

Finally, I would call for a massive social mobilization effort where professionals, social sectors, NGOs, media, community and the individual must work together to make DOTS accessible, acceptable and affordable to all those who need it to make the SAARC region free from its curse. Let us join hand to hand to fight against TB and recognize the efforts of unsung heroes and heroines who make the DOTS successful. Together, let us join forces to Stop TB in our lifetime.

Kathmandu, Nepal

Dr. Kashi Kant Jha
Director
Message from Director of
Stop TB Partnership, Afghanistan

We all know that TB is curable but still TB is one of the top 3 major causes of death among women ages 15-44 worldwide. Afghanistan is the country where ratio of women is more than men suffering with this disease. The death of a mother leaves her children vulnerable to many suffering including even premature death. Women with TB are twice as likely to give birth to a premature or low birth weight baby and four times as likely to die during childbirth. How many children in Afghanistan are orphans because one of their parents (most likely a mother) died of TB? We know a motherless child is likely to die very young.

Afghanistan is one of the 22 high TB disease burden countries. Due to various reasons Afghanistan is donor dependant. Many partner and donors are assisting in TB care and control efforts. In the presence of many donors and partners there is tendency of duplication of efforts and overlapping of activities. Also for a country like Afghanistan, having sustainable tuberculosis control activities and reaching goals and objectives of Global Stop TB Partnership can only be achieved effectively through multi-sectoral approach. Realising these facts and to mitigate these risks WHO in consultation with MoPH took an initiative and brought all partners at one forum that is “Afghanistan Stop TB Partnership”. The mission of this partnership is elimination of TB as a public health problem and, ultimately making Afghanistan free of TB. The forum includes representatives from NTP/MoPH; from WHO; from donors; from the academe; from the business sector; from communities including religious leaders; and selected Basic Package of Health Services (BPHS) partners. Also there are adhoc members – Afghanis residing outside the country. WHO has been performing key role by facilitating and hosting the secretariat of this partnership. Partnership at national level was officially launched in 2009 and till date there are three sub-national stop TB partnerships established in Herat, Kandahar and Mazar-e-Sharif province.

Under the umbrella of partnership, Afghan TB Patient’s Association was established. At present 350 members, all treated TB patients, are working in their communities to make their communities TB free...
Being women and as a chair of stop TB partnership, it is my responsibility to advocate and bring more women in the partnership.

Still a lot to be done like;

• We have to help families understand that TB in the family member, if untreated, could be putting their other family members including children’s lives in danger.

• All children who are at risk for TB but are not ill with the disease should receive preventive treatment with the drug named Isonizid.

• Health workers who are providing medical care to pregnant women and children need to check all their patients for TB risks, signs and symptoms and refer them for TB prevention measures or TB treatment as needed.

• All pregnant women should be examined for signs and symptoms of TB and provided with proper care if required.

• At every visit, children who are malnourished should be checked for TB signs and symptoms.

• Making TB prevention and care an integral part of prevention of mother-to-child transmission, prenatal care, family planning, and immunization services will prevent thousands of unnecessary deaths in Afghanistan.

Dr Sima Samar
Director of Stop TB Partnership
Islamic Republic of Afghanistan
Message

Since the inception of DOTS strategy in 1993 NTP, Bangladesh has achieved a commendable success in Tuberculosis (TB) control. However, TB is still remaining as a major public health problem in Bangladesh with high morbidity and mortality. We are very much thankful to SAARC Tuberculosis and HIV/AIDS Centre (STAC) for supporting TB control in Bangladesh along with other SAARC Member countries. The Centre has been regularly observing World TB Day and also "SAARC TB Day" each year on 24 March to commemorate Dr. Robert Koch's discovery in 1882 of Mycobacterium tuberculosis.

The theme of the world TB day 2013 is "stop TB in my life time" (Stopo Janho Jokhake Rububbo). This theme has been chosen in 2012 for two consecutive years. TB cannot be fought alone. Everyone can play a role for stopping TB. This theme actually underlines the fact.

I am very glad to know that STAC is going to publish a document titled "World TB Day Special" on this occasion and I would like to congratulate STAC for such initiative. I hope this document will be a source of inspiration for all those fighting against TB.

Finally, I would like to convey my sincere thanks to Director, STAC for publishing "World TB Day Special".

Dr. Md. Ashraful Haque
The National TB Center (NTC) takes pleasure to publish Annual Report 2066/2069 (2011/2012) of the NTP on the occasion of the World TB Day, March 24th, 2013. The aim of this report is to analyze critically progress made by the programme at all levels and at the same time find out the possible weaknesses so that can be overcome in future in programme implementation.

National TB Programme of Nepal has made exemplary progress since adoption of DOTS strategy in 1996. However, tuberculosis still remains a major public health problem in Nepal. National TB Programme is priority one programme of Ministry of Health & Population however; greater commitment by Government is needed to fight TB. Similarly, greater commitment by donors is also required to finance the new STOP TB Strategy which has been adopted by the Ministry of Health & Population in order to provide more comprehensive TB control measures.

Directly Observed Treatment Short course (DOTS) based services are available through 1345 treatment centers, 3610 sub-treatment centers in the country, while 539 microscopy centers are providing TB diagnostic services. NTP has consistently achieved both global targets for TB control including 75% case detection and nearly 90% treatment success rates. DOTS plus programme for treatment of Drug Resistance TB (DR TB) started in September 2006 with approval from Green Light Committee (GLC) of WHO. By July 2012, 2521 DR TB cases have been registered for treatment through 14 treatment centers and 65 sub-centres. NTP has also started treatment to Extensively Drug Resistant TB (XDR) cases since 2010 with 46 registered cases till the date. Practical Approach to Lung Health (PAL) has been piloted, gradually expanded to 14 districts and will be implemented to remaining districts in phase-wise manner.

This report is an outcome of the various activities carried throughout the country. The recording, reporting and verification of NTP data is done at the Treatment Centers and detailed statistical analysis of NTP indicators and issues, then presented and discussed during planning and review meeting at various level (District, Regional, National). NTP Annual Report also documents the salient contributions of National TB Programme partners and their inputs which have been instrumental in achieving the goal and targets of this successful programme. This report also serves as a working tool for health workers at all levels and provides good reference of National and International scientific committees, students and partners of Nepal NTP. This report is the product of the hard work of the entire health workforce involved in the NTP.

Furthermore, NTP is categorically focusing efficient resource mobilization and coordination among partners to detect and cure missing TB cases as per its strategic plan in the years to come.

I would like to extend my sincere appreciation and thanks to all partners; WHO, GFATM, DHI, SABRE, TB/HIV & AIDS Center, BRATM, PAMTA, HERD, KISACO, KIF, JANTRA, NATA_GENET, NAYA GORETO, NRH, Medical colleges, Private health care providers, Community volunteers, DOTS Committee, Health Facility Management Committee individuals and Community peoples whose efforts and contributions have made Nepal Tuberculosis Control Programme a successful model.

Finally, I appreciate the hard work and dedication of my team members at NTC and WHO in preparation of this Annual Report.

March 2013

Dr. Rajendra Pant
Director
National TB Center
Message by National Manager
National TB Control Program, Pakistan

There is no excuse that people are dying of a disease around the globe which is curable. Even though, controlling TB has become a huge challenge for the whole world. TB prevention and control activities have become more complex and demanding with the emergence of multi drug-resistant (MDR) TB and co-infection of TB and HIV / AIDS. People living with HIV are more vulnerable to the TB - one epidemic supporting the other. Yet, TB is curable even for people living with HIV/AIDS.

We strongly believe that better health leads to improved quality of life and poverty reduction. The epidemic takes its toll mostly on people in their productive age, resulting in adverse effects on country’s socio-economic situation. Eradicating TB would mean eradicating poverty.

Pakistan is adopting new tools that are accurate, authentic and WHO-endorsed. We are committed to improve the TB diagnostic and treatment services in the country. Setting up more than 6000 free of cost TB diagnostic & treatment facilities through primary health system ensuring 100% DOTS coverage and conducting the TB prevalence survey in a record time are few of our humble efforts to achieve the Millennium Development Goals.

With an ambition to completely wipe out TB from the country we have ensured provision of enhanced treatment facilities for MDR TB patients, counseling and treatment for TB-HIV patients, establishment of new BSL-III laboratories and strengthening surveillance mechanism.

On this World TB Day the whole SAARC region should raise their voices for a faster treatment, a quick, cheap, low-tech test and an effective vaccine to achieve the goal of ZERO TB deaths and a world free of TB.

Dr. Ejaz Qadeer
National Manager
National TB Control Program
Islamabad
The National Programme for Tuberculosis Control and Chest Diseases (NPTCCD) is the key stakeholder in Tuberculosis control activities in Sri Lanka. As the name denotes, it is responsible for control of chest diseases as well, in the fact that well control of the respiratory diseases in a community is a major stay for successful control of TB.

The TB control activities in Sri Lanka moved in to new dimensions with the implementation of DOTS strategy in the last decade of twentieth century, improving treatment outcome and reducing defaulter rate. To reinforce DOTS and improve quality of the respiratory health care in the country, the naive initiative of the WHO, Practical Approach to Lung Health (PAL), is being piloted currently. Further, a new death notification system was introduced recently, which threw light in to some opaque areas in TB control activities.

Despite these new developments, it is observed with the dawn of the twenty first century, that new challenges are appearing in the horizon to play their role to humiliate TB control activities in Sri Lanka. Emerging MDR-TB issue, the issue of post war immigrants from southern India to Northern Sri Lanka, identified high risk populations as Prisoners’ community, Muslim community, and people living in urban slums are some of the new challenges and constraints faced by the NPTCCD.

To overcome these obstacles, multisector collaboration and multi disciplinary approach is a vital necessity. In this context, it is contemporary to share new knowledge, experiences and strategies among stakeholders for TB control worldwide.

Paving the way for this intermingle, SAARC TB and HIV/AIDS Centre has brought TB control activities of the SAARC membership countries under one roof.

This opening could be strengthened further by organizing region specific events regarding TB control in the SAARC region. The SAARC TB and HIV/AIDS Centre realizing the importance of this, has decided to commemorate SAARC TB Day along with World TB Day. The decision to launch “World TB Day Special”, to be contemporary with the new knowledge, is a valuable and timely requirement fulfilled.

I congratulate SAARC TB and HIV/AIDS Centre for pioneering this work and I sincerely hope that this will be a stimulus for personnel who are involved in TB control activities in the SAARC region.
WORLD TB DAY & SAARC TB DAY

PRESS RELEASE

World TB Day & SAARC TB Day falling on March 24 each year is designed to build advocacy to policy makers and to create public awareness that tuberculosis today remains an epidemic in most of the world. It commemorates the day in 1882, when Dr Robert Koch astounded the scientific community by announcing that he had discovered the cause of tuberculosis, the TB bacillus. Dr. Robert Koch's discovery opened the way towards diagnosing and curing TB.

The National TB Control Programmes of SAARC Member States and SAARC TB and HIV/AIDS Centre (STAC) on this occasion are commemorating the World TB Day along with SAARC TB Day. His Excellency the Secretary-General, SAARC has kindly issued his valuable Message on this occasion reflecting his commitment to call upon national authorities and development partners to strengthen TB prevention and control initiatives.

Stop TB in My Lifetime: In 2013 we enter the second year of the two-year "Stop TB in my lifetime" World TB Day campaign. At a time when partners are calling for zero TB deaths, Universal access to TB care, faster treatment, a quick, cheap, low-tech test, an effective vaccine, a world free of TB, we need to make stronger commitment and more efforts to stop deaths from TB. TB is airborne and can kill - every day 4000 people globally.

SAARC Tuberculosis Centre (STC) was established in 1992. The Centre had been supporting the National TB Control Programmes of the SAARC Member States. The 31st session of Standing Committee of SAARC held in Dhaka, Bangladesh in 2005, appreciating the efforts of the centre on TB/HIV Co-infection and other works related to HIV/AIDS discipline approved the renaming of the Centre as "SAARC Tuberculosis & HIV/AIDS Centre (STAC)". The Centre, with its efforts and its effective networking has been recognized by the Member States as a Centre contributing significantly for TB & HIV/AIDS Control.

The STAC coordinates the efforts of the National Tuberculosis Control Programmes (NTPs) & National AIDS Control Programmes (NACPs) of
SAARC Member States. The Centre has developed regional strategies pertaining to TB/HIV co-infection & HIV/AIDS, its Vision Document, Advocacy, Communication & Social Mobilization Strategy (ACSM), SAARC Regional strategy on TB Control/Elimination & coordinates for endorsement & subsequent implementation, organizes trainings, workshops, seminars, meetings, conferences & conducts research on TB & HIV/AIDS, publishes documents, disseminates the information, support NTPs & NACPs of Member States in review and evaluation of their programmes on request & carry out any additional activities identified by National Programmes & the Governing Board of STAC.

The SAARC Regional TB Reference Laboratory (STRL) has been established to coordinate the National TB Reference Laboratories in the Region in the area of quality assurance of sputum microscopy, culture & drug susceptibility testing (DST), surveillance of drug resistance, TB/HIV co-infection and laboratory Bio-safety. In addition, the STAC has established regional network of National TB Reference Laboratories in SAARC Region. Panel testing is one of the three components for external quality assessment (EQA) or proficiency testing. STRL has completed the ninth round of proficiency testing so far & tenth round is under process. The performance shown by all the ten NTRLs throughout the ninth rounds of proficiency testing are highly appreciable. Designation of SAARC Regional TB Reference Laboratory (STRL) to SAARC Regional Supra Reference Laboratory for TB and HIV/AIDS is approved by all Member States and is under upgradation. STRL is already accredited by Gautin Laboratory Germany.

SAARC Goodwill Ambassador Programmes have been very effective for generating Advocacy & Awareness relating to HIV/AIDS in the region. Ms. Shabana Azmi, Goodwill Ambassador during her tenure did tremendous advocacy & awareness in Nepal & Bhutan. This year, Ms. Runa Laila, Bangladesh, Shri Ajay Devgan, India, Ms. Sharmeen Obaid-Chinoy Pakistan have been selected Goodwill Ambassadors for Advocacy & Awareness in SAARC Member States.

Tuberculosis is one of the major public health problems in the SAARC. The SAARC region accounts for 33% of the Global TB burden with nearly 2.87 million of new TB cases of which about 1.2 million are estimated to be sputum smear positive infectious cases and capable to spread the disease to others. More than 75% of these cases and deaths occur among 15-54 years age group, economically the most productive age group. As a result
the social and economic losses due to TB are huge.

In SAARC Region, a remarkable progress has been made for DOTS since its inception in 1993. By 1997 all Member States started DOTS strategy for TB control. DOTS coverage within SAARC region has steadily increased since 2000. Population coverage in 1997 was 11%, since then it has been increasing and since 2007 it is 100%.

HIV associated TB is gaining ground. Similarly, Multi Drug-Resistant TB (MDR-TB) is beginning to appear in many parts of the region. This has further added to the burden of TB control. Control of MDR-TB requires further and larger investment of resources for treatment of MDR-TB which requires special infrastructure for diagnosis, longer duration to treat and the drugs for which are comparatively more toxic. The Governments of the SAARC Member States are showing strong political commitment by making available important resources from their own funds or mobilizing the funds through other resources for addressing these problems.

For details please visit our Website: www.saarctb.org

Dr. Kashi Kant Jha
Director
SAARC Tuberculosis & HIV/AIDS Centre
Thimi, Bhaktapur
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South Asian Association for Regional Cooperation (SAARC)

The South Asian Association for Regional Cooperation (SAARC) comprises of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, it was established on 8 December 1985. SAARC is a manifestation of the determination of the people of South Asia to work together towards finding solutions to their common problems in a spirit of friendship, trust and understanding and to create an order based on mutual respect, equity and shared benefits.

The SAARC Secretariat is supported by different regional centers established in Member States to promote regional cooperation. Among them, SAARC TB and HIV/AIDS Centre is one of the regional centers which is located in Nepal.

SAARC TB and HIV/AIDS Centre

SAARC TB and HIV/AIDS Centre (STAC) is one of the Regional Centre of SAARC. The Centre was established in 1992 to work for control and prevention of Tuberculosis in the Region. Considering the role played by the centre through its activities on TB/HIV co-infection, the centre was renamed as SAARC Tuberculosis and HIV/AIDS Centre in 2005. The Centre is also a WHO collaborating centre for TB, TB/HIV, research and training. The Centre has developed its networks between the Member States in different aspects of TB and HIV/AIDS control. The Centre coordinates with the NTPs and NACPs of Members States for implementation of Regional Strategies. It also supports in sharing of experiences of new findings in coordinated manner. Human resource development is taken as one of the major task of the Centre, so that the Centre is supporting the Member States in the field of skill development and upgrading of the knowledge & capacity of the staff working in National TB and HIV/AIDS control programmes.
History of STAC: Milestones

- **1984** Suggested to formulate a specific proposal to establish SAARC TB Centre in Nepal
- **1990** The Technical Committee of SAARC held in Colombo considered the proposal
- **1990** The Heads of State or Government of Member State of SAARC decided that SAARC Tuberculosis Centre would be setup in Nepal
- **1992** The Centre established to work for control and prevention of Tuberculosis in the Region
- **1994** The Centre came into existence and started functioning
- **2000** The Centre and WHO/SEARO signed a MoU to work collectively for TB & HIV/AIDS
- **2005** The Centre was renamed as SAARC TB and HIV/AIDS Centre with additional mandate to work for HIV/AIDS also
- **2010** SAARC Supranational Reference Laboratory for TB and HIV/AIDS
- **2011** The Centre shifted into the new building provided by the Government of Nepal
Major Activities of the Centre

✓ Human Resource Development for the control & prevention of TB and HIV/AIDS in the Region
✓ Development of SAARC Regional Strategies & Implementation
✓ STAC as WHO Collaborating Centre for TB and HIV/AIDS in SAARC
✓ SAARC Regional Reference Laboratory of TB & HIV/AIDS with its network in the Region
✓ Collaboration with UN agencies and INGOs
✓ SAARC Regional Resource Centre for TB and HIV/AIDS
✓ Establish network with experts/specialists, linkage network with institutions related to TB and HIV/AIDS
✓ Provide platform for sharing of experiences, knowledge and new findings through meetings, workshops, conferences etc.
✓ Conduct research and studies in important aspects of TB and HIV/AIDS
✓ Advocacy and Awareness programme through Partnership with different stakeholders on the occasion of World TB Day, World AIDS Day and SAARC Charter Day
✓ SAARC Goodwill Ambassadors’ Programmes
✓ SAARC Prizes on TB and HIV/AIDS

Programmes with SAARC Goodwill Ambassadors for HIV/AIDS

Under the SAARC Regional Strategy on HIV/AIDS Ms. Shabana Azmi, internationally acclaimed Indian Cine Star and Mr. Sanath Jayasuriya, internationally acclaimed Srilankan batsman were nominated as SAARC Goodwill Ambassadors for the programme “Uniting for HIV/AIDS.

- Ms. Shabana Azmi visited Nepal in 2009 and participated in different activities, such as Press Conference, interaction with high level dignitaries etc.
- She also visited Bhutan in 2010 and performed different activities such as participation in STAC’s programme in Thimphu, interaction with high level dignitaries.
New SAARC Goodwill Ambassadors for HIV/AIDS

After completion of the tenure of previous ambassadors, new ambassadors have been selected.

Ms. Runa Laila, Bangladesh
Shri Ajay Devgan, India
Ms. Sharmeen Obaid-Chinoy, Pakistan
General Information on Tuberculosis

Discovery of Tuberculosis

Robert Koch (1843-1910)
The eminent German Scientist discovered Mycobacterium tuberculosis in 1882 AD

“If we are continually guided in this enterprise by the spirit of genuine preventive medical science; if we utilize the experience gained in conflict with other pestilence, and aim with clear recognition of the purpose and resolute avoidance of wrong roads- at striking the evil at its roots, then the battle against tuberculosis cannot fail to have a victorious issue” – Robert Koch - The Fight against Tuberculosis 1902.
World TB Day

When Dr. Robert Koch announced his discovery of the TB bacillus on 24 March 1882, 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 landmark discovery, many great technological developments like invention of many anti-TB drugs. Implementation of principles of National TB Control Programme as well as DOTS has taken place. However, TB is still the number one killer along infectious disease and has claimed the lives of at least 200 million people since 1882. Millions more add to that total each year.

We commemorate the World TB Day on 24 March every year, all over the world in memory of the landmark discovery of TB Bacillus. This also provides us an opportunity of advocacy for mobilizing support from policy markers National and International organizations, women groups and community at large, in order to implement National TB Control Programmes successfully.

SAARC TB Day

In compliance with the decision of the sixth meeting of the Governing Board of STAC held on 7-8 January 1997, STAC has been observing “SAARC TB Day” along with “World TB Day” each year on 24 March.

Stop TB in My Lifetime

2013 is the second year of a two-year campaign for World TB Day, with the slogan “Stop TB in My Lifetime”. WHO and the Stop TB Partnership hosted at WHO, are together promoting World TB Day. World TB Day provides the opportunity for affected persons and the communities in which they live, civil society organizations, health-care providers, and other partners to discuss and plan further collaboration to fulfill the promise of stopping TB in our lifetimes through advocacy and action.
Themes of World TB Day

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<tr>
<th>Year</th>
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<tr>
<td>1997</td>
<td>DOTS-the only way to fight TB</td>
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<td>1998</td>
<td>STOP TB Use DOTS</td>
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<td>1999</td>
<td>STOP TB Use DOTS</td>
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<td>Forging new Partnership to Stop TB</td>
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<td>2004</td>
<td>Stop TB now-Every Breath Counts</td>
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<td>2005</td>
<td>Front line TB Care Providers: heroes in the fight Against TB</td>
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<td>2006</td>
<td>Actions for life towards a world free of tuberculosis</td>
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<td>2007</td>
<td>TB Anywhere is TB Everywhere</td>
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<td>2008</td>
<td>I Am Stopping TB</td>
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<td>2009</td>
<td>I Am Stopping TB</td>
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<td>2010</td>
<td>On the move against Tuberculosis: Innovate to accelerate action</td>
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<td>2011</td>
<td>ON THE MOVE AGAINST TUBERCULOSIS: Transforming the fight towards elimination</td>
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<tr>
<td>2012</td>
<td>Stop TB in my life time</td>
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<tr>
<td>2013</td>
<td>Stop TB in my life time</td>
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History of Tuberculosis

TB is a killer disease, has probably been recognized since the Stone Age. Traces of tuberculosis lesion have been found in the lungs of 3000 year old Egyptian mummies. The Greek physician Hippocrates (450-370 BC) – “the father of medicine” wrote a description of the disease.

The name tuberculosis appears to have been first used in 1839 by Johann Schonlein. In Classic Greek times it was known as phthisis. From the verb phthinein meaning, to waste away. Till the present Century, it was commonly called “consumption” – for the same reason. But it was in the 17th century that a Dutchman, Franciscus Silvius of Leyden, first used the term “tubercle” to describe the knobby lesions found in the lungs of people who had died of the wasting disease.
What is Tuberculosis?

Tuberculosis is an infectious disease caused by a bacteria called *Mycobacterium tuberculosis*.

**TB Bacillus**

Dr. Robert Koch identified *Mycobacterium Tuberculosis* “Etiology of Tuberculosis” by isolating the TB Bacillus which is a rod shaped germ.

**Organs affected by TB**

TB affects mainly lungs. It is reported that 80% of the TB cases are pulmonary TB. But it also affects the gland, abdomen, intestine, bone & Joint, skin, brain and other organs.

**How does TB spread?**

TB spread from infected TB patient to other person by coughing sneezing, spitting or talking. It is an airborne disease.
## Symptoms of Pulmonary TB

Cough more than 2 weeks, evening rise of temperature, loss of weight/loss of appetite, blood stained sputum, chest pain, shortness of breath are main symptoms suggestive of TB. A person who has these symptoms may have Tuberculosis.

## Who is vulnerable to TB?

Individuals who are at high risk of contracting and developing the disease because of their exposure to a patient with TB include:

- Family and close contacts of TB patients
- The elderly
- People with low income and poor access to health care
- People who inject illicit drugs
- People who live or work in certain setting, such as nursing homes, hospitals, prisons, shelters for the homeless or drugs treatment centres
- People who may be exposed to TB on the job such as health care workers
- People living with HIV infection
- Alcoholism, Malnutrition
- Poorly controlled Diabetes Mellitus (DM)
- Chronic lung diseases such as chronic bronchitis and silicosis
- Heavy smokers
- Cancers and steroid therapy
How TB can be prevented?

1. **Early diagnosis and treatment:** TB should be treated early in order to prevent deterioration of the disease and spread of the infection. Patients with active pulmonary tuberculosis can attend any DOTS centre for treatment.

2. **Examination of close contacts:** The close contacts of TB patients, usually the household contacts, should be examined. This includes tuberculin skin testing and/or chest x-ray examination for young children and chest x-ray examination for older children and adults.

3. **Proper disposal of sputum & related products**

4. **Leading a healthy lifestyle:** The germs attack the lungs when a person’s body resistance is reduced. So try to guard yourself by leading a healthy lifestyle in order to minimize the chance of contracting the illness. This includes:
   - adequate exercise
   - enough rest and sleep
   - balanced diet
   - avoidance of smoking and alcohol
   - breathing fresh air and maintaining good indoor ventilation
   - good personal hygiene (e.g., avoid coughing, spitting and sneezing directly at other persons)

5. **BCG (Bacille Calmette-Guerin) vaccination:** BCG vaccination to all newborn babies to protect them against tuberculosis.
In mid 1980 the arrival of HIV (the virus that leads to AIDS) supported TB to comeback in the industrialized countries while TB was a major health problem in the developing countries. **Today the co-epidemic of TB and HIV is a major problem in the world. HIV increases the risk of getting TB 30 to 50 times.** At the local level, AIDS and TB programme must collaborate with each other in the areas of surveillance and provision of care involving families, communities and local health services. At the national and international level, this collaboration would also include coordinated planning, pooling of resources for HIV/AIDS and TB Care, joint training as well as for the public information and education programmes. TB is now the most important, life threatening opportunistic infection associated with HIV infection.

**TB and HIV/AIDS**

- One third of the world’s population has already been infected with TB. If these individuals contract HIV infection, it dramatically shortens their lives by causing and active case of the to erupt from their previously harmless infection.
• For someone who does not have a TB infection but has contracted HIV, exposure to the TB germ can cause active TB disease.
• A healthy person who has been TB infected has less than a 10% lifetime chance of developing tuberculosis. An HIV infected person who is also infected with TB has up to 10% chance each year of developing a case of TB.
• The only protection for the community is a fast complete cure for TB patients.
• TB accounts for at least one third of AIDS deaths worldwide and 40% of deaths in Asia.
• A parallel epidemic of TB is following the AIDS pandemic. This is already occurring in many developing countries, particularly in sub-Saharan Africa and Asia.

**MDR-TB**

**What is MDR TB and how it is produced?**

Multi-drug Resistant (MDR) bacilli are the *Mycobacterium tuberculosis* bacilli which are resistant to more than one anti-tuberculosis drug, specially the two main drugs –Isoniazid and Rifampicin. MDR is currently the most severe form of bacterial resistance. MDR-TB is entirely a man made phenomenon. Drug resistant bacilli are the consequence of human error of prescription of inadequate chemotherapy, poor management of drug supply, the use of drugs of unproven bioavailability, poor case management and non compliance of treatment.

**How to prevent MDR-TB?**

MDR is a potential obstacle to the successful treatment of TB. Where ever MDR is common; it shows the poor performance of TB control programme. Treatment failure rates are high in MDR endemic areas. The resistance level in a given population can be reduced by the implementation of sound TB control policies and DOTS.

TB disease caused by an infection of non-MDR organisms can be cured by 6-8 months of regular treatment. But if a person is infected due to MDR-TB, it becomes difficult to cure. It is said that MDR –TB is 100 times more expensive to cure in comparison to non-resistant one. Some specialized drugs are available to treat MDR-TB but these are very expensive and toxic. The DOTS is the best way to prevent MDR-TB.
What is XDR-TB?

XDR-TB, an abbreviation for extensively drug-resistant tuberculosis, is a form of TB which is resistant to at least four of the core anti-TB drugs. XDR-TB involves resistance to the two most powerful anti-TB drugs, isoniazid and rifampicin, also known as multidrug-resistance (MDR-TB), in addition to resistance to any of the fluoroquinolones (such as ofloxacin or moxifloxacin) and to at least one of three injectable second-line drugs (amikacin, capreomycin or kanamycin). MDR-TB and XDR-TB both take substantially longer to treat than ordinary (drug-susceptible) TB, and require the use of second-line anti-TB drugs, which are more expensive and have more side-effects than the first-line drugs used for drug-susceptible TB.

How do people get XDR-TB?

People may get XDR-TB in one of two ways. It may develop in a patient who is receiving treatment for active TB, when anti-TB drugs are misused or mismanaged, and is usually a sign of inadequate clinical care or drug management. It can happen when patients are not properly supported to complete their full course of treatment; when health-care providers prescribe the wrong treatment, or the wrong dose, or for too short a period of time; when the supply of drugs to the clinics dispensing drugs is erratic; or when the drugs are of poor quality.

How TB can be detected?

Sputum Microscopy & Culture

Pulmonary TB can be detected by sputum slide examination under Microscope and culture. Chest X-ray also helps in detection of TB of the lungs. At present bacteriological 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 has much less inter-observer variability. It is much more reliable and specific. It also provides information regarding bacteriological status of patients that help us to treat them on a priority basis. It is also used for follow up examinations to judge the progress of patients during the course of treatment.
Gene Xpert

The Gene Xpert is a new diagnostic test for tuberculosis. It can find out if a person is infected with TB, and also if the TB bacterium of the person has resistance to one of the common TB drugs, rifampicin.

The four-cartridge Gene Xpert

Contrary to the tests that exist at the moment, it works on a molecular level to identify *mycobacterium tuberculosis*. This means that it does not use microscopy but a kind of chemical test to look for the TB bacterium. The GeneXpert is a small machine, about the size of a microwave oven, that can fit easily on a small table. It has been developed in the United States by a company called Cepheid and an organization called the Foundation for Innovative New Diagnostics (FIND), supported by the American National Institutes of Health. The test is also called the Xpert MTB/RIF (for mycobacterium tuberculosis and rifampicin). This machine is used in SAARC Member States for prompt service in TB control programmes.

How it works

The Gene Xpert is a machine that can detect *mycobacterium tuberculosis* in a sample of sputum. A person suspected of having TB needs to give a sputum sample. From the tube, the sample is fed into the machine, and then biochemical reactions are started to see if the sample contains the TB bacterium. The machine looks for the DNA specific to the TB bacterium. If there are TB bacteria in the sample, the machine will detect their DNA and automatically multiply it. This technique is called PCR (polymerase chain reaction), and allows the machine to also look at the structure of the genes. This is important to detect if a TB bacterium has developed resistance to drugs. The DNA of the TB bacterium is, in a way, like a long string of different colours. If one or more of the colours change (if there is a mutation in the DNA), then the bacterium can become resistant to certain TB drugs. The Gene Xpert can test for resistance to one of the most common TB drugs, rifampicin. This means that it can tell us two things: first, whether or not a person has TB, and second, whether or not the TB that the person has can be treated with rifampicin. The test is very quick and only takes about two hours – much faster than the other TB tests, which usually take at least a few days.
The Gene Xpert comes in various sizes. The smallest machine has capacity for four cartridges (in other words four tests can be run at a time). The largest has capacity for 100 cartridges.

**Tuberculin Test**

Dr. Robert Koch also used extract of TB bacilli for detection of TB. This test is known as Tuberculin Test. Its use is limited to detect TB in children below 5 years.

**X-ray**

Wilhelm Conrad Roentgen discovered X-ray in 1895. X-ray made possible to visualize the chest shadow caused by tubercular lesion but it needs the eye of experts to find out the valuable results.

**Give BCG Vaccine at Birth**

Two French scientists Albert Calmette and Camille Guerin developed a vaccine against tuberculosis from an attenuated form of the bovine bacillus in 1921. BCG stands for Bacillus-Calmette-Guerin. It is the only vaccine we have for the prevention of TB. It should be given to child at birth. BCG protects children from tuberculosis like menigial or milliary TB.

**Treatment of TB**

**How is TB disease treated?**

Tuberculosis is 100% treatable and curable disease. 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 disease relapses with drug resistance, which is dangerous to patient and difficult to cure.

The First Anti-TB Drug

Selman A Waksman and his colleagues, working in the USA discovered streptomycin, the first effective antibiotic drug against tuberculosis in 1944.

Anti-TB Drugs

- Isoniazid (INH)
- Rifampicin (RFP)
- Pyrazinamide (PZA)
- Streptomycin (SM)
- Ethambutol (EB)
- Thioacetazone (TH)
- Kanamycin (Km)
- Levofoxacin (Levo)
- Ethionamide (Eto)
- Cycloserine (Cs)
- Pyrazinamide (PZA)

National TB Control Programme

The programme run by governmental and non governmental institutions for control of TB is called National TB Control Programme (NTP). All SAARC member countries have NTP. The main diagnosis facilities, sputum examination by microscopy and all necessary drugs are made available at free of cost for full course of treatment to the patients under these programmes.

Chemotherapy

The Short Course Chemotherapy (SCC) is the most effective way of curing every infectious patient and preventing the spread of tuberculosis in the community. Cure is easily achieved through the use of these medicines, if these are taken as per advice of treating physician.
DOTS

DOTS is an abbreviation of Directly Observed Treatment Short-course, which is a new strategy to control TB by giving drugs to patients under direct observation of health workers. DOTS has been found to be 100% effective in curing TB and in preventing multi-drug resistance. Only DOTS ensures the cure of diagnosed TB patients. It can also prevent relapse and death. Effective treatment of TB can prolong the survival of patients with AIDS. Through the general health services it can be used widely. The global targets for TB control are to cure 85% of new sputum smear-positive cases and to detect 70% of such cases. DOTS strategy has achieved these results on a programme basis in our region.

The 5 components of DOTS

- Political commitment
- Diagnosis by microscopy
- Adequate supply of SCC drugs
- Directly observed treatment
- Accountability

Millennium Development Goals (MDGs) set for 2015

The recently recommended approach of the World Health Organization to TB care and control is the Stop TB Strategy, launched in 2006. This strategy was linked to new global targets for reductions in TB cases and deaths that were set for 2015 as part of the Millennium Development Goals (MDGs) and by the Stop TB Partnership.

The targets are that TB incidence should be falling by 2015 (MDG Target 6.c) and that prevalence and death rates should be halved compared with their levels in 1990. The outcome targets – to achieve a case detection rate of new smear-positive cases of at least 70% and to reach a treatment success rate of at least 85% for such cases – were first established by the WHA in 1991. Within the MDG
framework, these indicators were defined as the proportion of cases detected and cured under DOTS.

The ultimate goal of eliminating TB, defined as the occurrence of less than 1 case per million populations per year by 2050, was set by the Stop TB Partnership. The TB Control Programmes focuses on the five principal indicators that are used to measure the impact and outcomes of TB control: incidence, prevalence and deaths (impact indicators) and case detection and treatment success rates (outcome indicators).

MILLENNIUM DEVELOPMENT GOALS (MDGs) SET FOR 2015

GOAL 6: COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES

Target 6.c: Halt and begin to reverse the incidence of malaria and other major Diseases.

Indicator 6.9: Incidence, prevalence and death rates associated with TB
Indicator 6.10: Proportion of TB cases detected and cured under DOTS

STOP TB PARTNERSHIP TARGETS, SET FOR 2015 AND 2050

By 2015: Reduce prevalence and death rates by 50%, compared with their levels in 1990.

By 2050: Reduce the global incidence of active TB cases to <1 case per 1 million population per year.

National Tuberculosis Control Programmes in SAARC Member Countries

Tuberculosis is the number one killer of adults in countries of SAARC. Furthermore, TB control programme is becoming complicated due to spread of HIV/AIDS, uncontrolled urbanization, overcrowding, poverty, malnutrition and illiteracy. Simultaneously, TB control programme is expected to be seriously disadvantaged through the spread of multi-drug resistance, which may rise rapidly, if appropriate measures are not initiated urgently.
The SAARC countries have adopted DOTS to fight against TB. All member countries are implementing DOTS. As per information received from the member countries, the areas of DOTS are expanding year by year to cover more and more population under the National TB Control Programme. It is not only successful in curing tuberculosis but also one of the most cost-effective interventions in the public health programme presently available in the world.

**Burden of Tuberculosis in SAARC Region**

The SAARC region, with an estimated annual incidence of 2.87 million TB cases, carries 33% of the global burden of TB incidence. Four of the eight Member Countries in the Region are among the 22 high burden countries, with India accounting for 23% of the world’s TB cases. Among 2.8 million incident TB cases, 1.2 million are estimated to be sputum smear positive infectious cases.

**Progress in TB Control**

A total 2,022,883 cases (all types) were notified in 2011 in the SAARC Region, of which 43.5% were new sputum smear positive cases. The case detection rate for new smear positive is 72% in 2011 for SAARC Region. Overall case detection rate in the Region in 2011 for all types of TB cases is 70%. There is remarkable progress in DOTS coverage which has reached 100% in 2007. Regarding treatment success, the target is achieved since 2001. In 2011 case detection rate of NSP reached 72%.

**TB/HIV co-infection**

TB/HIV co-infection poses a critical challenge for the health-sector and for people living with HIV and TB. HIV is the strongest risk factor for developing active TB disease. An HIV positive person is more likely to develop TB disease as compared to an HIV negative person.

In 2011, 1.1 million (13%) of the 8.7 million people who developed TB worldwide were HIV positive; 79% of these HIV-positive TB cases were in the African Region. Globally, there were an estimated 0.4 million HIV-associated TB deaths in 2011, with approximately equal numbers among men and women. Seventy-nine percent TB patients known to be HIV positive were provided with CPT, and 48% were started on ART, similar to levels achieved in
2010. More work remains to be done to ensure that all HIV-positive TB patients are rapidly started on ART, in line with WHO recommendations. And in 2011, 3.2 million people enrolled in HIV care were reported to have been screened for TB, up 39% from 2.3 million in 2010.

Of those without active TB disease, 0.45 million were provided with IPT. The scale-up of collaborative TB/HIV activities saved a total of 1.3 million lives between 2005 and the end of 2011.

WHO recommends, the three ‘I’s for HIV and TB – intensified TB case-finding, isoniazid preventive treatment and TB infection control – to decrease the burden of TB among people with HIV. The SAARC TB & HIV/AIDS Center also includes a fourth ‘I’ in its Regional strategy on TB/HIV Co-infection, it states about the integrated case management including ART & DOTS.

In Afghanistan 6,445 TB patients have known their HIV status in 2011. In Bangladesh 1,900 TB patients have known their HIV status among them 81 were HIV positives. And 69 HIV positive patients were screened for TB. In India, 688,530 TB patients have known their HIV status. In Pakistan 8,322 TB patients have known their HIV status among them 33 were HIV positives while in Sri Lanka 1,832 TB patients have known their HIV status in 2011.
Afghanistan

The National Tuberculosis Control Program (NTP) was established in 1954 by the Ministry of Public Health (MoPH), with technical and financial supports of World Health Organization (WHO). In 1997, NTP in collaboration with WHO and other TB partners adopted the Directly Observed Treatment Short course (DOTS) strategy, implementation beginning only in 2002. In early 2003, the first National Strategic Plan for TB Control 2002-2005 drafted with the global targets of 70% case detection of new sputum smear positive cases and 85% treatment success by 2005 were adopted by the MoPH as the national goals of the 3-year DOTS strategy. Then NTP by help of WHO developed national strategic plan for 2006-2010 and in 2008 it has been extended in line with MDG and Stop TB Partnership strategy by 2013.

The NTP strategy for prevention of tuberculosis is early detection and treatment of all TB cases. TB sputum smear microscopy is the main tool for detection of infectious cases. NTP has been using the 8 months TB treatment regimen till 2012 and has planned to gradually shifting to the 6 months regimen. NTP has also started to engage private sector including private practitioners and private hospital in the TB control program in order to notify the TB cases who are seeking care from private practitioners. NTP has started to address the management of multi-drug resistant TB (MDR-TB) and vulnerable groups such as prisoners, internally displaced persons (IDP) and children.

<table>
<thead>
<tr>
<th>Percentage of Case notification by type of patient (2010)</th>
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<tbody>
<tr>
<td>New pulmonary smear positive</td>
</tr>
<tr>
<td>New pulmonary smear negative</td>
</tr>
<tr>
<td>New Extra pulmonary TB</td>
</tr>
<tr>
<td>Smear positive failure</td>
</tr>
<tr>
<td>Smear positive relapse</td>
</tr>
<tr>
<td>Smear positive returned after default</td>
</tr>
<tr>
<td>Others</td>
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Case detection rate and Treatment success rate for new smear positive cases (2000 – 2011)

- Case detection rate: 53%
- Treatment success rate: 16%

- 2000: 5%
- 2003: 16%
- 2006: 24%
- 2008: 0.33%
- 2010: 0%
- 2011: 4%
Bangladesh

Tuberculosis is a major public health problem in Bangladesh and it ranks sixth among countries with the highest burdens of TB. The estimated prevalence and incidence rates of all forms of tuberculosis were respectively 411 and 225 per 100,000 population in 2010. In 2010 the notification rates of all forms of TB and new smear-positive cases were respectively 103 and 71 showing an increase against previous years but a marginal decrease compared with 2009. Treatment success rate among new smear-positive cases is steadily 92% for the cohort of patients registered since 2006. HIV prevalence in the adult population (15-49 years) has been estimated to be low at 0.02%.

A recent survey revealed an HIV prevalence of 7% among injecting drug users. This has raised concern regarding the potential for transmission of HIV to other population groups. National TB/HIV operational guidelines were developed in 2009.
Bhutan

The TB Control Programme is fully integrated into the general health services with the majority of activities decentralized to the districts. The NTP has introduced fixed-dose combination drugs (FDCs), and has procured them through Global Drug Facility (GDF) replacing single drug formulations for first-line treatment for both adult and pediatric cases. Guidelines on management of TB have been revised and trainings conducted for medical doctors involved in TB control activities. There is no representative data on levels of anti-TB drug resistance in the country. The Drug Resistance Surveillance is ongoing to better assess levels of drug-resistant TB in the country. However, based on modeling, it is estimated that 0.6% of newly diagnosed smear-positive TB cases have MDR-TB. The Public Health Laboratory (PHL) has been linked to the Regional Supranational Reference Laboratory in Bangkok, Thailand, and accredited for culture and first line DST. A comprehensive HRD master plan is in place in the HR Division of the Ministry of Health. The programme coordinates with the Human Resource Division at the central level on HR issues. There is strong collaboration between NTP and partners, including the military hospitals. All military hospitals are involved in delivering TB services. The National TB Control Programme is financially supported through the government and both Rounds 4 (up to end-2010) and 6 of the Global Fund.

The prevalence of HIV infection in the general population is low, being only 0.02%. HIV sentinel surveillance carried out annually has also revealed a low level of HIV infection. A national body responsible for coordinating TB/HIV activities was formed in 2007 and a national plan for collaborative TB/HIV activities has been developed.
India

The Revised National TB Control Programme (RNTCP), based on the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, was launched in 1997 expanded across the country in a phased manner with support from the World Bank and other development partners. Annually more than 1.5 million TB patients are placed on DOTS treatment under RNTCP. In 2011, RNTCP has achieved the NSP CDR of 71% and treatment success rate of 88% which is in line with the global targets for TB control.

Since its inception, the Programme has initiated more than 15 million patients on treatment, thus saving more than 2.5 million additional lives while the rate of TB Suspects examined has increased substantially from 397 per 100000 population per annum to 652 per 100000 population over the last 10 years. Quality assured, anti-TB drugs for the full course of treatment is provided to the patients through patient wise boxes. Decentralized treatment is provided through a network of more than 6,00,000 DOT providers, to provide treatment to the patients as near to their home as possible. The utilization of Pediatric patient wise boxes is on the increase since its introduction in 2006, under the programme for the treatment of pediatric patients suffering from TB. These boxes are designed according to the dosages used for different weight bands.

The programme is in the process of establishing a network of accredited Culture and Drug Susceptibility Testing (DST) Intermediate Reference Laboratories (IRLs) across the country in a phased manner for diagnosis and follow up of MDR TB patients. Currently 38 labs are accredited and are functioning across the country. The RNTCP has initiated evaluation of the Gene-Xpert TB-RIF in line with the global consultation guidelines to gather evidence for use within the country in various settings including non-risk settings.

| Percentage of treatment outcomes among New smear positive cases (2010) |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | Cured           | Treatment complete | Treatment Failure | Defaulted | Died | Not Evaluated |
| Cured                          | 85%             | 3%               | 2%               | 5%         | 4%   | 1%            |

Case detection rate and Treatment success rate for new smear positive cases (2000 - 2011)
Maldives

Maldives adopted DOTS in 1994 and achieved the targets of TB control by 1996. WHO listed Maldives among 5 countries that achieved Global target which was announced in 44th World health assembly for achieving the targets of TB control well ahead of 2005.

Drug susceptibility testing, if deemed clinically necessary for a particular patient, is undertaken by shipment of samples to the National Tuberculosis Institute (NTI), Bangalore, India, which is also the designated supranational reference laboratory for the country. Patients diagnosed with MDR-TB are managed clinically at the tertiary-care hospital, the Indira Gandhi Memorial Hospital (IGMH) in Malé, and treatment is based on individualized regimens. Second-line drugs for the management of these cases are procured by the Ministry of Health and Family on a case-by-case basis. In 2010 no MDR-TB case was detected nor started on treatment.

The NTP is technically supported by World Health Organization and benefits from the direct procurement mechanism of the Global Drug Facility to access the quality assured first-line drugs.

Available data suggest that TB is relatively uncommon in Maldives; HIV prevalence is estimated to be less than 0.1% in the adult population and TB/HIV is not a major problem yet. Screening of all HIV-positive cases for active TB is in place in collaboration with the HIV programme since 2003. All TB patients who are above 15 years of age are being tested for HIV starting from 1 December 2011.
Nepal

The prevalence of HIV is steadily rising in Nepal making collaborative measures from both National AIDS and TB Control Programme more important now than ever before. NTP has conducted several periodic surveys to establish the prevalence of HIV among TB patients. The latest survey showed HIV prevalence among TB patients at 2.4%.

World Health Organization estimates prevalence of all types of tuberculosis cases for Nepal at 71,000 (238/100,000) while the number of all forms of incidence cases is estimated around 49,000 (163/100,000). With the introduction of Directly Observed Treatment Short course (DOTS) number of deaths has dramatically reduced from 9,712 (51/100,000) in 1990 to 6,200 in 2010 (21/100,000).

The global targets of 85% treatment success and 70 % case detection rate have already been achieved.

Case finding rate for mid July 2010 to mid July 2011 period is 73% for national level. Case finding increased from 30% in pre DOTS era in 1995 to just over 70% in 2001 with nationwide coverage of DOTS programme.

A key milestone in the history of Nepal National TB Programme was the introduction of six month treatment regimen in 2009. During July 2009 – July 2010 period a total of 37,732 TB patients were registered for treatment in NTP. Treatment success rate among new sputum smear positive TB cases (15,569) was 90%. Like previous years the default rate remains low at 3% while failure rate among new smear positive is 1%.

In line with the recommendations of WHO and other international technical agencies NTP now offers fixed-dose combination (FDC) tablets for the treatment of tuberculosis (TB).
Pakistan

TB is still a major development challenge for Pakistan. It ranks 5th amongst the 22 countries with high burden of TB. Government of Pakistan endorsed the DOTS strategy, following WHO’s declaration of TB as a global emergency in 1993. The National TB Control Programme (NTP) Pakistan adopted DOTS (Directly Observed Treatment, Short course) strategy in 1995. TB control targets of NTP aligned with the Millennium Development Goals (MDGs), which are “to cure 85% of the detected new and 35% among re-treatment TB new cases of Sputum Smear Positive cases (SS+) pulmonary TB and to detect 70% of the estimated cases upon achievement of 85% cure rate.” The impact targets are “to halt and begin to reverse the incidence of TB by 2015, and to reduce by 50%, prevalence and mortality rates by 2015, relative to the 1990 levels.” The incidence target is part of target 6.c of the MDGs.

While the outcome targets include “achieving case detection rate of at least 70% for new SS+ cases and to reach a treatment success rate of at least 85% for such cases”. Within the MDG framework, these indicators are defined as the proportion of cases detected and cured under DOTS.

Among total TB cases notified in 2011, 40% were New smear positive (NSS+), 39% New smear negative (NSS-) and 17% New extra-pulmonary (EP). Treatment outcomes of new smear positive cases registered for treatment in 2010: cured were 77%, treatment completed 17%, failure around 1%, defaulted about 4% and death 2%. The treatment success rate under DOTS is also increasing, from 77% in 2001 to 93% for patients registered in 2010.
Sri Lanka

Sri Lanka is not among the 22 high burden countries of tuberculosis. However, Tuberculosis remains a widespread problem and poses a continuing threat to the health and development of the people. The estimated annual risk of tuberculosis infection (ARTI) is 0.4% (0.17% – 0.72%). The highest rates of infection have been found in the most densely populated areas, such as Colombo and other urban areas. The overall default rate has dropped from 15% to 4% in the last ten years, due to intensified default tracing efforts involving the district and field Public Health Inspectors (PHIs) and other categories of health staff. Innovative case-finding strategy will be implemented through TB/diabetes collaborative activities.

The estimated prevalence and incidence rates of all forms of tuberculosis in 2010 were 101 and 66 per 100,000 population respectively. The notification rate of all forms of TB and new smear-positive cases were 45 and 22 respectively, showing a slight but steady increase compared with previous years. Treatment success rates among new smear-positive cases were 86% for the cohort of patients registered in 2009.

HIV co-infection rates among TB patients are currently estimated at less than 0.1%. TB patients have been included under the annual surveillance for HIV since 1993. In 2010, of 1,015 TB patients counseled and tested for HIV, only 2 were found to be HIV positive. A National policy for the provision of CPT and ART to HIV-positive TB patients is in place.
Disseminate the Information about TB
TB CONTROL IS A SHARED RESPONSIBILITY!

If you are a Communicator

Tell the people what TB is, and the dangers of not getting it treated completely. Remove all myths & misconceptions associated with TB.

If you are a Concerned Citizen

Enquire where DOTS is available. Disseminate this information to communities as widely as possible. Make it easy for patients and especially for women to have access to DOTS. Spread knowledge about TB. Inform communities that TB is completely curable. Educate patients on how they can help to prevent the spread of their infection to their family members, their colleagues at work and others. Motivate poor and vulnerable people having symptoms of TB to get investigation and treatment if necessary.

If you are a TB Treatment Supervisor

So that the patient has chosen you as the TB treatment supervisor and trusts you, your main role is to make sure that the patient takes the TB drugs regularly, on schedule for the full duration of the treatment. Remember that the patient should feel comfortable with you and can ask questions about things that might be difficult to understand. The patient may be very ill and feel ashamed about having TB.

You will need to provide reassurance that you will be there to help the patient follow the treatment and be completely cured of TB. Listening and encouraging TB patients and their families is another way to supporting the needy.

If you are a Public Health Worker

Public health workers may make routine visits to the pharmacies and to the mycobacteriology laboratories used by the facilities to which they are assigned for TB surveillance. With the collaboration of laboratory or pharmacy staff, public health workers can use the information found there to:
- Confirm suspected TB cases once the medical evaluation is completed
- Monitor the progress of reported TB patients
- Collect information on possible drug resistance and the adequacy of the current regimen.
If you are a TB Patient

- Convey the message “TB is Curable”
- Inform TB patients “TB drugs are Freely Available”

If you are a Pharmacist

- Inform TB patients “TB Drugs are Free at DOTS Centres”

If you are Students/Teachers

Then remember that the students/teachers are the most revolutionary force, hence role of school as well as students/teachers may be proved most crucial one. Students and teachers are in the process of learning & teaching and are capable to propagate education in their friends, families and community at large on TB and its control. Tell other people about TB and its cure and organize interactive sessions in the schools.

If you are Media Personnel

Media has a very significant role in stopping TB. Through advocacy, publications, and broadcasts and social mobilization activities, media does not merely heighten public awareness about TB and mobilize demand for TB services but also carries out the critical advocacy effort needed to build the political will necessary for governments to sustain effective TB control.

It is important for media:
- To report accurately
- To inform people of the value of DOTS as a public benefit
- To sensitize to an individual’s need for confidentiality and privacy
- To refrain from sensationalizing issues

If you are a Social Mobilizer

The role of NGOs in prevention and control of TB has been very significant. The DOTS strategy is considered today as most cost effective strategy to combat TB, first developed by an INGO - the IUATLD. Involvement of NGO personnel in stopping TB covers a wide spectrum of activities from provision of TB diagnostic, treatment services to operational research. Traditionally, provision of TB treatment services has been the most common area for collaboration. However, with the advent of DOTS, NGO participation in stopping TB has been taken on even greater importance. Being closer to the communities they (being more credible, dependable and more integrated in the services) provide services. NGOs have a distinct edge over Government workers in convincing TB suspects to undergo diagnostic tests, take their medicines regularly and report for the prescribed follow ups to ensure complete cure.
World TB Day and SAARC TB Day is a worldwide event that aims to raise public awareness of tuberculosis and the efforts made to prevent and treat this disease. This event is held on March 24 each year all over the world.