



STC
Commemorates
World TB
Day 2002
on the global
theme
"Stop TB
fight Poverty"

(Director, STC addresses the mammoth gathering at National Stadium, Kathmandu on World TB Day 2002)

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STC Newsletter is a regular publication of SAARC TB Centre. It includes reports on activities, decisions of important meetings of the Centre and recent information on tuberculosis and its control

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Report on Activities:

World TB Day 24 March 2002 –

“Stop TB fight poverty”



(School Children leading the procession on World TB Day)

STC commemorated the World TB Day on 24 March 2002 giving priority to activities concerned with creating public awareness and advocacy about TB and its control. It is observed to recall Dr. Robert Koch, a German Bacteriologist and his announcement of discovery “mycobacterium tuberculosis” the causative agent of the disease. TB programme managers world wide, make use of World TB Day as a platform to disseminate the message on the fight against TB and to promote the control activities. Every year a different theme is selected to make the day’s activities effective. The theme for this year is **“Stop TB fight poverty”**.

The Governing Board of SAARC TB Centre has considered that awareness and advocacy are vital issues in controlling TB. The STC has decided to observe the World TB Day all over the Region on 24 March every year. The following activities were organized to mark the day:

An interactive programme with school children:

On the occasion of the World TB Day 2002, an interactive programme with school children was organized on 20 March 2002 under the school partnership programme of

SAARC TB Centre. The co-organizers of this programme were National TB Centre, NATA Kathmandu Branch and Hamro Ghar, Banasthali. Approximately 100 students, teachers and some social workers participated in the programme. Dr. D. S. Bam, Director and Dr. P. Kumar, Deputy Director, STC highlighted the role of students & social workers in spreading the messages of TB control, to the general public. The president of the NATA Kathmandu Branch, Ms. Bhubaneshori Satyal and other members also addressed the gathering on this occasion. The programme was graced by the Hon'ble Member of Raj Parisad Standing Committee, Miss Bhadra Ghale.

Opening of DOTS centres:

SAARC TB Centre has supported NTP Nepal for strengthening DOTS programme. Joint programmes were organized in collaboration with NTC to open DOTS centres in Kathmandu Medical College and Nepal Medical College on 21 and 22 March 2002 respectively.

Briefing programme for Journalists:

In TB control, Journalists have already been shown their solidarity with STC under the partnership with media programme. On 22 March, a programme was organized jointly by STC, NTC and Health Journalist Society, Nepal at STC premises, Thimi, Bhaktapur for briefing the journalists about TB and its control in the Region. The programme was graced by the Hon'ble Mr. Sarat Singh

Bhandari, Minister of Health as the Chief Guest. Participated journalists were from Health Journalist Society, Nepal. In the programme Dr. D. S. Bam, Director, STC highlighted on the problems caused by TB in our society. He also answered the different questions raised by the participants about TB and its control in the community. NTP website www.ntp.mos.com.np was also launched on this occasion.

Inauguration of TB Museum

Before participating in the briefing programme, Hon'ble Minister Mr. Bhandari inaugurated TB Museum at Thimi, Bhaktapur on 22 March 2002.

Display of Banners:

Attractive colourful banners with slogans related to TB and its control in the Region were displayed at the various prominent places of the Kathmandu valley.

Messages:

The National daily published message of His Excellency Mr. Q.A.M.A. Rahim, Secretary General, SAARC. In the messages H. E. expressed "*TB – an age old disease, known for centuries to afflict, debilitate and to impoverish large sections of the population, continues to ravage human, especially those in the developing world. TB is yet to receive the high priority it desperately deserves*". He also added "*TB is spread through infectious droplets containing the TB bacilli, transmitted*

from TB patients to other people through coughing, sneezing or spitting. A person with active TB can infect an average of 15 people every year. TB is known to thrive in conditions of poverty and overcrowding". A message from Dr. D. S. Bam, Director, SAARC TB Centre, was also published in the same newspaper along with the different articles on TB control.

Procession:

A rally programme was organized at Basantapur as the first session of the commemoration of World TB Day on 24th March. School students, colleges students, social workers, political leaders, government officials, workers from NGOs of the traditional cultural groups, sport personnel, volunteers, police and army band, shamans, fashion models, artist, etc. arrived at the venue at 10. a. m. Hon'ble Mr. Sarat Singh Bhandari, Health Minister graced the programme as the Chief Guest. At the beginning of the programme, National Anthem and peace song were sung by the Batuk. Hon'ble Minister inaugurated the rally by releasing pigeons and balloons. At 11 am the rally proceeded towards the National Stadium for the second session of the commemoration of World TB Day 2002.

Joint Function:

The procession gathered at the National Stadium to commemorate the day. The function was jointly organized by SAARC TB Centre, National TB Centre, JICA, and WHO. Different activities were held to mark the day.

Rt. Hon'ble Mr. Taranath Ranabhat, Speaker of the House of Representatives, inaugurated the function as the Chief Guest. The Organizing Committee welcomed the Chief Guest and awarded the badge "Stop TB fight poverty". The Royal Nepal Army displayed the band show. The TB song was performed by the senior artists. Dr. D. S. Bam, Director, STC delivered the welcome speech and announced that "Nepal is beyond DOTS". Procession of different ethnic groups & display of their customs were held. A cured TB patient expressed his feelings about the disease. The "Rana-Shamundra Bam" award for the person with outstanding contribution in TB control was established. Representatives from DFID, WHO, Embassy of Japan, President NATA delivered their speeches. Dance show was followed by the remarks of Director General, Department of Health Services and Prof. Donald Enarson, Director, Scientific Activities of IUATLD, Paris. Hon'ble Mr. Sarat Singh Bhandari, Minister of Health & Chairman of the Organizing Committee and the Chief Guest also addressed the gathering. The vote of thanks was delivered by Mr. Mahendra Nath Aryal, Secretary for Health.

Releasing of Books:

The Chief Guest of the joint function, Rt. Hon'ble Mr. Taranath Ranabhat released 2 books '*Involving Medical Colleges and Private Sector in TB & HIV Control*' and '*Role of Private Sector and NGOs in TB Control*' and a brochure '*An Introduction of SAARC TB Centre*' published by SAARC TB Centre.

Workshop on Development of Research Protocol Related to Operational Research Emphasizing Quality Assurance & MDR-TB and Involvement of Private-sector & Medical Colleges in TB Control.



(Director, STC in open discussion with the participants and resource persons at the workshop)

Aforementioned workshop was held in Kathmandu from 27 to 28 May 2002. Experts from Bangladesh, Bhutan, India, Nepal and Sri Lanka attended the workshop. Besides, other local experts from both public & private sector and Medical Colleges working in the field of TB control, diagnosis and research took part in the workshop as observers.

The objectives of the workshop were:

- to formulate the research protocol related to MDR TB in the Region,
- to formulate research protocol by emphasizing quality assurance,
- to foresee and develop suitable strategy to

deal with the problem of MDR-TB,

- to improve possibility of joint plan of action, including pilot project for dealing Quality Assurance & MDR-TB,
- to share experiences, lessons learnt and constraints being faced in controlling TB & MDR-TB,
- Development of a common definitions and guidelines to study the MDR-TB in the SAARC Region.

The workshop was inaugurated by the Hon'ble Mr. Mohan Bahadur Basnet, State Minister for Health, His Majesty's Government of Nepal, who graced the ceremony as chief guest. In the inaugural

ceremony Mr. Basnet welcomed the participants on behalf of HMG Nepal and expressed his satisfaction for cooperation among the Member Countries for the control of Tuberculosis. **"TB is considered as a major health problem and it has been a great challenge for us"** Mr. Basnet said in his opening speech. He pointed out that the Member Countries of SAARC could use STC as a common platform to work collectively for the control of TB in the Region.

Dr. D. S. Bam, Director, SAARC TB Centre, delivered welcome address and highlighted the objectives of the workshop. He expressed gratitude to the Hon'ble State Minister of Health, Secretary of Health, Director General, Department of Health Services, Director, SAARC Secretariat, Member Countries of SAARC and all National and International dignitaries.

On behalf of His Excellency the Secretary General, Mr. K. Wangdi, Director, SAARC Secretariat addressed the gathering and informed that SAARC has accorded high priority to the control and prevention of TB in the Region.

Dr. Umanga Sooriyaarachchi, from Sri-Lanka addressed the session on behalf of the participants.

Dr. L. R. Pathak, Director General, Department of Health Services delivered the Vote of Thanks.

The inaugural session was presided over by Mr. Mahendra Nath Aryal, Secretary of Health.

Recommendations:

Following recommendations were made after detailed discussions in the workshop:

1. All the participating Member Countries have agreed in principle for the upgradation of the SAARC TB Centre as a Regional Reference Laboratory. Till such time the participating Member Countries would take the help of Tuberculosis Research Centre (TRC) Indian Council of Medical Research (ICMR), the existing Supra-National Reference Laboratory of the WHO for the Drug Resistance Surveillance (DRS) related External Quality Assurance (EQA) activities.
2. The WHO/IUATLD DRS protocol will be followed for carrying out DRS in the respective member countries.
3. A specific timetable will be drawn up by the participants of the member countries for the timely implementation of DRS.
4. The participating countries will submit the project proposal as per schedule to the SAARC TB Centre to enable them to explore the possibility of obtaining adequate funding from donor agencies for undertaking of multi-centric study on DRS.
5. All Member Countries should develop country specific mechanism to initiate pilot projects involving private sector in TB control programme.
6. All participants of Member Countries felt the need to involve the private and government medical colleges/ Universities for TB control/ DRS in order to sensitize doctors, medical & para-medical staff and students.
7. All the participants felt the need for research funding for carrying out operational research in the above-mentioned areas.

JSC Meeting on SAARC-Canada Regional TB and HIV/AIDS Project



(JSC Meeting held at SAARC Secretariat on 18th June 2002.)

A Memorandum of Understanding (MOU) was signed in July 1997 between SAARC and Canadian International Development Agency (CIDA), at which time it was decided to develop a joint project for TB & HIV/AIDS control in SAARC Region. The aim was to look at the dual epidemics in order to obtain a better understanding of the best practices being adopted in the concerned management of HIV/AIDS/TB containment in SAARC Member Countries, currently confronting both epidemics. The main components of the project are:

- ◆ Regional Epidemiological & Laboratory Data-base and Information Net-work,
- ◆ Regional Laboratory for diagnostic reference testing, standardized antibiotic resistance testing and quality assurance
- ◆ Policy and Communications

The second meeting of Joint Steering Committee (JSC) was held under the chairmanship of H.E. Mr. Q. A. M. A. Rahim, Secretary General, SAARC at SAARC Secretariat, Kathmandu on 18th June 2002. Dr. Donald Sutherland, Director, Bureau of HIV/

AIDS, STD & TB, Health Canada, Ms. Carla Hogun Rufelds, Chief, Canadian Cooperation Office (CCO) Kathmandu, Mr. K. Wangdi and Mr. Tariq Zameer, Directors, SAARC, Mr. Lekhnath Bhattarai, Section Officer, SAARC Division, Ministry of Foreign Affairs, His Majesty's Government of Nepal and Dr. D. S. Bam, Director, SAARC TB Centre participated in the meeting.

In continuation to the meeting Dr. Sutherland, Ms. Carla Mr. Wangdi and Mr. Bhattarai visited SAARC TB Centre, Thimi, where the project is located. After observing the physical facilities, Dr. Sutherland discussed with the professionals about the functioning of the project. He advised to start regional report writing on quality assurance of sputum microscopy, epidemiological aspects of HIV epidemic, gender issue in TB & HIV.

The functioning of the project has been started at the beginning of the year 2002. Three professionals, Microbiologist, Epidemiologist and Research Officer joined STC in the months of March & April 2002.

tb.net Conference:



(Inaugural Session of the tb.net conference)

The 5th tb.net conference 2002, on TB, HIV/AIDS & Media was organized jointly by SAARC TB Centre, National TB Centre and United Mission to Nepal from 22 to 24 February 2002 in Kathmandu. Hon'ble Mr. Sarat Singh Bhandari, Minister of Health inaugurated the programme on 22 February 2002. The appeal of the conference was "Communicate TB and HIV/AIDS before it is too late".

Dr. D. S. Bam, Director, STC welcomed the participants and facilitators in the conference.

Need of the conference was highlighted by Dr. John Dickinson, UNM. TB and HIV situation in the World/Region was presented by Ms. L. Morgan WHO, Geneva. Media in TB and HIV was explained by Mr. Peter Gill, BBC, World Service Trust and Vote of thanks was delivered by Dr. S. Mishra, Director, National Centre for AIDS and STC, HMG Nepal. The inaugural function of the conference was chaired by Hon'ble Mr. Mohan Bahadur Basnet, Minister of State for Health. Approximately 150 participants from Nepal and abroad participated in the conference.

Special Articles and Technical Information on TB

Involving Medical Colleges in Tuberculosis and HIV Control

Dr. D. S. Bam*, Dr. Md. M. Rahman**, Dr. Mallika Samaratunga***

Introduction:

Tuberculosis (TB) is a major public health problem in SAARC region with nearly 38% of total global disease burden. Over 6 million people are living with the disease and more than 2.5 million new cases and nearly 0.6 million deaths are occurring in this region annually. TB is the commonest cause of death from infectious disease among adults of this region. More than 75 percent of the morbidity and mortality due to the disease occur in the most economically productive age group of 15-45 years. The advent of HIV and the emergence of drug resistant TB underlines the urgency with which responses have to be made.

All the member countries of SAARC are adopting DOTS strategy for TB control through their national TB control programmes and are making good progress. Treatment success rates in areas under DOTS are nearly 80%. However, this very effective strategy is currently available only to 45% of the population of the region and case detection rates remain low at an coverage 30%.

Country wise population coverage (2000/1)

Bangladesh-90%, Bhutan- 100%, India-40%, Maldives -100%, Nepal -85%, Pakistan-10%, Sri Lanka-93%.

Expanding and enhancing DOTS services throughout the region is therefore a priority. In order to halve the mortality by 2010,

universal coverage and the global targets of 85% treatment success and at least 70% detection of all new cases must be achieved by 2005. This can only be possible by diversifying ownership and by involving multiple sectors within and outside the government health sector to increase access and utilization services. It is equally essential to ensure that quality services are delivered to increase awareness among communities.

The region has about 200 Medical Colleges and rapidly expanding private health care sector those are already playing a major role. These sectors also command considerable resources and credibility among communities. However, there has been little or no coordination between the national programmes, the academic and the private health care providers.

The emergence of drug resistance and the advent of HIV in epidemic proportions have only sharpened the need for coordination and collaboration between academic medicine and disease control programmes.

The Role of Medical Colleges in TB and HIV Control:

The role of medical colleges in national disease control cannot be denied. Medical colleges can play an important role in the national efforts to manage patients and save lives. They are in a unique position to reach various levels of health

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care providers. They have the potential to create a new generation of medical professionals who have updated knowledge about TB and HIV/AIDS and skills of controlling these diseases. However their participation in control programmes so far been inadequate. The academia and clinical practitioner lack consensus on the rationale and practices of national TB control programmes in member-countries largely due to absence of information and adequate involvement in these programmes. On the other hand, national control programmes have not been successful in reaching out to medical colleges and providing them with the necessary information to make useful contributions. Therefore, the medical faculty prefers to individualize treatment regimens over the national TB and HIV/AIDS control programme.

This needs to be changed to bridge the gap between internationally accepted national programme strategies and what medical colleges would like to teach and practice in isolation in their own settings. SAARC TB centre and WHO could have a role in initiating this collaboration between medical institutes and national programmes.

DOTS and Country Status in Involving Medical Colleges:

Country	Status
India:	Started strategy in some medical colleges
Nepal:	BPKIHS, it first started DOTS teaching and from June 2000 started DOTS treatment. Nepal Medical College started DOTS from March 2000. Nepalganj Medical College. Kathmandu Medical College. Universal College for Medical Sciences started DOTS from 17 May 2002
	<i>Number of patients treated and</i>

success rates by BPKIHS (2000/2001 2nd quarter) Only SM + cases

- ◆ Number patients registered M=27, Female =15, Total = 42
- ◆ Cure rate = 64.3%
- ◆ Treatment success rate = 76.2%
- ◆ Conversion rate = 83.0%

Sri-Lanka:

Sri Lanka has incorporated the national TB and HIV/AIDS control programme in their core curriculum of undergraduate medical education.

What is to be done for Successful Involvement?

- ◆ A DOTS orientation programme is to be organised for the doctors, nurses and students of the medical college for motivation and commitment.
- ◆ A committed person with knowledge of DOTS is to be identified as focal person to communicate with the programme.
- ◆ A senior doctor is to take responsibility to look after or monitor DOTS clinic. He/ She should be able to justify NTP policy and avoid unnecessary treatment of the patients.
- ◆ DOTS is to be included in CME activities of the institution.
- ◆ Frequent visit from NTP in the initial stage is very essential to lead the programme according to NTP policy.
- ◆ Frequent visit of NTP authority from the centre is necessary to get the commitment.

Proposed Activities at Country Level:

- ◆ Medical Curriculum Review
- ◆ Establishment of Task Force to enhance role of Medical Schools/Colleges.
- ◆ Establishment of DOTS Centres
- ◆ Operational research on provision of DOTS in urban areas

Migration: a regional challenge for TB control and HIV prevention

Dr. Md. Mojibur Rahman Dr. Mallika Samaratunga** Dr. Basista Rijal****

Migration is one of the major challenges for control of TB and prevention of HIV/AIDS in the SAARC region.

Migratory patterns in South Asia are complex and here migration occurs in three different forms:

1. within countries
2. within the region across national borders and
3. from the region to countries where there is more employment opportunities.

Migration in all these three instances may be again voluntary or forced, and legal or illegal.

Among various reasons of migration, the most prominent ones are economic, trade, tourism and civil unrest.

Impact of Migration on national TB control program: It is very difficult to treat migrant TB patients because:

- due to lack of legal status and financial, cultural & linguistic constraints they face barriers to
- accessing health care services for treatment.
- they also face difficulties in accepting and/or staying on treatment leading to treatment interruption or default

- different drug regimens in different countries create problems in treating a migrant who is already under treatment

All of these factors contribute to lower cure rates, ongoing transmission of infection and increasing prevalence of drug resistance TB.

Impact of migration on HIV/AIDS prevention: Migration is also fuelling the HIV epidemic in the following ways:

- The types of mobility that promote HIV transmission i.e., labour migration, urbanization, women trafficking and displacement of refugees are found in this region.
- migrant women and girls are at risk of being lured or forced into sex work or they may have been specifically trafficked for this purpose.
- Many migrants are young men, often traveling alone or in small groups dislocated from the normal support and social control of their home environments. This situation lends itself to high-risk behaviours, such as casual sex, injection drug use, which contribute to the spread of HIV.
- HIV-positive migrants bring the infection home and may infect their wives and other sexual partners, if any.

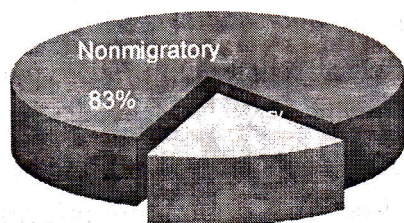
A study among returning migrants and non-

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migrants in an area of Doti district of Nepal revealed that 10% of the returning migrants from Mumbai of India were HIV infected, compared to 2% of the non-migrants.

Another HIV/STI and behavioural survey among female sex workers in the terai area of Nepal showed the association of HIV infection with sex work and trafficking of women in India. In this survey, though only 17% of the surveyed women had worked in India, they accounted for 75% of the total HIV.

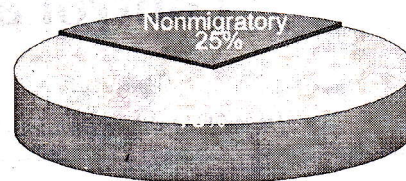
Fig. 1. : Type of surveyed Sex workers



infections found in the sample. This study also showed positive association between women trafficking and prevalence of HIV infection. Women who reported being coerced were three times more likely to be HIV infected than those who were not.

Experience has shown that TB and HIV form toxic synergism- HIV increases the risk of getting TB 30-50 times and HIV infection in TB patients shortens their lives dramatically by causing acute TB. From above discussion it can be concluded that migrating population is at greater risk of getting HIV & suffering from TB. The problem is pronounced along the international borders. SAARC attaches the highest importance in combating migratory problems of ill health and poverty. A situation analysis of the problem on both sides of the

Fig. 2. : HIV Infected Sex Workers



borders is urgently required. A joint plan of action is to be made operational on both sides of the borders. Cross-border collaboration in health related activities with initial focus on TB and HIV /AIDS for migratory population is to be ensured. Exchange of health education materials for HIV prevention and provision of care package for those living with HIV/AIDS would be the top priority. The TB control programme requires uniform treatment regimen and knowledge of DOTS center on both sides of the border and a system of referral for follow up of patients already put on treatment who may move from one side of the border to the other.

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Multi-Drug Resistant Tuberculosis: an Over View of the SAARC Region

Dr. Basista Rijal¹, Dr. Md. Mojibur Rahman², Dr. D.S. Bam³

Two out of every three premature deaths in low-income countries are the result of an infectious disease or inadequate maternal or neonatal care with Tuberculosis (TB) one of the major causes. A recent study indicates that one TB case alone can lead to 20-30% loss of household income in developing countries. The world will not be able to achieve the poverty reduction targets set by the G8 (Group of highly developed 8 countries) for the year 2015 if it does not make a renewed effort to tackle the tuberculosis and the other major high burden diseases such as malaria, diarrhoeal diseases, pneumonia, AIDS, measles and maternal mortality

How is MDR tuberculosis produced?

Drug resistant tuberculosis is a case of tuberculosis (usually pulmonary) excreting bacilli resistant to one or more anti-tuberculosis drugs. Resistance of *M. Tuberculosis* to anti-tuberculosis drugs is a man made amplification of a natural phenomenon. Wild strains of *M. tuberculosis* that never been exposed to anti-tuberculosis drugs are almost never resistant.

Genetic mutation may lead to the emergence of clinical resistance to anti-tuberculosis treatment. This type of resistance occurs in the absence of anti-microbial exposure, but it is diluted by the majority of drug-susceptible micro-organisms.

Exposure to single drug - due to irregular drug supply, inappropriate prescription or poor adherence to treatment - suppresses the growth of the susceptible bacilli to that drug but permits the multiplication of drug resistance organisms. This phenomenon is called acquired resistance. Subsequent transmission of such bacilli to other person may lead to disease, which is drug-resistant from the outset, a phenomenon known as primary resistance. MDR tuberculosis is resistant to at least

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Isoniazid and Rifampicin, the main anti-tuberculosis drugs.

The following factors are associated with anti-tuberculosis drug resistance:

1. Programmatic factor

- ◆ Lack of a standardized therapeutic regimen
- ◆ Poor implementation compounded by frequent or prolonged shortage of drug supply in areas with inadequate resources.
- ◆ Political instability
- ◆ Use of anti-tuberculosis drugs of unproven quality

2. Health Provider related factors:

- ◆ Departure from the correct management of individual cases.
- ◆ Selection of inappropriate regimen due to
- ◆ Lack of recognition of prior treatment
- ◆ ignorance of importance of standardized regimens
- ◆ Addition of a single drug to a failing regimen.
- ◆ Lack of proper monitoring and supervising patients while on therapy.

3. Patient related

- ◆ Non adherence to prescribed treatment
- ◆ HIV infection.

However, the crucial element in the emergence of drug resistance is not the patient or even the practitioner, but the lack of a properly organized system to ensure prompt diagnosis, effective treatment and ongoing surveillance of tuberculosis. For this reason the level of anti-tuberculosis drug resistance in a population is an indicator of the National Tuberculosis Programme.

The situation of MDR tuberculosis in Asia with emphasis of SAARC countries:

Accurate and comprehensive data of MDR

tuberculosis is scanty in Asia. The WHO/IUATLD 2000 surveillance report demonstrated worrying prevalence of MDR tuberculosis especially in those areas where DOTS has not been implemented. The data showed high prevalence of MDR TB in some parts of China where DOTS is not implemented. Limited amount of data from India showed a prevalence of MDR-TB that requires a close monitoring and calls for expansion for surveillance. On the other hand those countries having relatively good TB control programme including Thailand, Nepal, Republic of Korea have relatively low incidence of tuberculosis.

A very few data are available because scarcity of surveillance system in SAARC region on MDR tuberculosis. The anti-tuberculosis drug sensitivity test conducted in Nepal in 1987-1990 revealed that 5.7% and 30% of new and old cases respectively were having MDR tuberculosis and another study in 1991-1994 revealed that 1.6% and 9.6% of the new and old cases respectively had MDR tuberculosis. The latest surveillance report of the IUATLD/WHO, 2000 showed that 1% and 7.4% of new and old cases had MDR tuberculosis in Nepal. The tendency shows that the level of MDR tuberculosis is decreasing in Nepal.

In India, the data revealed that 13.4% of the new and old (combined) cases had MDR tuberculosis in 1994-1997 according to WHO/IUATLD. The recent surveillance, 2000 report of WHO/IUATLD showed that the 3.4% of the new cases and 25% of the old cases had MDR tuberculosis in India. The situation of the other member countries of the SAARC is not clear due to lack of information. The primary drug resistance survey conducted in Sri Lanka in 1999 revealed that of the 929 new cases only 6 (0.64%) were MDR.

How to prevent MDR-tuberculosis:

The best prevention is to give each new cases of sputum positive pulmonary tuberculosis an effective regimen of short course chemotherapy. In the old case also can be managed by WHO recommended regimen under direct supervision.

Basis for Management of MDR tuberculosis

1. Designing an appropriate regimen.
2. Reliable anti tubercular drug resistance

surveillance system.

3. Quality Assurance -the quality of the susceptibility test carried out in any Laboratory should be regularly checked by another reference laboratory at national or supra national level.
4. Reliable anti-tubercular drug supplies

Conclusion:

Running good national tuberculosis Programme can minimize MDR tuberculosis. The success and failure rate should be monitored on regular basis by surveillance system for anti tuberculosis drug resistance. SAARC networking system will help for guideline quality assurance and also for joint plan of action for achieving quality assurance in MDR tuberculosis.

Recommendations:

1. As the data on anti tubercular drug resistance is very inadequate, there should be national and SAARC regional surveillance system. The longitudinal data on drug resistance will help to qualify the magnitude of the problem and provide the information on trends.
2. Well-established network SAARC regional laboratories will be the models for standardized surveillance of drug resistance.
3. The survey should collect and analyze individual data on age, HIV co-infection, country of birth and contribution of the private sector to drug resistance.

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CONTACT TRACING FOR TUBERCULOSIS IN A CHEST CLINIC

Dr. Anoma Siribaddana MBBS, MD, MRCP*

Abstract

In the year 2000 Chest Clinic, Kandy, Sri Lanka, registered 641 pulmonary TB cases. All these patients were requested to bring or send household and any other close contacts for screening for TB. A total of 632 contacts were subjected to history taking and examination, followed by other investigations. Of them 630 underwent chest X-ray and 262 underwent sputum smear microscopy. A total of 11 contacts were diagnosed as TB cases and all of them were from symptomatic contacts. No TB cases could be detected from asymptomatic contacts. So it would not be cost effective to further investigate the asymptomatic contacts.

Introduction

Since Tuberculosis is a contagious disease screening of close contacts of patients with Tuberculosis is a very important part of a good tuberculosis control programme. Early diagnosis and prompt treatment of tuberculosis is important in curing tuberculosis in individuals and controlling tuberculosis in the community.

Being a third world country, we should consider more on the cost of the programme. Cost effectiveness of various screening tools has to be evaluated and best methods are to be determined for these projects to be sustainable.

A survey was conducted by the Chest Clinic, Kandy, Sri Lanka on contact tracing for Tuberculosis. Chest Clinic, Kandy is the main

chest clinic in the central province of Sri Lanka and it manages about one sixth of the whole tuberculosis burden of the island.

Method

The Chest Clinic Kandy has managed a total number of 641 pulmonary TB cases in the year 2000. All of them were requested to bring household and any other close contacts for screening. The contacts were seen by the medical staff; history taking and examination done and all were subjected to routine chest radiography except the pregnant. In those who could produce sputum, microscopy for acid-fast bacilli, was also done.

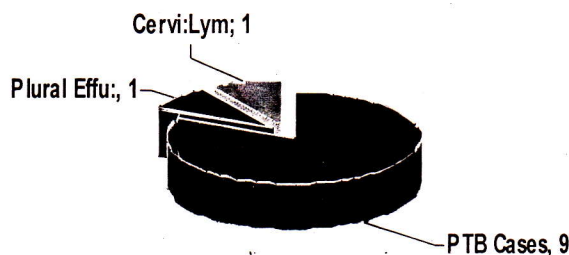
Results

A total number of 632 contacts were screened during the year 2000 in Chest Clinic, Kandy,

*Chest Physician - Chest Clinic,
Kandy & Teaching Hospital, Kandy

Sri Lanka. Of them 630 under went for chest radiography and 262 for sputum smear microscopy. Among these 632 contacts, 9 were diagnosed as cases of PTB and 2 as Extra Pulmonary TB (ETB). Among the ETB cases, one was diagnosed as plural effusion and other as cervical lymphadenopathy. All these 11 cases were symptomatic.

TYPES OF DIAGNOSED CASES



Discussion

Out of 632 contacts 11 were diagnosed as TB cases and all of them were from symptomatic contacts. Actually very rarely active TB can be detected from asymptomatic persons or even contacts. In this study all the asymptomatic individuals had normal chest radiographs. At the same time asymptomatic individuals were rarely able to produce sputum and often a sample of saliva was produced which, was negative for acid-fast bacilli.

But proper history taking and examination is of utmost importance in screening contacts for TB. Educating the index cases and close contacts regarding symptoms of the disease and informing them to seek treatment when symptomatic, is very important especially when a proper patient referral system is not in operation. Patients seek treatment from

various health care providers who might not direct patients to an appropriate treatment facility. This results in either an unnecessary delay in commencing treatment or the patients not getting the chance of proper anti TB therapy at all. When the index cases and the contacts are educated regarding the symptoms of the disease, this unnecessary delay could be eliminated as patients could report to the chest clinics early in the disease, as they are aware of the symptoms. This will also increase case finding and help to reduce both morbidity and mortality resulting from delayed diagnosis of tuberculosis.

As post primary tuberculosis occurs due to reactivation of the infection, the disease could manifest later in the contacts. There may be a delay of several years. When the contacts are told that they do not have evidence of active disease at present, it is also important to inform them of the fact that there is a possibility that anybody could get active disease later in life. If not, the contacts may get a false sense of security that they are free of the disease for the rest of the life. We have found instances where the patients refused to accept a diagnosis of TB because screening a few years ago had found that they were disease free.

In conclusion, it is clear that routine investigation of asymptomatic contacts is not necessary. A good history taking and examination is very important, as the active cases are always symptomatic. Educating the index case and contacts regarding symptoms is important as the disease may develop later in contacts.

Abstracts

Quality Control of Sputum Smear Examination in Cebu Province

A. Fujiki, C. Giango, S Endo,

INT J TUBERC LUNG DIS 6(1):39-46, 2002
IUATLD

SETTING: Rural Health Units (RHU) in Cebu Province, Philippines.

OBJECTIVE: To assess and improve the on-going quality control of tuberculosis activities Cebu Province.

METHODS: During the period of the study, from January 1996 to December 1997, positive slides (100% in 1996 and 20% or 100% in 1997) and 20% of negative slides selected from all of the slides examined at the RHUs were assessed on the quality of smear preparation. The readings were blindly cross-checked by the provincial assessors.

RESULTS: In 1997, 1) 90% of RHUs participated in the quality control activity; 2) the proportion of good quality smears increased markedly; and 3) the false positive and false negative rates did not change during the period, but most of the false positives were observed among the scanty positives of the field reading, and no false negative were noted among the heavily positive slides.

CONCLUSION: Although the false positive and false negative rates did not decrease during the period, the quality control procedure resulted in marked improvements in smear preparation, a high participation of RHUs in the quality control programme and the elimination of large discrepancies between readers on positive slides in 1997. It is considered to have significantly improved the NTP's smear microscopy service in Cebu Province.

Quality Assessment of Sputum Transportation, Smear Preparation and AFB Microscopy in Rural District in Malawi

C. J. Mundy, A.D. Barries, A. Banerjee, F. M. Salaniponi, C. F. Gilks, S. B. Squire

INT J TUBERC LUNG DIS 6(1): 47-54, 2002
IUATLD

SETTING: Ntcheu District, Central Region of Malawi.

OBJECTIVES: To assess 1) the feasibility of introducing simple internal quality control procedures for acid-fast bacilli (AFB) microscopy, and 2) the quality of the district sputum smear microscopy service.

DESIGN: A simple internal quality control system was piloted in which district laboratory staff assessed: 1) specimen suitability, 2) time between sputum submission and smear examination, 3) smear preparation and staining, and 4) microscopy. Actual times for processing specimens were compared with recommended times. External quality validation was carried out.

RESULTS: Of 4805 sputum specimens: 1) documentation was complete in 95%, 2) 93% reached the laboratory within 7 days of collection, 3) 96% of smears were well prepared and stained, and 4) 97% concordance (96.4% smear-positive and 97.6% smear-negative) was demonstrated when 208 smears were re-examined by a second technician. The aggregate index of reliability was 86%. The mean time spent on microscopic examination was 3.8 minutes, compared with the recommended time of 10 minutes. When all smears from 164 patients were assessed externally, 98.2% concordance (98.1% smear-positive and 98.2% smear-negative) was demonstrated. False smear-negative and smear-positive rates were less than 2% each.

CONCLUSION: District laboratory staff were able to incorporate simple quality control procedures for AFB microscopy into their routine practice, resulting in a reliable service. The lessons learnt are widely relevant and potentially useful for implementation of a national quality assurance scheme.

Determinants of Drug-resistant Tuberculosis Analysis of 11 Countries:

M.A. Espinal, K. Laserson, M. Camacho, Z. Fusheng, S. J. Kim, E. Tlal, I. Smith, P. Suarez, M. L. Antunes, A. G. George, N. Martin-casabona, P. Simelane, K. Weyer, N. Binkin, M. C. Raviglione.

INT J TUBERC LUNG DIS 5(10): 887-893, 2001
IUATLD

SETTING: Eleven countries/territories.

OBJECTIVES: Global information on the determinants of drug-resistant tuberculosis (TB) based on representative data is not available. We therefore studied the relationship between demographic characteristics, prior TB treatment and human immunodeficiency virus (HIV) infection with anti-tuberculosis drug resistance.

METHODS: Population based representative data on new and previously treated patients with TB collected within an international drug resistance surveillance net-work.

RESULTS: Of 9615 patients, 8222 (85.5%) were new cases of TB and 1393 (14.5%) were previously treated cases. Compared with new cases, previously treated cases were significantly more likely to have resistance to one (OR = 2.5, 95%CI 2.1-3.0, P < 0.001), two (OR=4.6, 95%CI 3.7-5.6, P < 0.001), three (OR = 11.5, 95% CI 8.6-15.3; P < 0.001 and four (OR = 18.5, 95% CI 12.0-28.5, P < 0.001) drugs. An approximately linear increase in the likelihood of having multi-drug-resistant tuberculosis (MDR-TB) was observed as the total time (measured in months) of prior anti-tuberculosis treatment increased (P < 0.001, X² for trend). In multivariate analysis, prior TB treatment for 6-11 months (OR = 7.6, 95% CI 2.6, 22.4, P < 0.001 and ≥ 12 months (OR 13.7, 95% CI 4.5-41.6, P < 0.001) but not HIV positive, was associated with MDR-TB.

CONCLUSION: This study shows that prior but ineffective treatment is a strong predictor of drug resistance and that HIV is not an independent risk

factor for MDR-TB. The association between length of treatment and drug resistance may reflect longer treatment as a result of treatment failure in patients with drug resistance, it may also reflect irregular prior treatment for TB, leading to drug resistance.

Characteristics of Drug Resistance and HIV among TB patients in Mozambique:

A. Mac-Arthur, Jr, S. Gloyd, P. Perdigao, A. Noya, J. Sacarlal, J. Kreiss

INT J TUBERC LUNG DIS 5(10): 894-902, 2001
IUATLD

SETTING: The rate of human immunodeficiency virus (HIV) seroprevalence among tuberculosis patients varies between 2% and 53% in Mozambique, depending on the region. Drug resistance surveillance has been performed in only a few cities in Mozambique.

OBJECTIVES: To establish the extent of drug resistance in areas of Mozambique with different levels of HIV prevalence to estimate the prevalence of HIV among tuberculosis (TB) patients and to examine the association between drug resistance and HIV infection.

DESIGN: All tuberculosis patients diagnosed at randomly selected health facilities over 9 months (September 1998 to June 1999) were enrolled in the study. Sputum was collected, smeared and cultured and drug susceptibility tests were performed. Blood was tested for HIV in the respective provinces and patients received pre-test and post-test counseling.

RESULTS: Of 709 culture – positive cases, 25.5% were HIV-positive. HIV-positive patients were significantly more likely to have a prior history of treatment (OR 2.2; 95% CI 1.9-3.6) and resistance to both isoniazid and streptomycin (OR 2.3, 95% CI 1.3, 4.5). In patients with no history of prior tuberculosis treatment, the multi-drug resistance rate was 3.4% and resistance to isoniazid and streptomycin (HS) was 5.2%. any drug resistance was significantly more common among those with a history of prior treatment (OR 3.1, 95% CI 2.1-4.7), particularly resistance to HS (OR 4.5, 95% CI 2.6 – 7.9).

CONCLUSIONS: This study demonstrates

substantial levels of drug resistance in Mozambique. Differences in drug resistance between high and low HIV prevalence areas may be related to prior treatment.

Drug Resistance Trends in M. Tuberculosis, Blackburn 1990-1999

L. P. Ormerod, R. M. Green, N. Horsfield, R. White.
INT J TUBERC LUNG DIS 5(10): 903-905, 2001
IUATLD

SETTING: Blackburn, United Kingdom

OBJECTIVES: To describe the drug resistance data for mycobacterium tuberculosis in white and Indian Sub-continent (ISC) ethnic patients in a high prevalence district in the United Kingdom (UK) over a 10 year period.

DESIGN: Data from a detailed prospective clinical and epidemiological database of all notified patients were examined for the years 1990-1999 inclusive.

RESULTS: Primary isoniazid resistance was found in 17/229 (7.4%) of ISC and 3/67 (4.5%) of white isolates. There was no statistical difference in the rates of drug resistance in those of ISC ethnic origin, whether they were ISC of UK born and whether or not they had made return visits to the ISC.

CONCLUSION: The rate of primary isoniazid resistance remains between 5-10% in ISC patients in Blackburn, showing no fall from previous surveys. The rate of drug resistance was not lower in those born in the UK, irrespective of whether return visits had been made to the ISC. These data will need to be further monitored.

Tuberculosis Treatment in Nepal: A Rapid Assessment of Government Centres using different types of patient supervision.

B. Mathema, S. B. Pande, K. Jochem, R. A. Houston, I. Smith, D. S. Bam, J. E. McGowan:
INT J TUBERC LUNG DIS 5(10):912-919, 2001
IUATLD

SETTING: Urban and periurban government tuberculosis (TB) treatment clinics in Nepal.

OBJECTIVES: To assess TB treatment supervision strategies and outcomes.

DESIGN: Three types of treatment centres were selected according to intensity of treatment supervision: Group A – all patients supervised by directly observed therapy (DOT) at the treatment centre during the intensive phase, Group B- flexible DOT where patient-nominated treatment supervisors include community or family members, Group C- drug dispensed monthly and no supervised treatment. The cohort studied comprised all new patients starting treatment during a 5-months period in 1996 (n=759)

RESULTS: At group A treatment centres, 100% of patients had daily DOT supervised by treatment center staff during the intensive phase. At group B sites, 75% of nominated supervisors were family or community members and 13% of patients had no supervisor. At group C sites 93% of patients were unsupervised. Bacteriologically confirmed cure rates for smear-positive patients were 91% (95% CI 80.3-97.2) for A sites, 57% (95% CI 48.8-64.0) for B and 34% (95% CI 25.1-40.4) for C. Treatment centres with the best results had good access to laboratory facilities, uninterrupted drug supply, longer clinic hours, standardized TB case management and support from a non-government organization.

CONCLUSION: At government facilities in Nepal, only group A treatment centres achieved WHO global targets for cure. Group B treatment centres showed better outcomes than supervised therapy but did not achieve cure targets. Rapid low-cost assessments to collect data that are not routinely reported can improve the evaluation of programme aspects such as supervision strategies.

Efficacy of an unsupervised 8-month rifampicin-containing regimen for the treatment of pulmonary tuberculosis in HIV-infected adults.

J.L. Johnson, A. Okwera, P. Nsubuga, J. G. Nakibali, C.C. Whalen, D. Hom, M. D. Cave, Z. H. Yang, R.D. Mugerwa, J. J. Ellner
INT J TUBERC LUNG DIS 4(11):1032-1040, 2000
IUATLD.

SETTING: National Tuberculosis Treatment

Centre, Mulago Hospital, Kampala, Uganda.

OBJECTIVE: To assess the efficacy of a daily self administered 8-month rifampicin containing regimen for the treatment of pulmonary tuberculosis (TB) in human immunodeficiency virus (HIV) infected adults.

DESIGN: Treatment outcomes in patients with pulmonary TB treated with a single 8-month regimen and followed in a prospective epidemiological study.

RESULT: Two hundred and sixty five HIV infected and 26 non-HIV infected adults with initial episodes of pulmonary tuberculosis were treated with 2 months of daily isoniazid (INH), rifampicin (RMP), ethambutol and pyrazinamide followed by 6 months of daily INH + RMP. Median follow-up was 17.8 months. Ninety-five percent of the HIV infected and all of the non-HIV infected patients who had sputum examined were sputum culture negative after 2 months of treatment. Twenty two HIV infected and no non-HIV infected patients died during treatment. Relapse rate were 8.4% (5.9 per 100 person-years of observation [PYO], 95% CI 3.2-8.6) among HIV infected patients and 4.5% (2.1/100 PYO, 95% CI 0-7.8) for non-HIV infected patients. Adverse drug reactions occurred in 37% of the HIV-infected patients, most were minor and self-limiting.

CONCLUSION: An 8-month RMP containing regimen was well tolerated and effective in the treatment of HIV infected adults with initial episodes of pulmonary TB. Relapse rates were similar to those reported with 6-month short-course regimens in HIV-infected individuals. Decisions about the duration of anti-tuberculosis treatment for HIV-infected adults must balance programme resources and the likelihood of poor compliance with longer regimens with the potential for modest decrease in relapses with longer treatment

Mycobacterium Tuberculosis and Human Immunodeficiency Virus Co-infection in Intravenous Drug Users on Admission to Prison

V. Martin, J. A. Cayla, A. Bolea, J. Castilla.

INT J TUBERC LUNG DIS 4(1):41-46, 2000
IUATLD.

BACKGROUND: Intravenous drug users (IDUs) and prisoners are groups of great interest in human immunodeficiency virus (HIV) infection and tuberculosis (TB) epidemiology.

AIM: To determine predictors and temporal trends of the co-infection of Mycobacterium tuberculosis and HIV in IDUs on admission to prison.

PATIENTS AND METHODS: Between 1 January 1991 and 31 December 1997, 796 IDUs or former IDUs were studied. Socio-demographic and penitentiary variables were evaluated. HIV positive patients with ≥ 5 mm induration on tuberculin test were deemed co-infected. Analysis of factors associated with co-infection was based on a logistic regression model.

RESULTS:

Of the incoming prisoners, 44.0% were infected by M. tuberculosis, 43.8% by HIV and 20.1% were co-infected. Co-infection predictors were: 1) total prison time served previously (none OR 1; < 2 years, OR 2.44, 95% CI 1.28-4.64; ≥ 2 years, OR 4.94, 95% CI 2.56-9.55); 2) age (16-25 years, OR 1; 25-29 years, OR 3.14, 95% CI 1.71-5.75, > 29 years, OR 3.67, 95% CI 1.96-6-6.86); 3) tattoos (OR 1.56, 95% CI 0.98-2.49), 4) syringe sharing (OR 2.43, 95% CI 1.5-3.77) and 5) ex-IDU status (OR 1.10, 95% CI 0.98-1.22).

CONCLUSION:

The high prevalence of co-infection that was detected was associated with risk factors that could be amended by public health intervention.

Welcome & Farewell News

Appointment of New Professionals:

On the decision of the Appointment Committee the following three new professionals have been recruited:

Dr. Basista Prasad Rijal, Microbiologist

Dr. Rijal joined SAARC Tuberculosis Centre as Microbiologist on March 08, 2002. He obtained his graduation (MBBS) from Institute of Medicine, Tribhuvan University, Nepal in 1988 and post graduation (M. Phil.) from the Faculty of Medicine, Peradeniya University, Sri Lanka in 1997. He started his career as a Lecturer in the Tribhuvan University, Teaching Hospital in 1988. He has been working as an Assistant Professor in Institute of Medicine, Maharajganj Campus from August 1998 to March 2002 before joining SAARC TB Centre. He has undergone national and international professional training on infectious diseases. He is one of the recipients of the WHO fellowship as well, on Immunology, vaccinology and Biotechnology in Switzerland and France.



Dr. Md. Mojibur Rahman, Epidemiologist:

Dr. Rahman hailing from Chapai Nawabganj, a Northern District of Bangladesh, graduated from Rajshahi Medical College in 1978. Dr. Rahman worked as Medical Officer and Upazila Health and Family Planning Officer in different Upazilla Health Complex of Bangladesh including Ansar Academy Hospital under the Ministry of Home Affairs. Having Post-graduate Diploma in Public Health (DPH) and Master of Public Health (MPH) in Epidemiology he received training on "Management of Epidemic & Disease Control", "Data Handling & Bio-statistics", and "Health Service Planning & Management". Before joining STC as Epidemiologist on 22.03.2002, Dr. Rahman worked in Bangladesh as Assistant Professor in the Department of Epidemiology of National Institute of Preventive and Social Medicine (NIPSOM), as Senior Scientific Officer in the Institute of Epidemiology Disease Control and Research (IEDCR) and as Epidemiologist in the Institute of Public Health (IPH). During his service in Bangladesh, he acquired experience in the field of Public Health including Epidemiology and Research.

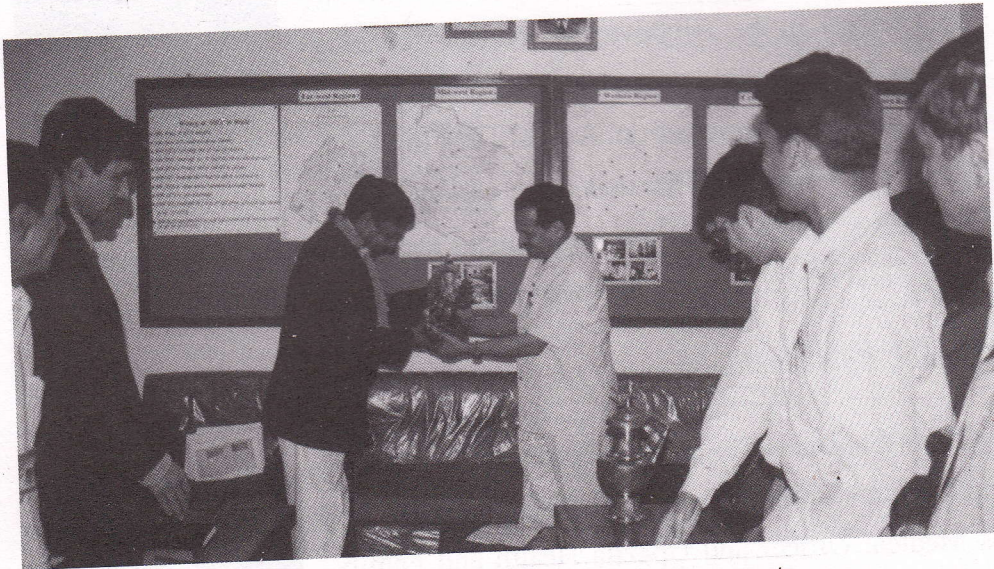


Dr. Mallika Samaratunga, Research Officer

Dr. Samaratunga who has joined STC as Research Officer on 16 April 2002, is from Sri Lanka. Having graduated from Faculty of Medicine, University of Ruhuna in 1985, she joined the Government Health Service in Sri Lanka. While serving in the National TB Programme, Sri Lanka, she obtained her Post-graduate Diploma in TB and Chest Diseases (DTCD) in 1994 from Post-graduate Institute of Medicine, University of Colombo. Before joining STC Dr. Samaratunga worked as the District Tuberculosis Control Officer (DTCO) in Kandy District, Sri Lanka for 6 years.



Farewell to Dr. Kumar:



(Out going Deputy Director receiving a presents from Director, STC/NTC)

Dr. Prahlad Kumar, Deputy Director, SAARC TB Centre has left the office, STC on 30 April 2002. He was the first Deputy Director of the Centre. His exemplary work aided the SAARC TB Centre to rise to its present day

status as a Centre of excellence & WHO collaborating centre for TB control activities in the Region. A farewell function was organized by STC and NTC staff to pay their sincere gratitude to out going Deputy Director. While appreciating his valuable contribution to the development of the Centre, we wish him and his family a bright & prosperous future.

STC Visit

- Hon`ble Mr. Sarat Singh Bhandari, Minister of Health, Secretary of Health and Director General, Department of Health Services visited STC and observed the activities on 22 March 2002. Mr. Bhandari expressed his satisfaction in the functioning of the Centre.
- The staff of STC welcomed Mr. Md. Akram Hossain, Director, SAARC Meteorological Research Centre (SMRC), Dhaka, Bangladesh at SAARC TB Centre on 16 April 2002. Mr. Hossain observed the activities of the Centre and made discussions with Deputy Director about functioning of the Regional Centres in order to make its activities efficient and effective.
- Dr. D. S. Bam, Director, STC welcomed the Member Countries' participants of "Workshop on Development of Research Protocol on Operational Research emphasizing Quality Assurance and MDR TB" in STC on 29 May 2002. All the participants observed the functions of the Centre.
- Dr. Donald Sutherland, Health Canada, Ms. Carla Higon Rufelds, CCO, Kathmandu Mr. K. Wangdi, Director, SAARC Secretariat and Mr. Lekhnath Bhattarai from Ministry of Foreign Affairs, HMG, Nepal visited STC on 18 June 2002. Dr. Sutherland was happy to observe the set-up of offices of STC professionals with the facilities (furniture, computers and peripherals) provided by Health Canada.

Proposed Programmes

Among the approved programmes of STC in 2002, following programmes are going to be organized in near future:

1. Consultative Meeting of Programme Managers of TB and HIV/AIDS
2. Training for Regional/District level programme managers on data management
3. Two weeks modular training of trainers in TB control programme management
4. Meeting of Directors of focal reference laboratories for the project in Member Countries
5.
6.

Editor's Letter

Dear Readers,

Thank you very much for your acknowledgement on our STC Newsletter. We welcome your comments and suggestions as well, because they will help us to improve our publication. Articles related to TB/HIV/AIDS are most welcome, as the current activities at STC are mainly focused on control of this co-epidemic.

Thank you

- Editor

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P.o.Box 9517, Kathmandu,
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