



# STC Newsletter

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Inauguration of VIIth Meeting of the Governing Board of SAARC TB Centre and Workshop Relating to Research on TB and HIV in SAARC Member Countries, 26th - 29th Oct. 1997, Kathmandu, by the Hon'ble Minister of Health **Mr. Shanti Shamsher Rana**

*Director, Dy. Director and all Staff of the Centre wish our readers  
**A Very Happy New Year 1998***

SAARC Tuberculosis Centre's News Letter is published every six months, reports on the works, decisions of important meetings of the centre and recent information on Tuberculosis.

### SAARC TUBERCULOSIS PUBLICATION

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Observation of STC by Hon'ble Minister for Health, HMG, Nepal  
(see page 11 for news)



Scientific Session of the Workshop Relating to Research on TB and HIV in SAARC  
Member Countries. (see page 1 for the report)

# STC NEWS

## *Report of Seventh Meeting of the Governing Board of STC and Workshop Relating to Research on TB and HIV in SAARC Member Countries*

*(Kathmandu 26th-29th Oct. 1997)*

At the invitation of the Director, SAARC Tuberculosis Centre (STC), the Seventh Meeting of the Governing Board of the STC succeeded by Workshop Relating to Research on TB and HIV in Member Countries was held on 26th - 29th Oct. 1997. The Meeting was attended by Members of the Governing Board from all Member States and the SAARC Secretariat was represented by Ms. K. C. Namgyel, Director.

The Meeting was inaugurated by Hon'ble Minister for Health, His Majesty's Government of Nepal Mr. Shanti Shamsher Rana. Welcoming the participants to Kathmandu, Mr. Rana emphasised the need for enhanced cooperation among the Member States for prevention and control of Tuberculosis and management of dual infection of HIV and TB. He expressed confidence that a collective and concerted efforts from Member Countries will be able to help in tackling this problem effectively.

Dr. D. S. Bam, Director of STC extended a warm welcome to the delegates. The inaugural ceremony was chaired by Dr. Durga Prasad Manandhar, Acting Secretary of Health, Ministry of Health, His Majesty's Government of Nepal.

### ***Review of the Progress of the Centre:***

The Board reviewed the progress in the implementation of the decisions taken at the Sixth Meeting of the Governing Board. The Director, STC, gave an overview of the progress made in the implementation of the Calendar of Activities of the year 1997-98. The Board formulated following programme for the next year:

Programme for the July 16 to Dec. 1998:

1. Meeting of TB Programme Managers on Status and Progress of Revised Strategy of TB Control in Member Countries.
2. Training Programme for Regional TB Coordinators.
3. A meeting to review the status of action taken on recommendations made in earlier activities.
4. Workshop evolving formulation of uniform Management Information System (MIS) in Member Countries.

5. Other regular activities like collection and distribution of information, publication of STC Newsletter and other documents etc.

### ***Report on Workshop Relating to Research on TB and HIV in SAARC Member Countries:***

A two day Workshop Relating to Research on TB and HIV in SAARC Member Countries was held in Kathmandu on 28th-29th Oct. 1997. Delegates from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka participated in the Workshop. The purpose of the Workshop was to exchange experiences on research relating to TB and HIV and the effective collaboration in respect of the diagnosis and management of the dual infection of TB and HIV in Member Countries.

The Workshop had been useful in exchanging experiences on the research relating to TB and HIV. Some of the countries had identified the possible areas of collaboration between the programme managers of AIDS control and TB control. It was also observed that there is an immediate need to formulate and implement research activities in the field of diagnosis and management of this dual infection.

The Workshop began with presentation on research relating to TB and HIV made by the participating countries. After presentation of the country status the subject matter was discussed by the participants.

### ***Recommendations:***

To take a wholistic approach to this problem advocacy, training, community based service delivery and research were identified as the major areas of collaboration both at intra and inter country levels:

#### **1. Advocacy:**

A strategy, aiming at the politicians, administrators and technocrats needs to be developed so that the management activities receive adequate political commitment as well as technical and administrative support including funding. A clear conception of how both the epidemics interact and the rational steps that can be taken for more effective HIV/TB prevention and treatment need to be emphasised on the countries policy makers.

#### **2. Training:**

Basic training programmes for health workers of both AIDS and Tuberculosis need to be developed in respect of the other programme i.e. AIDS workers need to be trained in the relevant activities of TB control programme and TB workers in the important facets of the AIDS programme. The hall mark of the training would be to prepare an army of workers who are well equipped to manage the cases of HIV TB dual infection.

### 3. Community Based Service:

In SAARC region, Tuberculosis remains the most important opportunistic infection on HIV cases. DOTS imbibes direct observation of the treatment and the services are required to be taken to the door steps of the community at a place convenient to both providers and takers. It is in this context that community based service appears to be the only viable tool to tackle this menace.

### 4. Research:

a) Research in TB and HIV is a priority for NTPs. It must be linked to programme needs and coordinated between National AIDS and TB programmes. All TB and HIV research activities should be officially approved through the national health research council or its equivalent. Any joint research projects conducted by SAARC member states should be jointly developed by the two programmes.

b) Many countries have limited capability within their programmes to plan and conduct research. NTPs and AIDS programmes may benefit from assistance with; technical expertise for development of protocols and supervision; staff; and financial support. For this purpose inter/intra country and international agencies may be useful. SAARC TB Centre will provide support to TB - HIV research initiatives in the following ways:

- i) Providing platform for interaction for member states;
  - ii) Collection of information from member countries and disseminating the same;
  - iii) Preparation and review of protocols
- c) TB-HIV research needs vary from country to country. Priorities should be developed jointly by the two programmes. Testing of TB patients for HIV/AIDS is a highly sensitive issue. Routine mandatory testing of TB patients for HIV is not recommended, unless a specific beneficial intervention is sought for. Voluntary testing must include pre and post counseling with assurance of confidentiality.
- d) Possible TB-HIV research priorities include:
- i) Strengthening surveillance activities (sentinel surveillance of HIV in TB patients, if undertaken by any member country, should be done only by unlinked anonymous testing)
  - ii) Longitudinal cohort studies of the outcomes of tuberculosis infection/disease amongst people infected with HIV.
  - iii) Research on assessing the efficacy of the diagnostic tools of DOTS, in dual infection of HIV/TB
  - iv) Testing the efficiency of the treatment regimens of DOTS in cases of HIV-TB.

- v) Operational research in developing models of community based care of people with HIV and TB.
- vi) Economic studies assessing the impact of the TB/HIV epidemics.

### **Name list of the Participants**

Dr. A. K. Md. Ahasan Ali  
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Dr. G. R. Khatri  
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New Delhi, India.

Mr. Ibrahim Shaheem  
Director  
Disease Control and Prevention  
Dept. of Public Health, Maldives

Dr. Pushpa Malla  
Chest Physician  
National TB Centre, Thimi,  
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Mr. Abdul Quadir  
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Dr. Bandu Gunasena  
Chest Physician,  
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Ms. K. C. Namgyel,  
Director, SAARC Secretariat, Kathmandu.

Dr. D. S. Bam, Director  
Dr. P. Kumar, Dy. Director  
SAARC TB Centre, Kathmandu.

### **Observers:**

Dr. Ian Smith,  
WHO Advisor for NTP, Nepal.

Dr. S. B. Pande,  
Senior Researcher,  
Nuffield Institute of Health.

Dr. K. Osuga  
Chief  
JICA/HMG TB Project,  
Thimi, Kathmandu.

### ***News on Audit of STC Accounts***

A joint audit team consisting Mr. S. S. Dubey, Deputy Controller of Accounts accompanied by Mr. Jitender Kumar Jr. Accounts Officer, Ministry of External Affairs, New Delhi, Government of India and Mr. Muralidhar Tiwari, Director, Office of the Auditor General, Nepal audited the accounts of SAARC TB Centre of the Fiscal Year 1996-97 on Oct. 20, 1997.

# *Special Articles & Technical Information on Tuberculosis*

## *PRIVATE PRACTITIONERS AND TUBERCULOSIS CONTROL IN NEPAL*

\*Dr. Klaus Jochem

\*\*Dr. Shanta Pande

About 40 % of TB cases world-wide occur in South Asia (SA), of which more than half seek treatment in the private for-profit sector, including high proportions among the poor. Treatment outcomes in the private sector are poor, increasing the burden on TB patients and promoting multi-drug resistance. Many factors may contribute to low quality, including provider lack of knowledge, limited access to essential resources, economic incentives toward sub-optimal care and weak regulatory capacity of governments.

### ***TB TREATMENT IN THE PRIVATE SECTOR IN NEPAL***

- Indirect evidence only available, no studies have been carried out to estimate the volume of service or the quality care.
- Case detection in the public sector (including NGO supported districts & institutions) is estimated at 50 % suggesting use of other providers.

- A study carried out in the early 1990s, before the increased use of SCC in government facilities, showed that rifampicin distributed in the public sector accounted for only 30% of imports, 70 % were distributed through the private sector.
- Patients often shift between the private and public sectors before a final diagnosis and after treatment has been started (Durkin-Longley M, 1984)

### ***TB TREATMENT IN THE PRIVATE SECTOR IN SOUTH ASIA***

- In India, it is estimated that at least 60% of patients initially seek care in private clinics (Uplekar, 1996a, 1996b).
- In Pakistan, 80% of 152 hospitalised patients with confirmed pulmonary TB enrolled in Karachi's TB control programme reported seeking care initially from a general medical practitioner, and additional 14% sought care from consultants or hospital based physicians (Marsh, 1996).

- Similar findings were described in a study carried out among patients presenting to the Federal TB Centre in Rawalpindi, where two-thirds of patients reported that they had previously sought care from a private practitioner (ASD, 1996).

#### **WHO ARE PRIVATE PRACTITIONERS ?**

- Licensed doctors qualified in allopathic medicine.
- Licensed doctors practicing non-allopathic systems (ayurveda, homeopathy, unani).
- Licensed dispensers.
- Shop-keepers who sell drugs.
- Traditional Healers.

#### **WHY DO PATIENTS USE PRIVATE PRACTITIONERS ?**

- They provide personalised service.
- Their offices are open at more convenient times of day.
- They can offer a wide variety of preventive & curative services.
- They are often more accessible to the general population & frequently the first contact with the health care system when a person falls ill.

#### **FAILURE OF TB CARE BY PRIVATE PRACTITIONERS**

- Sputum examination generally not used for diagnosis or monitoring.
- Diagnosis mainly based on X-rays & symptoms resulting in over-diagnosis.
- Regimens rarely conform to WHO, IUATLD or NTP recommendations.

- Supervision of drug-taking poor, no directly observed therapy.
- No retrieval actions for defaulters.
- Patients are insufficiently educated.
- Records (identification, diagnosis, treatment & outcome) poorly kept.
- Cases are not reported so outcomes cannot be monitored.

#### **CAUSES OF POOR QUALITY OF CARE BY PPs**

- Lack of knowledge of current best practice.
- The absence of continuing medical education.
- Failure of public health bodies to disseminate guidelines on diagnosis & treatment.
- Poor access to laboratory for sputum microscopy.
- Lack of effective patient educational materials.
- Unavailability of user-friendly patient recording & reporting systems to facilitate patient registration, notification, follow-up & evaluation.
- No mechanism for tracing patients who interrupt treatment.
- Poor availability of quality drugs.

#### **DEVELOPING A FRAMEWORK TO DESCRIBE THE CURRENT & FUTURE ROLE OF PPs IN HEALTH CARE PROVISION INCLUDING TB TREATMENT**

*The role of the private sector in providing services of public health importance is changing:*

- In many developing countries, public resources are diminishing & a widening role for the private sector is viewed as a way of increasing the overall resources available for health.
- There is also a view that (generally speaking) private providers can offer higher quality & more efficient services.
- Patients may have greater confidence in private providers, easier access, shorter wait periods, more flexible hours & better confidentiality contribute to greater consumer satisfaction, all these may be difficult to achieve in the public sector.
- However, market failures in health care are well recognised, & the role of governments in providing or ensuring the provision of essential services, including TB treatment, was outlined in the 16th World Bank Report (1993).
- The extent to which a role for private practitioners has already been outlined for TB services & other disease control or preventive programmes (e.g. STC, Malaria, Maternal & Child Health).
- The financial, legal & professional mechanisms that regulate the private-for-profit sector today & the opportunity for strengthening these, or for providing incentives to shift behaviours & practices.
- Any conflict of interest among practitioners who work in both the private & public sector & how this might undermine policy intentions.
- Existing drug legislation & the capacity of drug regulatory authorities to register drugs, monitor distribution & regulate pricing & prescribing, especially drugs used in the treatment of TB.

*A framework is crucial for identifying those strategies most likely to improve the case management of TB patients by PPs.*

- The relative size of the private-for-profit, its organisation and practice modes.
- Health sector policy, national health goals, the direction of current health sector reform efforts and donor support.
- The intended role for private practitioners in providing health services.
- The existing relationship between professional organisations, other actors in the private sector and government health services.

***RESEARCH TO ASSESS & IMPROVE TB CARE BY PRIVATE PRACTITIONERS.***

*(according to WHO/WB Workshop, Bombay, 1994).*

- Can educational interventions improve the management of TB by PPs.
- Does an intensified NTP improve treatment practices of PPs and increase referrals ?
- Does free access to efficient smear microscopy services improve TB treatment practices of PPs.
- Can PPs be "integrated" into the NTP by offering access to free microscopy, free drugs, monitoring and evaluation in return for standard care according to the NTP ?

A **research project** for a private-public service-linkage pilot project '**Improving treatment outcomes among tuberculosis patients treated by private medical practitioners in Nepal**' has been initiated by the Nuffield Institute for Health and the National Tuberculosis Centre in Lalitpur, a medium sized city in Kathmandu valley.

#### ***Need for the Private-Public Service Linkage Pilot Project***

- Since the joint review by the HMG/WHO in 1994 a clear national policy and strategy for intensified national tuberculosis programme was developed. The focus was to implement an intensified tuberculosis control programme through the existing primary health care delivery system.
- A five year plan was developed, DOTS was adopted as a national policy in 1995, and the DOTS implementation began in early 1996.
- Since the review the National Tuberculosis Programme (NTP) has achieved a lot. Political commitment has been obtained, uninterrupted drug supply is available well established recording and reporting system is in place and adequate manpower has been trained. The national cure rate has increased steadily over the last 2 years, and is now 58% with a cure and completion rate of 76 %.
- With a well developed strategy for tuberculosis control in the public sector in place, now is the appropriate time to focus on the private sector, where at least 50% of the TB patients in urban and peri-urban

areas seek treatment from private - for - profit medical practitioners.

#### ***Project Objective:***

***The overall aim of the project is to contribute to the development of strategies of improving the treatment outcomes of tuberculosis patients diagnosed and treated by licensed private medical practitioners.***

The ***Specific Aim*** of the project is to develop a protocol for a service linkage pilot project between private practitioners and the public sector facilities in Lalitpur municipality.

#### ***The issues that would be explored would include***

- Content and format for orientation training and continuing education of PPs.
- The adoption for standard case-management protocols.
- Mechanism for providing sputum smear microscopy services for privately-managed patients.
- Use of standardised treatment cards/registers for patients follow-up.
- Mechanism for identifying and tracing patients who interrupt treatment.
- Fee schedules for privately managed patients and the use of incentives to encourage referral to public sector.
- How to preserve patients choice of providers for diagnosis and treatment follow-up.
- Conditions under which free drugs would be provided by NTP to privately managed patients.

- Materials and mechanisms for providing appropriate education to privately managed patients.

### ***The Main Output of the Project:***

- Would be a detailed protocol and action plan for a private-public service linkage project that is consistent with NTP policies and has broad support from the private practitioners in the pilot area.
- The protocol will also serve as a guide line for INGO/NGO in Nepal who may be planning similar initiatives with private medical practitioners in their areas.

### ***Methodology:***

- A full time researcher has been employed by the Nuffield Institute of Health.
- A working group has been formed under the chairmanship of the NTC Director.
- The members of the working group include prominent private practitioners (PPs), local public health officials, administrators from the main referral hospital, the WHO NTP advisor, representative from the municipality and the Nepal Anti-TB Association.
- The working group will identify the practical issues that need to be addressed in developing service linkages.
- The issues identified by the working group and the options to address them will be presented by the working group to a wider forum in a workshop.
- The participants at the workshop will include private practitioners practicing in Lalitpur district, directors of INGO/NGOs

working in TB and health and policy advisors from national and international agencies with special interest in TB.

- The objective of the workshop will be to obtain consensus on the most feasible mechanisms for service linkage proposed by the working group.

### ***REFERENCES:***

*Ahmad M. and M. Khan (1996)*

- Private Medical Practitioners and Tuberculosis Control. Pakistan Journal of Health 33: 19-22

*Aljunid S. (1995)*

- The Role of Private Medical Practitioners and their Interactions with Public Health Service in Asian Countries. Health Policy and Planning 10(4): 333-349.

*Association for Social Development (1996).*

- Qualitative Study on Tuberculosis Patients at the Tuberculosis Centre, Rawalpindi, ASD, Islamabad.

*Berman P. and L. Rose (1996).*

- The Role of Private providers in Maternal and Child Health and Family Planning Services in Developing Countries. Health Policy and Planning 11: 142-55.

*Bhat R. (1993).*

- The Private-Public Mix in Health Care in India. Health Policy and Planning 8: 43-56.

*Durkin-Longley M. (1984)*

- Multiple Therapeutic Use in Urban Nepal. Soc. Sci Med 19(8): 867-872.

*Hong Y. P., D. W. Kwon, et. al. (1995).*

- Survey of Knowledge, attitudes and practices for tuberculosis among general

practitioners. *Tubercle and Lung Disease* 76: 431-435.

Jamil M. (1996).

- Satisfaction of Pulmonary TB Patients Attending Private Medical Practitioners and Government Health Facilities in Gowalmandi Lahore. (DPH Thesis, Supervisor, Maqsood Ahmad). Lahore, Institute of Public Health.

Marsh D. R. Hashim et al. (1996).

- Front-line Management of Pulmonary Tuberculosis and Analysis of Tuberculosis and Treatment Practices in Urban Sindh Pakistan. *Tubercle and Lung Disease* 77: 86-92.

Qari M. (1996).

- Situation Analysis of Pulmonary Tuberculosis Case Management by Private Medical Practitioners of Gowalmandi Area, Lahore. (DPH Thesis, Advisor: Maqsood Ahmad). Lahore, Institute of Public Health.

Swan M. and A. Zwi (1996),

- Private Practitioners and Public Health: Close the Gap or Increase the Distance. London, Health Policy Unit, London School of Hygiene and Tropical Medicine.

Uplekar M. W. and D. S. Shepard (1991).

- Treatment of Tuberculosis by Private General Practitioners in India. *Tubercle* 72: 284-290.

Uplekar M. W. and S. Rangan (1993)

- Private Doctor and Tuberculosis Control in India. *Tubercle and Lung Disease* 74: 332-337.

Uplekar M. W. and S. K. Juvekar (1994).

- Private Practitioners in Tuberculosis Control. *Foundation for Research in Community Health (FRCH) Newsletter* 8(5):6-8.

Uplekar M. S. Juvekar et al. (1996a).

- Tuberculosis Patients and Practitioners in Private Clinic. Bombay, Foundation for Research in Community Health.

Uplekar M. and S. Rangan (1996b).

- Tackling TB: The Search for Solutions. *Foundation for Research in Community Health*.

WHO/WB (1994).

- Protocol Development Workshop to Assess the Role of the Private Sector in the Management of Tuberculosis in High Prevalence Areas. Bombay, India.

WHO/World Bank/Foundation for Research in Community Health (FRHC).

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## ***Wel-Come News:***

### ***STC Visits:***

◇ A team of Board Member consisting, **Dr. A. K. Md. Ahsan Ali, Bangladesh; Dr. Tenzin Penjore, Bhutan; Dr. G. R. Khatri, India; Mr. Ibrahim Shaheem, Maldives; Dr. Pushpa Malla, Nepal; Mr. Abdul Quadir, Pakistan; Dr. Bandu Gunasena, Sri Lanka** visited SAARC TB Centre on 28th Oct. 1997. The Director, STC welcomed the Board Members at the STC premises.

◇ Hon'ble Minister of Health Mr. Bipin Koirala, accompanied by the Secretary of Health, Mr. Shree Ram Poudel, Act. Director General, DGHS, Dr. K. B. Singh Karki, visited SAARC TB Centre during the visit of National TB Centre on 21st. Dec. 1997. The Director, STC highlighted the role of SAARC TB Centre in Tuberculosis control in Member Countries.

## ***Proposed Programme of STC***

- ◇ The SAARC Training Programme for Strengthening IEC Activities with Special Emphasis on TB and HIV to be held in India. (Feb. 1998)
- ◇ A Five Day Training of Trainers for TB Programme Managers in Maldives/STC. (April 1998)
- ◇ Seminar on Socio-anthropological Research Studies in the Field of Tuberculosis. (May-June 1998)

## ***Letters to the Editor:***

Thank you very much for sending us the *Readers' Views on STC Newsletter* form which was enclosed with the STC Newsletter, Vol. VII January 1997. The suggestions and comments expressed in this form are very much important for us to improve our ensuing volume of STC Newsletter. Among the senders of the form we have given some name and address below. We request the friends those name could not be included due to shortage of space but ensure that their valuable suggestions are source of our inspiration. Kindly keep on guiding us through your communication.

- Dr. Nisar Khan,  
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*-Editor*