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Tuberculosis Control in the South-East Asia Region

*Report of the Sixth Meeting of
National TB Programme Managers,
Kathmandu, Nepal, 19–22 October 2000*

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1. INTRODUCTION

Tuberculosis and HIV/AIDS are both major health concerns in the South-East Asia Region with nearly 38% of the global burden of tuberculosis and 17% of the world's cases of HIV/AIDS. HIV has now begun to spread from population groups with high risk behaviour to the general population and multi-drug resistant strains of tuberculosis have emerged. At the same time, the Region has made considerable progress with tuberculosis control; DOTS is now available to over 40% of the population, while National AIDS Control Programmes have been set up in all Member Countries. WHO support is now focussed on strengthening country capacity to further accelerate control efforts against both disease epidemics. Recognizing the need for closer collaboration between National TB and HIV/AIDS Control programmes, WHO/SEARO organized a joint one-day meeting during the annual meeting of country staff from both control programmes at Katmandu, Nepal between 16-22 October 2000. The meeting co-hosted by His Majesty's Government of Nepal, was attended by national programme staff from all the SEAR Member Countries, the SAARC Tuberculosis Centre, UNAIDS (Thailand) and WHO staff from the STOP TB Initiative, SEARO and country offices.

The specific objectives of the meeting were:

- (1) To discuss HIV/TB co-infection in the SEA Region including common concerns and issues and identify mechanisms for collaboration between the two programmes;
- (2) To review opportunities, constraints and progress made with TB control in Member Countries during 1999-2000;
- (3) To identify mechanisms for intercountry and intersectoral collaboration, and
- (4) develop strategies and plans towards achieving universal coverage in the Region with DOTS by 2005, while simultaneously ensuring quality assured services and regular drug supplies.

2. INAUGURAL SESSION

The meeting was inaugurated by Dr B. D. Chataut, Director General Health Services, His Majesty's Government of Nepal. In his address, he highlighted the threat posed by HIV and TB to progress made in the Region and to the hard-won gains in child survival and life expectancy, especially among the poor and marginalized. TB had emerged as the major infectious killer in the Region and HIV the second leading cause of death worldwide. He therefore appreciated the initiative taken to jointly address these two major health concerns in the Region. The multiple barriers to combating these two illnesses required a multisectoral response. However, he pointed out, the window of opportunity was rapidly closing. Encouragingly, international attention is now focussed on these twin challenges; several partners and stakeholders have responded, the prices of anti-tubercular and anti-retroviral drugs have been halved, and DOTS had made a significant impact both at the global and regional levels. He concluded by reiterating his Government's support to the TB and HIV control programmes and wished the delegates a very successful meeting.

Dr Klaus Wagner, WHO Representative to Nepal, welcomed all the distinguished delegates and read out the message from Dr Uton Muchtar Rafei, Regional Director, WHO/SEA Region. He recalled the deliberations of the recent meeting of Health Ministers at Kathmandu and the priority they had accorded to the control of TB and HIV. The linkages between these infections and poverty were a challenge not only to the health sector but also to our communities. A broad alliance of partners is key to effectively addressing constantly changing environments and to meeting additional demands on already over-stretched resources. He alluded to the summits that remained to be conquered, but concluded that the Region had made considerable progress and that collective efforts would prevail.

Dr Vijay Kumar, Director, CDS, WHO/SEARO reiterated that the first steps taken towards coordinating activities between HIV and TB would be carried forward through sharing concrete examples of work and progress in the Region. He highlighted the various commonalities between HIV and TB; that the two diseases targeted the poor and the vulnerable, that both required prolonged care and community participation to combat and most importantly, that both affected the active workforce in countries in the Region. While there

were several managerial issues involved, the value of technical expertise had to be recognized and promoted; this meeting would provide a forum to develop effective strategies to enable the peoples of SEAR Member Countries to enjoy better health and continue to contribute to development within the Region.

Dr Jai P. Narain, Regional Adviser, HSI/STB, SEARO/WHO explained the objectives of the meeting. Dr D. S. Bam, Director, National Tuberculosis Centre, Nepal and SAARC TB Centre was nominated as Chairperson, Dr Supachai Rerks-Ngarm, Senior Expert in Preventive Medicine, Ministry of Public Health, Thailand as Co-chairperson and Dr Tapas Gurung, Programme Manager, National TB Control Programme, Bhutan as Rapporteur.

In his opening remarks, the chairperson appreciated the initiative taken by WHO/SEARO in arranging a common forum for discussions between staff from the two disease control programmes in Member Countries. Referring to the memorandum of understanding recently signed between WHO and SAARC for formal collaboration between the SAARC TB Centre at Kathmandu and WHO, he said this would considerably facilitate collaborative efforts in the Region.

3. OVERVIEW OF THE GLOBAL AND REGIONAL TB SITUATION

Progress made in the 1990s has resulted in DOTS becoming available to 21 percent of TB patients in 119 countries around the world today. Concurrently, external assistance for TB control in less developed countries has increased from US\$ 16 million to US\$ 125 million currently; money for TB research has increased from US\$ 20 million to US\$ 125 million, while drug costs have come down from US\$ 40-50 to less than US\$ 10-20. Yet, each year, upto 8 million new cases of tuberculosis occur, leading to two million deaths from the disease. Globally, 16 to 20 million people suffer from active tuberculosis. HIV has fuelled the TB epidemic and poor TB control programmes, drug resistance.

Technical expertise had been the cornerstone of TB control efforts earlier; changing environments now called for additional skills-managerial and

leadership. Political and community support are crucial for scaling up and sustaining efforts; social mobilization is key for future success.

The Region faces several challenges in expanding DOTS effectively. The importance of involving other health sectors such as private providers and medical academia must not be overlooked. The successful delivery of DOTS services through NGOs in Bangladesh, and in Nepal through village and district development committees are examples of mobilizing resources and tapping potential strengths in communities. Through mobilizing other sectors such as the military, police, prison systems and large employers such as the railways, many countries have been able to provide services upto the periphery and in very remote areas. Similarly through developing trust and developing schemes that ensure feasibility and accountability, the strengths of the private sector could be harnessed.

The Stop TB Initiative coordinates an expanded global partnership against this disease of poverty that will ensure that TB patients all over the world have access to treatment and cure as a basic human right. It pledges to protect vulnerable populations, especially children, from TB and multi-drug resistant TB and to reduce the social and economic toll that the disease exerts on families and communities. The Stop TB governance structure would be in place by November 2000, followed by a global investment plan and global TB fund by March 2001. The next annual STB partner forum will be held in April 2001. At the global level the Stop TB Initiative will assist through creating global partnerships, advocating policy reform among international agencies, coordinating resource mobilization, promoting research for new tools, and in monitoring and feedback.

Similar regional and country level strategies are envisaged; it is very important to establish interagency coordinating and technical advisory committees in the Region. At the country level, it is expected that the next five year plans would be in place by 2001 and that the 22 high burden countries will make rapid progress towards achieving global targets by 2005. While planning in individual Member Countries would, necessarily vary, it would be essential to expand beyond health to other sectors, improve donor coordination and institute rigorous monitoring through programme reviews every 2-3 years. Advocacy, social mobilization, reliable and consistent drugs and supplies and capacity-building are all equally required to stimulate and

strengthen the health sector. Competence to efficiently utilize increasingly available resources and to respond to health sector reform must be developed. The principles of the global TB fund are to rapidly respond to additional resource requirements in a flexible manner; to provide resources for agencies and NGOs at global and country level to develop capacity, and to catalyze social mobilization in order to simultaneously create a demand for services in order that global targets be reached. TB drug shortages in the past have been due to limited resources, increasing demands, and poor governance. The global drug facility will assist in procuring high quality anti-TB drugs for countries with greater economy.

The tools of TB control are technical expertise, social and political mobilization and rigorous monitoring; these must be sustained, while new tools are developed to help eliminate TB. Effective use of current tools would reduce mortality from TB by half if global targets are reached by 2005 and sustained for the next five years.

Within the Region, considerable emphasis has been laid on rapidly expanding DOTS without compromising on quality. Advocacy for enhanced support to TB control has been carried out at various fora for increased commitment. DOTS coverage in the Region has increased from less than 10 percent in 1998 to over 40% at present. While small and medium burden countries have achieved or are expected to achieve 100 percent coverage with DOTS by 2002, the larger and higher burden countries will do so by 2005. Treatment success rates in areas under DOTS in the Region are around 80 percent. Case detection rates in the Region are still low at an overall 30 percent with only the smaller countries reporting higher rates. Forging partnerships and improving public awareness to enhance case detection and supporting operational research to make DOTS services more convenient, accessible and effective are priorities in the Region.

WHO will continue to strengthen TB control through advocacy at various policy fora, coordination of intersectoral and interprogramme partnerships, technical support for capacity-building through training, surveillance and operational research and through assistance in programme planning, monitoring and evaluation and in ensuring quality laboratory services and drugs.

4. ISSUES IN TB CONTROL

There have traditionally been a variety of health care providers – the public health facilities, private institutions, private practitioners, large scale employers' health facilities, NGOs and traditional healers. Quality TB control services would imply an accessible, acceptable system of delivering diagnostics, treatment and support facilities in order to maximize utilization of services through a patient-centred approach. The important thing is to ensure that DOTS is delivered in the most optimal way.

Major constraints to the provision of quality TB control services have been the lack of finances, inadequate staffing, inefficient diagnostics, drug shortages, poor primary health care networks and a performance rather than a patient-oriented approach. Sociocultural and economic barriers further hinder patients from seeking care for TB.

4.1 Ensuring Quality DOTS

It was in response to these recognized constraints that the DOTS strategy was developed and subsequently promoted. It emphasizes the need for accurate diagnosis and appropriate use of drugs under direct observation by an acceptable DOTS provider; thus simultaneously ensuring compliance and user-friendliness. Programme management issues such as political commitment for resources, the provision of uninterrupted drug supplies, and accountability were built into its core components. Objective indicators to monitor progress under the strategy were developed and continue to be strictly measured; as a result, the strategy has yielded treatment success rates over 80% in countrywide control programmes all over the globe.

There has been rapid progress with DOTS expansion in several countries; but in some countries the quality of implementation has not been maintained, as indicated by shortfalls in treatment outcomes. Poor quality DOTS is worse than no DOTS at all. Hence the need to pace expansion with due attention to good implementation cannot be overemphasized. Regular assessment of performance with attention to the quality and quantity of services and the identification of actual strengths and weaknesses is essential in order to target efforts towards problematic areas though improved

commitment, particularly at the policy level. The indicators need to be further improved and refined in order to better assess the actual quality of services provided. Which indicator is used at a particular phase of DOTS implementation is also important to determine progress, and has implications for future expansion. Paying equal attention to expanding while simultaneously maintaining quality is the best approach to achieve maximum impact. This also requires that resources be made available in consonance with each phase. The more cautious approach is to ensure quality before allowing further expansion; this minimizes any negative impact such as the emergence of multidrug resistance through poor implementation.

Several examples for improving quality through collaboration with other sectors such as private providers and through the active involvement of communities exist; these need to be replicated through formulation of guidelines which balance accessibility and convenience with accountability.

Thus, building national capacities through enhanced political commitment, mobilizing more resources, instituting better drug procurement procedures, ensuring rigorous supervision and monitoring and development of local solutions for local problems through operational research is called for in the South-East Asia Region.

4.2 Community Mobilization; Communication Strategies for TB Control

Although an excellent strategy to treat tuberculosis is available, case detection globally is low at around 25%. The challenge therefore, lies in expanding DOTS services while at the same time creating and sustaining the demand for DOTS to reach and exceed the 70% case detection target. Communication is a means of getting support from policy-makers for TB control and of achieving behaviour change through public education and information. Simple messages about tuberculosis and DOTS would greatly enhance the utilization of DOTS services, improve compliance, reduce stigma and increase community participation in DOTS, thus moving towards achieving the desired outcomes in a sustained programme. Greater access, increased utilization of DOTS services and better awareness would lead to increased compliance and larger numbers of cured patients.

In order to do this effectively, the gaps and barriers in accessing and delivering DOTS and in correctly channelling the appropriate message to the target populations in the community and in other sectors must be identified through operational research. Messages need to be simple, positive, action-oriented and linked to service delivery i.e. the creation of demand must parallel the availability of services. Competing and conflicting interests, concerns, and backgrounds must be considered to make optimal use of the wide array of communication channels now available.

DOTS offers unique possibilities for interpersonal communication between patients and health providers; TB programmes must devise, with experts, a communication strategy within national control programmes to make effective use of this high-impact resource.

Social marketing approaches are required to "sell"DOTS as a franchisable and marketable strategy which could, in fact, be a portal to provide services at family and individual level not only for TB, but for other health concerns.

4.3 Building Partnerships

The role of medical schools in national control programmes cannot be denied. Strategic areas for involvement are advocacy, training, service delivery and research. They have a considerable role to play as opinion makers among medical professionals as well as among policy makers and media. By ensuring optimal curriculum content and by disseminating updates in medical practices, they could contribute to a pool of health professionals knowledgeable and up-to-date in the best practices. In the area of service delivery, they could assist through providing tertiary level care and technical support to national programmes, develop strategies for combating multi-drug resistance and facilitate community-based care for people with HIV/AIDS and TB. Being at the cutting edge of research, they could contribute in the development of policy, in monitoring progress, while at the same time improving on existing practice. In order to do these effectively however, they must be involved in programme planning from the inception and be kept informed of the training needs and priorities of disease control programmes. Mechanisms to resolve the dichotomy that exists in perceptions between the individualized specialty approach of medical academia as opposed to the

broad based programme approach need to be developed and constraints on effective collaboration addressed through a process of continuous dialogue. These were some of the conclusions drawn from an informal intercountry consultation organized in July 2000 by WHO/SEARO on enhancing the role of medical schools in HIV/STI and TB control, where several examples of successful collaboration were highlighted. Recommendations included (1) holding national level meetings to define the role of medical institutes in national TB control programmes; (2) setting up of DOTS centres in medical institutes to teach and practice the policies of the national programmes; (3) development of optimal training materials for pre and in-service training based on national guidelines; (4) documentation and replication of successful initiatives undertaken in the Region, and (5) participation by medical schools in National TB Committees and task forces comprising of various stakeholders.¹

Effective involvement of medical schools is expected to have a considerable impact in view of the reach of medical academia among communities and the large and well utilized private health sector in the Region.

4.4 Public-Private Collaboration

The private sector plays a considerable role in the treatment of patients seeking care in the South-East Asia Region; between 60-80% of patients access private health providers who are often their first point of contact. To develop public-private service linkages that are consistent with the goals of national control programmes, the strengths of the private sector in terms of accessibility, flexible timings and rapport with patients must be utilized to increase the reach of services. Experiences from pilot projects involving the private sector have shown that effective coordination requires frank ongoing dialogue, the development of trust between the public health sector and private physicians, and a clear delineation of responsibilities. Where appropriate mechanisms have been established, an increase in self-referral and cross-referrals to public health services have resulted, with an increase in case-finding and improved treatment outcomes. The example of the Mahavir

¹ This report is available with the HSI & STB Unit, WHO Regional Office for South-East Asia, Indraprastha Estate, Ring Road, New Delhi (India)-110 002

Trust Hospital in Hyderabad, India, the ACT project in Chennai, India; the medical practitioners promoting and practising STD syndromic management in Sri Lanka; the pilot project in Lalitpur, Nepal and others show that private medical practitioners are willing and keen to participate in national responses to combat diseases. This is of special significance in the large urban areas in the Region with their rapid population growth, constant migration, higher burden of disease, poor health infrastructure, and free availability of over-the-counter drugs. It is essential therefore to analyze the process of collaboration with the private sector and to develop strategies to replicate successful models in order that public-private collaboration be rapidly increased in the Region.

4.5 Multi-drug Resistance Surveillance

Data on multi-drug resistance in the Region is not uniformly available on account of a lack of adequate facilities to undertake nationwide studies. Results from the global drug resistance surveillance completed in 1999 show drug resistance levels to be at around 2% in the Region. Multi-drug resistance therefore does not yet pose a threat to the practices of current national programmes as reflected by the low failure and high retreatment success rates. However, it is essential to determine baseline levels and to continually monitor trends in drug resistance as indicators of both programme performance in DOTS areas as well as to assess TB control in areas not yet covered by DOTS. The consequences and potential impact of high rates of MDR-TB are well known; cures cannot be effected and transmission countered without the use of more toxic, longer and less effective regimens, the costs of which cannot be borne by national programmes. A network of quality controlled laboratories which follow standardized methodologies and internationally accepted protocols is therefore being established within the Region for countrywide drug resistance surveillance. An intercountry training programme on Drug Resistance Surveillance Methodology was held in Bangkok from 21-25 August 2000 and a network of national laboratories will be set up under a supranational reference laboratory in the Region. The results would be useful to advocate for better implementation of TB control, help identify regional differences and high risk groups and plan for and measure the impact of future interventions.

4.6 Operational Research Priorities in TB Control

Public sector investment in research for tuberculosis control has increased from US\$ 19-33 million in the early nineties to US\$ 125 million currently; yet this represents only 0.3% of the global annual health research spending. However, the odds, on a significant return on investment in research in TB, especially in operational research, in developing countries, have never been higher; the best example of this being the DOTS strategy itself. This has tremendous implications for the South-East Asia Region where most of the challenges and opportunities for TB control lie. The Region however, faces several constraints that prevent the undertaking of meaningful operations research - lack of resources and commitment to research, insufficient capacity for quality research, the absence of links between researchers and control programmes and a perception that success in disease control is linked solely to biomedical and technical advances. The Region requires the proactive development of an environment conducive to the undertaking of operational research, technical competence, structures mandated to carry out research and support to translate results into policy.

Several initiatives in operational research have been undertaken in the Region with a view to accelerating DOTS expansion, securing partnerships with other sectors and improving case management including treatment observation. Priority areas for operational research were identified by National TB Programme Managers in Member Countries. Based on the issues identified, WHO/SEARO has initiated the development of generic protocols and operational research at identified centres. Support for multicentric studies to evaluate the potential of these initiatives for wider application and replication of successful models should follow. Traditional medicine systems also need to be investigated and their potential evaluated.

5. COLLABORATION BETWEEN TB AND HIV PROGRAMMES

5.1 Overview of TB/HIV Situation in the SEA Region

An overview of the situation of TB and HIV in the Region shows that the Region accounts for a considerable burden of 8 million active cases of tuberculosis and 5 million cases of HIV/AIDS. Both primarily affect individuals

in the age group between 15 and 49 years, thus severely affecting social and economic progress in the Region. While higher rates of infection are reported among intravenous drug users and commercial sex workers, HIV is beginning to spread to the general population in many parts of the Region. High risk behaviour coupled with the vulnerability resulting from migration and population movements for economic and other reasons spur the spread of HIV and secondarily of TB. Almost 50-70% of AIDS patients in the Region have tuberculosis. HIV is the most important risk factor for progression from infection to active tuberculosis; concurrently, tuberculosis is the leading opportunistic infection among the HIV-infected persons and the leading cause of death among people living with AIDS.

The implications of this for the national control programme are increased morbidity and mortality, increasing demands on already over stressed health services, lower cure rates and the emergence and transmission of multi-drug resistant TB. This underscores the need for rational and effective approaches. The DOTS strategy has proved effective for the treatment of tuberculosis among those affected by HIV, both extending the life span and the quality of life of those patients. IEC campaigns have major role in bringing about behaviour change and in improving the utilization of health care services. Tuberculosis had shown rising trend in areas of high HIV prevalence in the Region such as in northern Thailand; intensive efforts directed towards public education, prevention and control have now resulted in a fall in the incidence of tuberculosis.

5.2 Collaboration Between TB and HIV Control Programmes

Possible areas of collaboration between national TB and HIV control programmes are advocacy, policy formulation, training, programme planning and evaluation, surveillance and research, and the introduction of effective community-based care.

Providing DOTS to HIV-positive patients prolongs their lives and reduces the risk of transmission of TB. Voluntary counselling and testing reduces the risk of HIV behaviour among TB patients and therefore of HIV infections among them. Areas with high HIV prevalence should therefore be rapidly included under DOTS. Constraints such as the lack of sufficient centres for counselling, and for the diagnosis and treatment of tuberculosis, the absence

of coordination between the two programmes at country level in terms of the services available should be addressed. TB preventive therapy should be a part of the care package for people living with HIV; however, it must be ensured that there are adequate counselling facilities and sufficient capacity within national control programmes to meet the additional demands that this would generate. Clear guidelines for voluntary counselling and testing for co-infection need to be established and the implications carefully considered, especially in view of the current low tuberculosis case detection rates, the added costs involved and the possibility of a dual stigma further reducing health seeking behaviour, in addition to the technical difficulties in advocating preventive therapy in this group of patients. Operational research to assess the effectiveness of the diagnostic and treatment algorithms currently being used for TB/HIV and to assess the efficiency of currently recommended preventive treatment for TB among the HIV-positive needs to be established. The Regional Office has initiated several collaborative activities- efforts have been made to involve medical colleges, the private medical sector, regional associations such as SAARC to develop joint plans of action and to support cross-border activities.

5.3 Country Team Presentations and Discussions on Collaborative Activities

Several examples of collaboration between the TB and HIV control programmes exist within the Region. In Myanmar 20 TB/HIV sentinel surveillance sites were established with the objectives of offering counselling and preventive care while measuring the prevalence of co-infection in the community. HIV prevalence among TB patients has risen from 1.7% in 1995 to 4.7% in 1997 with a preponderance among males. With the institution of DOTS for the HIV co-infected, cure rates and survival rates have tripled. Following this study, collaborative programmes were established in 15 townships and intensive IEC on home care and condom promotion and on DOTS for TB patients together with integrated teaching on TB and HIV/AIDS in teaching institutes was begun. The sharing of technical expertise, IEC activities, logistics, advocacy for resource mobilization and resources is expected to benefit both programmes.

In Thailand, DOTS has been extended to HIV affected people along with the prevention and care package already available to them. Counselling and screening for tuberculosis among people with HIV have led to earlier detection and higher treatment success rates. Priority is now being given to further improve and expand DOTS services, infrastructure and coverage. More intensive public education is required to address misconceptions about tuberculosis in communities and especially among patients.

An integrated training curriculum for all communicable diseases has been developed in Bangladesh. It is felt that it is equally important to include the private sector and that this would ensure long-term sustainability. In Nepal, HIV testing accompanied by counselling is being offered at five DOTS centres.

In Indonesia, surveillance to assess the prevalence of TB among HIV-positive people and vice-versa and integrated modular training for health workers and health promotion to increase case finding have been initiated.

In India, combined activities in the areas of advocacy and training and the provision of additional staff to provide services jointly for HIV and TB have been initiated.

5.4 Massive Effort Against Diseases of Poverty

The understanding that good health must be at the centre of the economic development has resulted in increasing political commitment for sustained funding to the health sector, especially against the diseases of poverty. The goals of this initiative are to mitigate high mortality diseases linked to poverty through more effective use of vaccines, drugs and commodities currently available through diversified health services, i.e. a mix of Government, NGOs, private providers, employers and others, so as to reach the world's poorest. The initiative will also stimulate research and development for better use of existing tools and of new technologies. The implications of this for the South-East Asia Region are significant in view of the fact that most challenges and opportunities to improve health care among the poorest and most vulnerable lie in this Region.

6. ROLE OF REGIONAL ASSOCIATIONS IN TB CONTROL

Regional associations such as SAARC and ASEAN have a considerable role to play in the disease control efforts through providing a common forum for regional multilateral and bilateral dialogue on common concerns. They also provide opportunities for extending activities beyond health to other ministries such as those of foreign affairs, trade and planning, in accessing resources through additional mechanisms such as through trading partners, and in establishing intercountry collaborative activities especially in border areas.

SAARC had established a regional tuberculosis centre in 1993 at Kathmandu to coordinate TB control efforts in the Region, especially in the areas of documentation and dissemination of information, advocacy, monitoring, drug resistance surveillance, research and capacity-building. Several initiatives have been undertaken to address constraints to DOTS implementation in the Region and collaborative activities between Member Countries and international agencies involved in TB control in the Region have been established. The centre plans to develop a regional strategy and assist in country-specific planning for collaborative activities between HIV/AIDS and TB control programmes and establish a regional database and reference laboratory for tuberculosis and HIV/AIDS in close collaboration with other partners such as WHO and Canadian International Development Agency (CIDA).

The ASEAN Sub-Committee on Health and Nutrition is currently addressing issues related to the diseases of poverty including HIV, TB and malaria. Memoranda of understanding have been signed with various partners and an ASEAN task force on AIDS established. A joint common plan with Member Countries is being developed for nine identified priority areas for TB control with focal points in the various Member Countries.

7. HIGHLIGHTS OF PROGRESS MADE IN MEMBER COUNTRIES AND MAJOR PRIORITIES

7.1 Bangladesh

Achievements

There has been much progress in Bangladesh since the DOTS strategy was launched in November 1993. Health sector reform has provided an

opportunity to strengthen TB control through integration into the Essential Services Package (ESP) together with the Leprosy Elimination Programme. The benefits include sharing of activities such as training, surveillance, reporting, monitoring and Information, Education and Communication (IEC). The successful TB information system developed could be retained in the central government management information system. Under the NTP 40% of the country coverage is in collaboration with several NGOs through memoranda of understanding with the Government. Strong political commitment and active resource mobilization have contributed to the success of DOTS implementation in the country. DOTS coverage now extends to all 460 rural thanas, covering 95% of the population. Treatment success is around 80%.

Challenges

Case detection, however, is still low and should improve through planned new partnerships with the private sector, medical colleges, industry and involvement of urban community groups. The challenge of implementing TB control in the large urban metropolises remains. Targeted advocacy to create additional linkages is critical for sustaining current TB control efforts and for continued expansion. Ensuring secure anti-tubercular drugs under the essential services package requires streamlining of procurement procedures and inflow of resources for tuberculosis control. Mechanisms for quality assurance of laboratory services, anti-TB drug resistance surveillance and reinforcement of management and supervisory capacity have to be strengthened.

Major Priorities:

- Resource mobilization and establishment of efficient procurement procedures to ensure regular drug supplies
- Technical assistance is required for:
 - Developing management and supervisory capacity;
 - Establishing a national reference laboratory;
 - Establishing TB drug resistance surveillance, and
 - Planning for training and for reviewing teaching on TB and STI control in medical schools.
- Establishing DOTS in urban areas;
- Behaviour change communication strategies;

- Establishing quality control system for microscopy at peripheral level, and
- Operational research: optimizing TB control within the health system reform.

7.2 Bhutan

Achievements

DOTS was implemented nationwide by 1996. Because of its hilly terrain, Bhutan has utilized a strategy of hospitalization throughout the intensive phase of treatment. In recent years, an increasing proportion of smear-positive cases has been diagnosed, and cure rates have been improving consistently with a success rate of more than 90%.

Challenges

Areas that need to be addressed are establishment of regular recording and reporting from the district to the central level, in-service training of health personnel and increased community involvement. Default tracing mechanisms need to be strengthened in view of the considerable internal migration among patients registered with the national programme. Bilateral and multilateral consultations to address the issue of cross-border migration of patients enrolled in the NTP would improve programme implementation.

Major Priorities:

- Efficient district level recording and reporting systems;
- Management and supervisory capacity-building;
- Optimizing DOTS delivery in remote areas;
- Establishing quality control for microscopy services, and
- Addressing TB control in border areas and in migrant populations.

7.3 DPR Korea

Achievements

The country commenced DOTS implementation in 1998. DOTS now covers one-third of the population in DPR Korea. Complete coverage is expected by

2002. Initial treatment monitoring is being carried out; sputum smear conversion rates of over 80% have been achieved. National guidelines for TB control have been developed and training of programme staff using standard training modules is under way.

Challenges

Decentralization of DOTS to ri - and dong level is essential; mechanisms for efficient distribution of drugs, recording, reporting and follow-up procedures have to be established. The main constraints have been a lack of resources to do this effectively - there have been shortages of both supplies and drugs in the past and of a sufficient number of trained staff to undertake follow-up, recording and reporting and supervision.

Major Priorities:

- Funding for country-wide expansion of DOTS;
- Training staff at all levels for planned expansion;
- Mechanisms to sustain inputs especially drugs and reagents for microscopy;
- Management and supervisory capacity-building;
- Decentralization of referral and treatment observation to ri - and dong level, and
- Strengthening quality assurance and coordination mechanisms.

7.4 India

Achievements

Following a review of NTP in 1992, DOTS was introduced in 1993 through the Revised National Tuberculosis Programme (RNTCP). Large-scale implementation began in 1998; a comprehensive review in early 2000 found the implementation of the RNTCP successful, with nearly a quarter of a million cases having been put on treatment. The national programme plans to cover 300 million people by the end of year 2000. Success is attributed to the availability of sufficient funding being channelled through the District Tuberculosis Control Societies, sound technical and training policies and intensive monitoring and supervision. Other key factors have been the

innovative use of patient-wise boxes containing the entire course of anti-tubercular drugs and the establishment of peripheral tuberculosis units to improve accessibility. Major external funds are from the World Bank, while the British Department for International Development (DFID) and the Danish International Development Agency (DANIDA) provide support in two large states.

Challenges

India carries 30% of the global burden of tuberculosis. The requirements for effective countrywide DOTS are considerable, in view of the size of the country, the large and heterogeneous population, and the varying health infrastructure in the several states of the Indian Union. Improving services in the urban areas with rapidly expanding populations, large numbers of migrants and poorly developed infrastructure is a challenge. Collaboration with the large private sector and other health facilities currently treating a substantial proportion of patients with TB is required. Partnerships with other sectors such as the railways, defense, central government health services, employees state insurance and a few medical colleges have begun. Pilot private sector projects involving medical practitioners and NGOs are in place and have shown success.

Attention is being paid to ensuring resources and planning effectively for phased expansion to all states while simultaneously maintaining quality. Greater political commitment for adequate resources, both financial and technical and for decentralizing to the states is required.

Major Priorities:

- Nation-wide expansion in a phased manner while simultaneously maintaining quality services through effective monitoring and supervision;
- Improving DOTS services in urban areas;
- Strengthening management capacity at the state level;
- Decentralizing managerial aspects of programme implementation to selected states, and
- Ensuring appropriate advocacy for DOTS at all levels.

7.5 Indonesia

Achievements

The new integrated approach to health services has led to the creation of the GERDUNAS TB - a nationwide multisectoral programme to create new partnerships to help expand the response to TB. A national TB steering committee with members drawn from many sectors such as the directorate of health, development sectors, NGOs and the private sector has been set up in keeping with the new health sector reform strategy.

Challenges

Completeness of nationwide reporting needs to be ensured for the overall rate to be correctly determined. In view of the planned decentralization to district level, strong efforts should be made to establish Gerdunas TB at district and provincial level. Capacity has to be rapidly built at the provincial and district levels through training and through ensuring adequate staffing, provision of effective microscopy services and establishing a strong reporting and monitoring system throughout the country. The NTP should continue to mobilize and involve a wide range of sectors including the community, hospitals, NGOs and other partners in TB control. Equally essential is augmenting resources and adopting cost-effective procurement policies for anti-tubercular drugs at the central level, while simultaneously strengthening logistics to ensure uninterrupted supplies of drugs and equipment to all treatment centres.

Major Priorities:

- Ensuring adequate funding at the national level and from donors;
- Ensuring effective logistics;
- Training of staff at all levels for effective monitoring and supervision, and
- Effective planning as part of the decentralization process.

7.6 Maldives

Achievements

A nation of 0.27 million, the Maldives had implemented DOTS countrywide and crossed global targets by 1996. Early community involvement, intensive

IEC campaigns and social mobilization approaches have contributed to this success, despite the challenge of delivering services across far-flung islands.

Challenges

More intensive training of health workers and establishment of peripheral laboratory services at the island level is required. The country is now evaluating plans to further reduce the incidence and to aim for elimination of TB in the country. These include targeted case-finding activities to reduce the time to diagnosis and the provision of prophylactic chemotherapy to contacts of infectious patients, especially children.

Major Priorities:

- Maintaining quality and sustaining a successful NTP
- Targeted case-finding;
- Improved microscopy services at atoll island level, and
- Improved management and supervisory capacity.

7.7 Myanmar

Achievements

DOTS was introduced in 1996. The country experienced a rapid expansion phase; intersectoral cooperation, innovative approaches to community mobilization and the emphasis given to training programme staff have enabled effective expansion of the DOTS strategy to 80% of the country's population. Full coverage is planned by the year 2003; case detection rates have shown steady improvement. A system for quality assurance of laboratory services has been set up. Political commitment is high.

Challenges

There has been a rising trend in the incidence of TB in Myanmar, with a shift to younger age groups, compounded by the spread of HIV particularly among intravenous drug users. HIV, now recognized as a major health concern in Myanmar, has contributed to a 5% annual increase in TB cases. Sustaining

current services and continuing expansion require consistent internal and external funding, to provide for drugs and diagnostics. Microscopy services need to be strengthened and supervisory capacity improved. Currently, WHO and UNDP and JFAP are providing short-term funds for anti-TB drugs.

Major Priorities:

- Funding for countrywide expansion of DOTS including additional resources required to counter the increased case load secondary to HIV/AIDS;
- Mechanisms to sustain inputs especially drugs and supplies for microscopy;
- Strengthen quality assurance and coordination mechanisms, and
- Mechanisms to address TB control in border areas and in migrant populations.

7.8 Nepal

Achievements

Following a review of the national tuberculosis programme in Nepal in 1994, DOTS demonstration sites were established in April 1996. Impressive achievements have been made since then; DOTS now covers 75% of the country with both case-finding and treatment success rates approaching global targets. Full coverage is expected by 2002.

Challenges

Expansion to the more inaccessible mountainous areas poses a challenge. The NTP relies heavily on donor support both for implementation of the programme and for drugs. Although the national budget has increased over the past years, sustainability of current efforts will depend on securing adequate external resources. Ensuring full staffing at all health facilities, especially at microscopy centres, establishing quality assurance for regional laboratories and forging intersectoral linkages with the private sector, medical schools and Industry are being actively pursued as is the issue of cross-border migration of patients in border areas.

Major priorities:

- Securing funding from both national and donor sources;
- Ensuring essential logistics system;
- Quality training of staff at all levels for effective monitoring and supervision, and
- TB control in border areas and in migrant populations
- Optimizing DOTS delivery in remote areas.

7.9 Sri Lanka

Achievements

Sri Lanka has made considerable progress despite civil unrest in the north of the country. DOTS is available to 95% of the population; hospitalization during the intensive phase is still practised; ambulatory DOTS was initiated in 1998 and presently covers seven districts. This will be expanded to the rest of the country by 2001.

Challenges

Mechanisms to ensure direct observation of treatment and default tracing need to be strengthened to address an overall high default rate of around 10% and the poor cure rates in five poorly performing districts. Recording and reporting also need to be improved. Allocating increased human and financial resources are essential for Sri Lanka to intensify TB control efforts in order to reach WHO targets by the end of year 2000 as planned. If successful, this will be the first medium-sized country to achieve this and could serve as a model for other island nations.

Major Priorities:

- Increased advocacy for sustained political commitment to TB control;
- Establishing ambulatory DOTS countrywide;
- Improving referral and late patient tracing mechanisms to reduce defaults, and
- Strengthening managerial, coordination and monitoring mechanisms.

7.10 Thailand

Achievements

Introduced in 1996, DOTS is presently available to nearly 60% of the population; a high level of political commitment to DOTS implementation backed by the strong health infrastructure ensured the extension of good quality DOTS services to the peripheral health facilities in the country. This commitment also resulted in maintaining the TB control budget during the severe economic crisis of 1998. Thailand proposes to expand the DOTS strategy to achieve nationwide coverage by the year 2001. In view of the high rates of HIV infection in parts of the country, guidelines for counselling, treatment of latent infection with TB (TILT), and intensive screening and monitoring of co-infected people in the high prevalence HIV/AIDS locations in Northern Thailand have been established. These efforts are being pursued in harmony with HIV prevention programmes. Although MDR-TB does not pose a significant threat at present, the NTP has initiated steps to address potential MDR-TB in high HIV/AIDS settings.

Challenges

The overall cure rate for the whole country in 1999 was 60% due to incomplete reporting; among evaluated cases the cure rate was only 75%. There is considerable variation in the quality of programme implementation in the various provinces of the country. A small number of provinces report high default rates; the transfer system in these areas needs to be strengthened; in other districts, high default rates indicate a weakness of the DOT system, probably due to heavy reliance on supervision by family members. Several regions report extremely high death rates of upto more than 30%; continued high death rates currently seen in many provinces is attributed to the impact of HIV.

Urban TB control, especially in Bangkok, is recognized as a key challenge. Mechanisms to involve the private sector, medical associations and medical academia in order to link public health clinics with large hospitals in the private and university sectors especially in the complex urban setting, are being considered. Cross-border collaboration for disease control with Cambodia and Myanmar are being addressed through bilateral discussions.

Major Priorities:

- More effective models of treatment observation; improved referral and late patient tracing mechanisms to reduce defaults;
- Strengthening managerial, coordination and monitoring mechanisms;
- Technical assistance for MDR-TB control and DOTS-plus options;
- Ongoing operations research for expanded TB-HIV/AIDS response, and
- Establishing effective TB control in urban areas.

8. ACHIEVING GLOBAL TARGETS—PRIORITY AREAS AND ACTIONS NEEDED

8.1 Accelerating DOTS Expansion

Priority needs in the Region are greater political commitment to TB as a priority, partnerships with other sectors, sustaining microscopy services, securing uninterrupted drug supplies and ensuring the universal availability of DOTS services free of cost. This would entail increased advocacy, more resources for capacity-building followed by assignment of adequate staff at all levels, and a phased expansion plan. WHO has a role in disseminating information, providing technical assistance, advocating for and promoting the practice of DOTS as the standard of care and in mobilizing resources for further expansion. Initiatives that have led to successful acceleration must be documented and replicated. Countries should arrange for advocacy meetings with other sectors including medical schools, NGOs, private practitioners, and other relevant ministries for greater trust and involvement.

8.2 Enhancing the Quality of DOTS Implementation

Improving the quality of DOTS implementation in the Region requires strengthening laboratory networks, ensuring regular supplies of quality drugs, intensive supervision of implementation in the field and intensive IEC to improve public awareness. Recording and reporting mechanisms have to be regularized; the importance of this component of the DOTS strategy has to

the highlighted by demonstrating the value at the local level through rapid feedback and regular reviews. WHO could provide assistance with reporting through simplification of reporting formats, and through provision of support to establish computerized reporting.

The process of decentralization has to be undertaken in a phased manner, ensuring full capacity at the next level of health facilities; in view of health sector reform, activities under DOTS need to be optimally integrated with concurrent national programmes in order to ensure sustainability. The advent of multi-drug resistance calls for the establishing of extensive drug surveillance networks and national plans for the treatment and care of patients with MDR-TB.

8.3 Improving Case Detection

Social mobilization, improved communication and public education and improved implementation are key to improving case detection. At the country level, social mobilization requires an initial situation analysis followed by a mandate to develop means for public communication including involving the media and the ministries of information. WHO could provide access to professional expertise, disseminate appropriate information and assist national level programme staff in developing mechanisms for community involvement. Partnerships with medical schools, NGOs, the private sector and large scale employers must be forged and sustained in order to improve access to DOTS, and to decentralize and improve the quality of services. Improved implementation in turn, would lead to more suspects being examined and a decrease in initial defaulting. The provision of incentives to DOTS providers and rewards in recognition of good performance would motivate staff to strive to reach and exceed targets. In some situations, actual estimates of cases expected would need to be determined in order to correctly report on case finding rates.

9. CONCLUSIONS AND RECOMMENDATIONS

Since the adoption of the DOTS strategy for TB control by all Member Countries in the South-East Asia Region in 1994, considerable progress has

been made. While smaller countries have achieved nation-wide coverage, the larger and higher burden countries, namely India, Indonesia, Myanmar and Thailand are expected to do so between 2003 and 2005. Nearly 80% of patients started on treatment for tuberculosis are now cured and several thousand deaths have been averted. Case-finding however, needs to be enhanced. The importance of sustaining and expanding the strategy regionwide without compromising on the quality of services provided has been universally recognized by all Member Countries, especially in the context of the emergence of HIV and multi-drug resistance in the Region. Attention is now focused on sustaining and enhancing resources through initiatives for global and regional partnerships, building technical capacity, ensuring uninterrupted drug supplies and on better monitoring and supervision. Multisectoral partnerships with the private sector, medical schools, business, industry and NGOs are being actively forged through a process of dialogue and the setting of pilot projects, some of which are being successfully replicated on a wider scale. Establishing linkages between the national HIV and TB control programmes in Member Countries and collaborative activities across borders are new and important priorities with widespread implications for disease control in the Region.

WHO continues to assist Member Countries in the Region with resource mobilization, ensuring essential supplies, and building technical and managerial capacity through training programmes, provision of technical expertise and the dissemination of information and teaching materials. WHO has played a vital role in providing forums for and facilitating the development of essential partnerships and collaborative frameworks within the Region together with Regional Associations. WHO has also been supporting countries in undertaking operational research and in monitoring anti-tuberculosis drug resistance. Steps have been taken towards involving the private sector, medical academia and the industry in National TB Control programmes as also towards establishing linkages between the National AIDS and TB control programmes in order to provide more effective management of both these priority health concerns within the Region.

9.1 Recommendations for Member Countries

- (1) Develop and implement five-year plans of action to achieve nationwide coverage with DOTS and global targets by 2005.

- (2) Develop mechanisms to improve and maintain the quality of DOTS implementation through improved microscopy services, direct observation of treatment and through public education in areas covered by DOTS.
- (3) Identify areas for collaboration between the HIV and TB control programmes and initiate collaborative activities at country level.
- (4) Build and sustain partnerships with other sectors such as the private sector, NGOs and medical schools in TB control.
- (5) Promote, support and undertake operational research to improve TB control services.

9.2 Recommendations for WHO and Other International Organizations

- (1) Continue to provide technical and financial support and assist Member Countries in developing and implementing five-year plans of action with a view to achieving nationwide coverage and global targets by 2005.
- (2) Rapidly establish a global facility to ensure uninterrupted supply of quality-assured anti-TB drugs.
- (3) Establish mechanisms for interagency collaboration both at regional and country levels to further strengthen DOTS in the Region.
- (4) Support countries in developing strategies for social mobilization to enhance participation by the community and mechanisms to enhance the involvement of the private sector in TB control.
- (5) Promote and support operational research targeted at improving TB control in Member Countries.
- (6) Intensify advocacy campaigns at the appropriate political and administrative levels in the Member Countries.
- (7) Establish a mechanism for recognition of country efforts based on their annual performance and render technical advice for further improvement.

Annex 1

PROGRAMME

19 October 2000

0900 to 1230 hrs

Registration

Opening Ceremony

Welcome and Introduction (Dr Vijay Kumar)

Plenary:

- Overview of HIV/TB situation (Drs A. Kochi and Jai P. Narain)
- Collaboration between TB and HIV programmes
 - Myanmar
 - Thailand
- Addressing cross-border issues: A priority (Dr Jai P. Narain)

1400 to 17 00 hrs

- Private-Public partnerships for disease control
Drs K.J.R. Murthy and D.S. Bam)
- Massive Effort to combat diseases of poverty (Dr Vijay Kumar)
- Country team discussions on collaborative activities followed by selected country presentations/reports
- Closing

20 October 2000

0900 to 1230 hrs.

Plenary:

- An Overview of Global and Regional TB situation and progress achieved over past years (Drs A. Kochi and Jai P. Narain)
- Ensuring quality of microscopy services and drugs
(Dr Leopold Blanc)
- Multi-drug resistance Surveillance: An Update (Dr Pasakorn)

1400 to 1700 hrs. **Plenary (contd...)**

- Enhancing case detection
 - Building partnerships with Medical Schools (Drs D.S. Bam/Nani Nair)
 - Community mobilization: The role of public education programmes (Mr B. Mohanty/Mr Maurice Apted)
- Operational Research priorities in TB control (Dr Nani Nair)

21 October 2000

0900 to 1230 hrs. **Plenary:**

- Role of the Regional Associations in TB control (Dr Prahlad Kumar)

GROUP WORK:

Progress towards achieving global targets and priority actions

- Achieving targets in high-burden countries
- Achieving targets in low-mid burden countries

1400 to 1700 hrs. **Plenary:**

- Presentations and Discussion on Group Work
- Meeting with individual country delegations
 - Thailand
 - Sri Lanka
 - Nepal
 - Myanmar
 - Maldives

22 October 2000

0900 to 1230 hrs.

- Meeting with individual country delegations (contd...)
 - Indonesia
 - India
 - DPR Korea
 - Bhutan
 - Bangladesh

1400 to 1700 hrs.

- Reflections on the future of global TB control (Dr A. Kochi)
- Presentation of Conclusions and Recommendations
- Closing

Annex 2

LIST OF PARTICIPANTS

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