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TB Control in the South-East Asia Region

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SEA Technical Working Group on TB
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1. INTRODUCTION

The South-East Asia Region of WHO with nearly 25% of the world's population, carries a disproportionate 40% of the global burden of TB. Of the 20 million people suffering from active TB globally, 8 million are in this Region. Five of the countries with the highest TB burden globally namely, Bangladesh, India, Indonesia, Myanmar and Thailand together account for 95% of the three million new cases of TB and the nearly three-quarter of a million deaths that occur every year in the Region. Everyday, more than 1 500 people die of TB; three people every two minutes, in the Region. As a result, the social and economic losses due to TB are tremendous. At the same time, the Region is home to nearly 6 million or approximately 18% of people living with HIV/AIDS, the largest proportion following sub-Saharan Africa. TB is the commonest life-threatening opportunistic infection among the HIV-infected in this Region and it is estimated that nearly 2.5 million cases are co-infected with both HIV and TB. The Region must make every effort to control TB at this point of time while the window of opportunity to reach the 2005 targets control TB is still open and take advantage of the recently established international initiatives such as the Global Fund to fight AIDS, TB and Malaria to accelerate and intensify DOTS in order to reach the targets set for TB control in 2005.

The specific objectives of the meeting of the SEA Technical Working Group on TB were:

- (1) To follow up on progress during the past year in TB control and the recommendations of the first TWG meeting held in Bangkok, Thailand in December 2002;
- (2) To develop consensus on key priorities including operational research to sustain current quality, continue expansion, and further improve the quality of DOTS implementation towards reaching the 2005 targets for DOTS in the Region, and
- (3) To advise on mechanisms/strategies for effective implementation of planned interventions, including intersectoral, interagency and intercountry coordination mechanisms.

Following the welcome and introductions, participants were briefed on the meeting objectives by Dr Jai P Narain, Coordinator, HIV/AIDS and TB WHO/SEARO. The meeting was attended by national TB (NTP) managers

from all SEAR Member Countries (with the exception of India and Nepal) regional experts in the field of TB, as well as WHO regional and HQ staff working on TB (See list of participants and programme at Annexes 1 and 2, respectively). Professor S K Kapoor of the All-India Institute of Medical Sciences was nominated chair person, Dr Rosmini Day, NTP manager of Indonesia as the co-chair and Dr Chandra Sarukkali, National TB programme Manager of Sri Lanka was nominated the rapporteur.

2. TB CONTROL IN SOUTH-EAST ASIA

2.1 Overview of the Current TB Situation and Progress - 2002-2003

A presentation was made to the members of the TWG on the current status of TB control in the Region and the progress made with the recommendations at the first meeting of the TWG held in December 2002. The following encouraging progress was noted:

Member Countries continued to make good progress with DOTS expansion, making it accessible to nearly 80 percent of the population in the Region today. The overall treatment success rate in the Region remained high and was presently 84.5%, close to the 85 percent target. Case detection rates had doubled in the past two years; however, it was noted that these figures still represented the detection of only a third of TB cases estimated in the Region. New resources had been secured during the past year. A total of US\$ 208 million was secured through grants approved by the Global Fund in eight Member Countries which applied to the Global Fund for support to their national TB control programmes. Additional resources were also made available through bilateral agreements between national governments, donor countries and agencies. The funding situation for TB control in Member Countries in the Region had improved considerably and the funding gap was less than 25% at present as compared to 50% in 2002. Advocacy efforts to sustain the priority status of TB control in national health plans and maintain core functions relating to DOTS in countries undergoing health sector reform had continued. A regional framework for TB/HIV was developed. Countries with higher prevalence of HIV had begun planning for the scaling up TB/HIV programme activities. The involvement of private sector providers and public health facilities, such as large lung hospitals and clinics, health facilities in public sector undertakings such as defence, prisons systems, state insurance, had been pursued and their involvement needed scaling up. Many successful initiatives were documented and the lessons learnt from these were being shared. The

introduction of DOTS in workplaces was a new initiative. The cross-border disease control programme for TB/HIV and malaria was ongoing at the Thai-Myanmar border and pilot projects in border districts between Bangladesh-India, Bhutan-India, and Nepal-India were being planned. In the area of human resource development, three countries in the Region had prepared comprehensive cost-itemized work plans for human resource development. Social mobilization and IEC activities were included in all country work plans for TB. An innovative approach to IEC called "COMBI" Communication for behavioural impact was commencing in Bangladesh and India.

WHO continued to assist Member Countries in developing country work plans and building capacity, resource mobilization, implementation and evaluation of DOTS programmes in Member Countries and promoting collaborative activities for DOTS in partnership with various stakeholders. The "COMBI" strategy was developed and the piloting of this was being supported by WHO.

Major challenges, however, remained. While it was encouraging that financial limitations hampering the scaling up of DOTS had largely been met through increased international investments in health, particularly for HIV/AIDS, TB and malaria, the securing of resources in the long term and delays in disbursement of available funds continued to cause concern. Health systems in the Region were already overstretched in meeting the requirements for several competing health priorities. Countries in the Region were going through a difficult process of health sector reform in an attempt to address this. However, inadequate preparation and commitment at the level of local governments compounded by the chronic lack of adequate human resources posed new challenges for previously vertically administered TB control programmes under the new integrated approach to health care delivery. Both human and financial resource allocations for TB at national and sub-national levels suffered as a result. While successful partnerships with several other sectors and stakeholders had been initiated, the involvement of these partners as well as collaboration between national HIV/AIDS and TB programmes was as yet insufficient in terms of making an impact in increasing the reach and utilization of DOTS. While the need to strengthen cross-border disease control, including TB control, was considered a priority, little had been done in practically establishing cross-border programmes except at the Thai-Myanmar border. Progress with implementation of DOTS in the large metropolises remained slow and where implemented, urban default rates were unacceptably high in most settings. Community awareness and participation continued to be low and traditional barriers to accessing care

remained. Data management was still a weak area for most NTPs and case detection and outcomes as a result, did not accurately reflect progress with these two key indicators of programme performance.

2.2 Summary Conclusions and Recommendations - NTP Managers' Meeting

Though progress with DOTS expansion in all Member Countries had been good, case detection under DOTS remained low at an overall 33% in the Region. This was a cause for grave concern, as it meant that a large majority of those most in need of DOTS services were not benefiting from these. It was, therefore, necessary not only to further expand DOTS, but also to improve the quality of implementation and make it more accessible in order to increase case detection. This would help in successfully treating and curing those suffering from TB in increasing numbers.

Continuing constraints for national TB programmes in the Region were: (i) lack of sustained commitment to TB control, particularly in countries where health care was decentralized to the level of local governments; (ii) a continuing lack of adequate technical and managerial expertise within programmes to sustain and improve the core functions of DOTS; (iii) transitional difficulties in the implementation of DOTS programmes during the process of health sector reform; (iv) insufficient involvement of other health sectors in DOTS implementation; (v) low community awareness leading to poor utilization of available services, and (vi) the need to meet emerging challenges such as HIV associated TB and MDR-TB.

There was, therefore, a need to continue to strengthen the capacity of national programmes to enable them to implement quality DOTS within the context of health sector reform; forge effective partnerships with other sectors and stakeholders; improve community awareness and utilization of DOTS through effective IEC and social marketing, and develop comprehensive and feasible approaches to tackle HIV-related TB and anti-TB drug resistance.

The key priorities identified by national TB control programmes, based on these, were to:

- (1) call for sustaining and increasing commitment for adequate financial and human resources to strengthen national capacity for programme implementation at all levels;

- (2) enhance national and sub-national partnerships with all stakeholders encompassing the private sector, NGOs, medical schools, business and industry, other government departments and health related sectors;
- (3) augment resources and establish effective mechanisms to coordinate the activities of multiple providers to strengthen DOTS implementation in urban areas;
- (4) undertake effective information, education and communication campaigns in collaboration with other partners, to improve community awareness and involvement in national TB control efforts;
- (5) develop and scale up collaborative approaches to HIV associated TB;
- (6) building on lessons learnt from pilot projects;
- (7) undertake operational research to further improve the quality, acceptance and utilization of DOTS services;
- (8) initiate collaboration for DOTS implementation at the operational level in cross- border areas and address the needs of mobile populations, particularly those who are socially and economically disadvantaged;
- (9) strengthen and establish TB surveillance with an emphasis on case notification and data analysis as well as anti-TB drug resistance and HIV-TB, and
- (10) ensure the inclusion of TB control in poverty reduction strategies and sector-wide approaches in line with the report of the Commission on Macroeconomics and Health. They also underlined the importance of preparing and revising regional and national plans for TB control beyond 2005, towards reaching the Millennium Development Goals set for 2015.

The recommendations for WHO were to enhance technical assistance in the areas of disease surveillance, data management, improving quality of DOTS implementation and resource mobilization through existing mechanisms and new initiatives. This would require that capacity at regional and country levels be strengthened to enhance technical assistance within the Region, particularly in light of increasing resources, new initiatives and

increasing monitoring and evaluatory requirements as a result of these. Due attention should also be paid to providing assistance to improve TB surveillance and in particular, data management, to better measure progress towards set targets and the MDGs set for 2015. WHO was also requested to provide assistance at the operational level to facilitate integrated disease control including DOTS implementation, in pilot project districts in border areas.

Member Countries also recommended that the various development partners active in countries in the Region should assist in strengthening technical capacity for DOTS at regional and national levels with enhancing commitment for increased and sustained resources for TB control in Member Countries in the Region. They should also promote and support the development of interagency coordinating committees or similar mechanisms at national and regional levels to coordinate their activities; develop consensus on common mechanisms to conduct reviews; report on project activities, and maximize the benefits accruing from their individual contributions in Member Countries.

2.3 TB Control in Member Countries – Progress and Future Steps

High TB Burden Countries

All five high burden countries (HBCs) made excellent progress in expanding DOTS. Thailand achieved full coverage, while Bangladesh, Indonesia and Myanmar covered between 90-95% of their populations. DOTS services were rapidly expanded in India to reach 741 million people or 69% of the population by August 2003, making it the second largest DOTS programme in the world. Treatment success rates remained high, except in areas with high HIV prevalence such as parts of Thailand and in the large metropolises due to difficulties in ensuring treatment completion and reporting on treatment outcomes. India and Myanmar were showing a steep increase in case detection rates with annualized case detection rates higher than 65% in 2003, and Thailand was showing steady progress. Bangladesh and Indonesia were not able to register a significant increase in case detection rates beyond 33%. All five HBCs were approved for additional funding through the Global Fund in the first three rounds. Assistance from the Global Drug Facility was being made available to Bangladesh, India, Indonesia and Myanmar. Additional resources were also available through bilateral agreements between donor nations and agencies at country level.

The key factors that together contributed to progress in the high burden countries were the high political commitment shown by national governments; increased funding for TB control through external financing; intensive capacity building of health staff; improvements in the quality of laboratory services; intensified supervision and monitoring; improvements in logistics; initiatives taken to build partnerships with health providers in other sectors and with other stakeholders including HIV/AIDS programmes, and in some measure, to IEC efforts undertaken to increase community awareness.

One of the key future steps towards reaching the 2005 targets were ensuring long-term commitment for resources from all stakeholders including national governments and international donor partners; increasing national budgetary allocations; improving national disbursement procedures, and enhancing political commitment, particularly at the level of local government where health services had been decentralized. There was equally a need to ensure and demonstrate good performance to donors and develop comprehensive result-oriented proposals to attract greater investment. In order to sustain and further accelerate the current momentum, all NTPs should undertake a comprehensive assessment of their human resources requirements and develop long term human resource development plans and also explore alternatives to employ additional staff or contract out specific tasks to nongovernmental agencies. Efforts to further strengthen management and technical capacity and improve staff motivation must be made. Measures that need to be undertaken to increase case detection were to further strengthen national laboratory networks and quality assurance mechanisms and improve technical capacity, especially for surveillance and data management. Current initiatives to establish public-private and public-public partnerships for DOTS, enhance the involvement of local NGOs and the extension of DOTS services into special settings, e.g. workplaces, prisons, refugee encampments and at border areas needed scaling up while at the same time increasing community awareness and participation through IEC campaigns and social mobilization approaches. National TB and HIV/AIDS programmes should work more closely at the operational level to jointly establish effective interventions for HIV related TB.

Low and Intermediate Burden Countries

Good progress had been made with DOTS expansion in all six Member Countries. While Bhutan and Maldives achieved universal coverage and Sri

Lanka 95% coverage in 1995, Nepal, and DPR Korea had made rapid progress, particularly in the last two years, to achieve over 90% by the third quarter of 2003. Timor-Leste was making good progress with establishing a nation-wide network of DOTS facilities in collaboration with NGOs, churches and the community. Initiatives to involve medical schools, the private health sector, NGOs, health facilities under large public and private employers, the army/police had been undertaken. DOTS was introduced into the prisons in Nepal. Nepal also established a TB-HIV stakeholders' group; however, no district pilots had been initiated to undertake TB/HIV interventions in any of the intermediate/low burden countries. Screening for TB among migrant workers was undertaken in Bhutan and Maldives. Efforts to improve community awareness through national IEC campaigns were carried out in all countries. Some studies on consumer satisfaction were also undertaken. DPR Korea, Sri Lanka and Timor-Leste had been approved for additional funding through the Global Fund. GDF assistance was made available to DPR Korea for the procurement of anti-TB drugs.

The key activities that contributed to progress were: (1) continued DOTS expansion; initiation of public-private and public-public partnerships for DOTS and increasing involvement of NGOs; (2) advocacy for increased resource allocation; (3) IEC campaigns to increase community awareness; (4) improvements in recording reporting (particularly in Bhutan); (5) training of staff and regulation to ban sale of TB drugs in private pharmacies (Bhutan and Maldives).

Major needs to reach 2005 targets were further increasing and maintaining resource allocations in the medium and long-term. This required persistent advocacy for sustained commitment from national governments, the obtaining of additional external funding, and documenting the good progress made in utilizing available resources to promote greater commitment from all partners and stakeholders. There was also a need to expedite Global Fund grant disbursement procedures at the national level and provide assistance to the countries applying for funding to the Global Fund in the next round. (Bhutan and Maldives) Additional assistance must be sought from the Global Drug Facility for anti-TB drug procurement. Improving community awareness through effective IEC and human resource development through proper comprehensive planning to build and sustain adequate technical capacity to implement DOTS were equally critical, particularly to increase the proportion of cases detected and successfully treated. NTP staff needed training in data management to improve the speed of data handling and feedback to the

periphery. Computerized data management at central/ regional level in some countries would be a useful step. To improve laboratory services and quality assurance of microscopy services, it was necessary to ensure that all laboratory personnel at national and sub-national level were properly trained and effectively supervised by the national reference laboratories, and that functional microscopes were available and repairs and maintenance regularly carried out. IEC campaigns to improve community awareness and operational research to identify locally appropriate mechanisms to reach all TB patients, particularly the most vulnerable and least able to pay, needed to be undertaken to increase the reach and utilization of DOTS.

Given the new funding now becoming available to national TB control programmes in the Region through multilateral and bilateral agreements, and provided the above identified priorities are given due attention and activities carried out as planned in the national five-year plans of action developed during the last biennium, progress in all Member Countries could be well be sustained and accelerated towards the global targets set for 2005 and the Millennium Development Goals set for 2015.

3. IMPROVING THE REACH AND QUALITY OF DOTS IN THE SEA REGION

3.1 DOTS in the Workplace

The workplace is one of the most appropriate settings to implement DOTS. It addresses the health concerns of a large vulnerable group in the population. Growth-oriented employers find it a cost-effective and doable strategy that will not only mitigate the suffering and loss of life caused by TB, but also save the costs incurred on account of compensation to employees affected by TB and the need to replace skilled labour.

TB affects people of all ages, but the hardest hit are those between 20 and 45 years of age, men and women who are at work during the most economically productive years of their lives. Out of 2.5 billion people in employment worldwide, nearly 10 million are at risk of developing active TB in their lifetime. The business sector has a large stake in controlling TB. The illness imposes great costs on employers with disruption of work, reduced productivity, high treatment costs, and in addition, significant indirect costs that are expended for replacement and retraining of workers.

In the current new environment where corporates and businesses are looking to demonstrate their social responsibility, many have begun to look at health as an entry point. The advantages to their employees are obvious. In addition, industries stand to gain from increased productivity secondary to decreased absenteeism and death due to TB, reduced corporate expenditure on health, and in the long term, assuring markets for their goods and services. Several examples from across the world have shown that DOTS at the workplace has the potential to make a major contribution in the building of a healthier and stronger workforce when supported by the government's national TB programme and an enlightened and committed workplace management. The DOTS strategy is both feasible and cost-effective for reducing the spread of TB in the workplace. The DOTS programme can well be built on the existing health services being offered to workers and sustained through supervision and monitoring of all TB cases through management systems which are usually in place at workplaces.

The guiding principles that have emerged from these examples are first the adoption of policy by high level management to guarantee job security, parity of pay, and no discrimination to those affected by TB. The keys to successfully establishing TB control practices in the workplace are: commitment to provide for DOTS at the workplace in collaboration with the NTP; treating employees as equal partners; using existing mechanisms available in many workplaces; ensuring adherence to established NTP policies and guidelines for free diagnosis and treatment; providing access to information; conducting regular review and monitoring; recognizing effective initiatives, and dissemination of best practices among similar set-ups. Where the factory or set-up is not large enough, diagnosis and treatment can be provided by developing links with public or private DOTS facilities or providers within access of the workplace. A step-by step approach to implementing DOTS in the workplace has been outlined in recent WHO publications which also spell out the role of various stakeholders-- governments, national TB programmes, business and industry, NGOS and employees themselves, in working towards a TB-free work environment.

Adoption of this initiative as a means to increase access to DOTS services to the largest population group affected by TB in countries in this Region will be a cost-effective step towards increasing case detection and improving treatment outcomes under national TB control programmes.

3.2 Urban TB Control —The Experience from Thailand

It has been recognized that the prevalence of TB is usually higher in urban settings around the Region due to several factors; among them overcrowding, the presence of a significant population of seasonal migrants, and larger numbers of poor people who are either homeless or live in slums and shanty towns with little access to healthcare. While there are a number of health facilities, both public and private, ensuring equitable access to services is a challenge. Introducing DOTS in the urban setting requires that NTPs approach several different types of health providers and facilities. There is often little or no coordination even between the different public sector health facilities in cities and in addition, public urban health care systems have remained poorly resourced.

A pilot project was set up to address the need for a tailored approach to DOTS in the urban setting involving the health service centres, a few large hospitals under the Ministry of Public Health (MoPH) and one large hospital under the Bangkok Metropolitan Administration (BMA) in the city of Bangkok in 1997. In 1999, this pilot project was expanded to include the Chulalongkorn medical school and additional hospitals under the MoPH and the BMA. In 2001, three private hospitals in Bangkok and a few in the neighbouring provinces were added. Under the terms of agreement between NTP and the hospitals, NTP provided training for health staff, drugs, standard recording and reporting forms and assistance with developing systems for treatment observation in the hospital setting, quality control, recording and reporting, patient referral, late patient tracing and supervision and monitoring. The principles of this collaboration were equal commitment and sharing of mutual resources, effective networking between the different facilities and agreement on adherence to national guidelines for TB control.

The challenges that needed to be overcome were establishing a single point for patient registration in the large multi-speciality hospitals; coordinating between the different service departments; ensuring adherence to the key components of DOTS in a clinical setting and tracing patients following initial registration for TB treatment, since a large proportion of them were seasonal migrants or actually lived in other parts of the country. This led to the development of a "one stop service" in the form of DOTS corners in some hospitals.

In terms of outcomes, the smear conversion rates were close to 80%, while cure rates achieved were around 70%. The future success of the urban DOTS initiative will depend on continued technical and logistic support from

the NTP, establishing good networking between public and private sector health facilities and improving the system for referral and transfer of patients both within the city and back to their home provinces.

3.3 Public Private Partnerships in the South-East Asia Region

A global assessment undertaken by WHO has shown that a large proportion of TB suspects and cases seek care from the private health care providers in poor countries. There has been growing recognition that to achieve the global targets set out in the Amsterdam Declaration, urgent steps should be taken to involve private providers in TB care. An informal consultation held in Geneva suggested several measures towards establishing an initiative to expand DOTS to the private practitioners, called Public-Private Mix for DOTS expansion (PPM DOTS).

In the 11 countries of South-East Asia, PPM DOTS are in different stages. In DPR Korea there is no private sector; in Maldives and Bhutan, the sales of TB drugs is prohibited; in Sri Lanka, Thailand and Timor-Leste, it is in the formative stages; in Myanmar and Bangladesh, pilot projects and policies have been formed, and in India, Indonesia and Nepal, the scaling up of PPM DOTS are taking place.

In India, over 14 PPM projects are operational. Hyderabad, Delhi, Kunnur and Pune are some of the initial pilot projects. In Hyderabad, 30-40% of the PPs are participating in the PPM at present, while as in Delhi, there are 18 nursing homes and seven microscopic centres participating. The incremental case finding in Hyderabad was about 23%, while as in Delhi, it was 29% for new sputum positives and 36% for all TB cases. In Hyderabad, 96% treatment success was reached and 81% in Delhi. In both these pilot projects DOT, NTP regimen and quality sputum examinations were strictly in place.

In Indonesia, all doctors are members of the Indonesian Medical Association (IDI) with over 50 000 enrolled members. In the year 2000, the Directorate-General of CDC signed a Memorandum of Understanding with IDI for their involvement in DOTS implementation. Several PPM projects have started in Palembang, Yogyakarta, Jakarta, North Sulawesi, etc. Some of these initiatives have seen an increase in case findings up to 25%.

In Nepal, two pilot projects in Lalitpur and Kathmandu cover a population of about 500 000. The case finding increase has been consistently

about 21% and 18% respectively and treatment success 91% and 84%. DOT, quality assured sputum examination and NTP regimens are strictly followed. All medical schools in Nepal (2 govt and 8 private) have adopted DOTS and included it in the teaching curriculum. The Nepal Medical Association has endorsed TB as a priority programme of the Ministry of Health and held over 21 orientation meetings under its umbrella to sensitize medical doctors. Now the focus is on specialized medical groups like, paediatricians, orthopaedicians, physicians etc. The PPM is being up-scaled to the whole of Kathmandu Valley (1.2 million pop) as part of urban TB control programme. All major urban cities in Nepal have committed for urban TB control with PPM as the major component.

In Bangladesh, the pilot PPM has started with 63 PPs participating in the project; 78% of the PPs are reporting cases. In the month of September 2003, these PPs reported 222 TB patients and of these, 71 were sputum positive.

In Myanmar, a national policy on PPM was established on the basis on social franchising. In Sri Lanka, a five-year plan to include the private sector through the National Association of Private Practitioners was developed. In Thailand, the urban TB control programmes involved the private sectors. In Timor-Leste, seven private hospitals started DOTS through a PPM initiative.

Recent costing studies on PPM DOTS done in Hyderabad and Delhi show that the total cost of doing a PPM or running a Government DOTS programme is broadly the same; (average cost per patient treated is about US\$120 only who bears the costs varies. There is comparatively low cost to the public sector in PPM-DOTS projects, as substantial resources are donated by the private sector at no charge (staff time, clinic space etc).

The key messages from the above examples are that PPM is both feasible and cost-effective; there is evidence that PPM can have a positive impact on case detection and treatment outcomes; and also, in the present global scenario of health sector reform, conditions for starting and scaling up PPM are most suitable.

The lessons learnt were the following:

- (1) Simple, practical tools should be used for referrals, treatment monitoring and reporting.
- (2) Government commitment, stewardship functions and financing must be assured.

- (3) Mutual trust between stakeholders, and common ownerships and goals should be created and time invested for dialogue, sensitization, and joint planning.
- (4) NTP drugs should be distributed to PPs for dispensing free of charge to patients, conditioned to keeping with NTP treatment guidelines.
- (5) If NTP and PP relations are strained, an NGO or professional association could be used as neutral ground.

The private sector still remains a major health care provider in the Region. All Member Countries have undertaken PPM, ranging from formative stage to scaling up and, even though examples show that PPM is both possible and productive, yet current efforts are not sufficient to make a significant impact. More innovative initiatives and scaling up of PPM projects are required to make a significant impact on the global case finding targets.

3.4 Cross-border Disease Control

In 2000, Myanmar and Thailand initiated a cross-border disease control programme for AIDS, TB, and malaria in bordering townships. The general objective was to strengthen collaboration between the two countries in improving the health of people living in the border areas through joint action, information exchange, and development of new interventions to facilitate border health development.

Since the initial emphasis of the programme was on reducing morbidity and mortality due to tuberculosis, the strategies used were health education relating to TB, BCG immunization, and DOTS implementation for early detection and treatment of TB cases, regular monitoring and supervision, partnership building, and promotion of operational research. Both sides agreed to joint policy formulation and programme planning, coordinated implementation, monitoring, supervision, evaluation and surveillance, resource mobilization, information exchange and the development of a net work for laboratory quality control. Border hospitals were upgraded. Mechanisms for the procurement of drugs and equipment, use of treatment cards/booklets that could be exchanged at the borders for follow-up, development and distribution of IEC materials in ethnic languages, training of health staff on both sides and enhancing the involvement of communities and NGOs, were taken up jointly.

The major constraints are the difficult geographic terrain, language barriers, and lack of transport for supervision. Mechanisms for information

exchange and cross-border referral remain weak, resulting in overall low cure rates and high default rates. Other drawbacks are the significant proportion of patients co-infected with HIV and the availability in border areas, of anti-TB drugs of indeterminate quality, raising concerns regarding potential drug resistance.

Priority areas for the future are to improve the quality of services to increase cure rates, reduce defaults and deaths, strengthen systems for referral, establish effective networking and strengthen community involvement on both sides of the border. Inter-country exchange of information and technical seminars are expected to improve this collaboration.

3.5 Enhancing the Quality of Laboratory Services

The laboratory plays an important role in National Tuberculosis Control Programmes. Quality diagnosis by smear microscopy is one of the five components of the DOTS strategy. Programme management primarily aims at strengthening smear microscopy at all levels—and ensuring its quality. In order to establish a well functioning national network of smear microscopy services, it is necessary to clearly define the roles at three organizational levels. The national reference laboratory at the central level is responsible for training of laboratory staff, supervision of microscopy services, implementation of laboratory quality assurance protocols, national drug resistance surveillance and research activities. The intermediate level of laboratories in larger countries in collaboration with the central level, are responsible for the training and supervision of staff at provincial and district levels, preparation and distribution of reagents and implementation of the first level of quality assurance of smear microscopy. Peripheral level laboratories are primarily responsible for smear microscopy both for diagnosis and for follow-up. While the density of microscopy centres varies in countries, the recommended norm is one centre for every 100 000 population. However, this may also vary, depending on the expected workload, the geographic area that would need to be covered and issues relating to access.

The essential components of a national quality assurance programme are internal quality control, (IQC) proficiency testing or External Quality Assurance (EQA) and quality improvement. A well established national quality assurance Programme should include both IQC and EQA. It defines a system for regular monitoring of smear microscopy services, ensures that laboratory results are accurate, reliable and reproducible and ensures the competency of the diagnostic services as a whole. International guidelines for EQA were

published in 2002 and assistance is available from the consortium of agencies which include among others, the International Union against TB and Lung Disease, the Centres for Disease Control and WHO for countries seeking technical assistance to establish national mechanisms for quality assurance. In addition, the need for on-site supervisory visits to provide on-the job training and supportive supervision of laboratory staff cannot be neglected; quality improvement hinges on this principle and is achieved by anticipating and preventing problems rather than by identifying and correcting errors after they occur.

3.6 Operational Research Priorities - India

The Government of India has identified priority areas for operational research, as relating to the Revised National Tuberculosis Programme (RNTCP) in India. To coordinate these research activities, the Government formed two committees at the central level: the RNTCP Screening and Monitoring Committee (SMC) and the Central Steering Committee (CSC) under the Chairmanship of the Director-General of Health Services, India.

The SMC screens and recommends the proposals that are then forwarded to the CSC for its final approval. Proposals received at the Central TB Division (CTD) are screened during the six-monthly review meetings of the SMC. The last meeting was held in December 2002, where four out of the eight proposals received were recommended by the SMC. The CSC subsequently has approved three of these proposals during its meeting in June 2003. Two of these proposals pertain to drug resistance surveys and the third is an annual risk of tuberculosis infection (ARTI) survey of Kerala. The studies will commence once the necessary clearance has been obtained from the Finance Division of the Ministry of Health and Family Welfare.

Epidemiological studies, operational research projects and basic science studies are currently underway in national institutes, NGOs, and academic setups. Several important studies funded through central funds have been completed or are in progress. These include the national ARTI survey, drugs resistance surveillance in six districts, and utilization of RNTCP services by marginalized groups, such as scheduled caste/ scheduled tribes, women, people living with HIV/AIDS. With financial support from USAID, a model DOTS project in Tiruvallur District, Tamil Nadu is collecting information on the epidemiological impact of RNTCP implementation at the community level. Baseline studies on the accessibility and utilization of RNTCP by various "marginalized sectors" (Scheduled Caste / Scheduled Tribes, women, people

living with HIV/AIDS), and a study of the RNTCP infrastructure and implementation mechanism have been commissioned by the programme. Two of these studies have been completed and the reports are being written. The remaining studies are expected to be concluded shortly.

In addition to these, WHO in India supports a number of operational research initiatives including piloting a new voluntary counselling and testing based TB/HIV surveillance, feasibility of an intra-district referral process, diagnostic algorithms for extra-pulmonary TB, evaluation of public-private mix programmes, role of community volunteers in delivering DOT, etc.

Surveys of drug resistance have also recently been completed in six districts from various parts of the country. The results of the surveys show that the prevalence of multidrug-resistant TB (MDR-TB) is less than 3% amongst the previously untreated patients. Documenting the level of drug resistance in the community is important in order to monitor the impact of the programme over time and to ensure that treatment regimens used by the programme are appropriate. The present relatively low level of MDR-TB makes the expansion of the RNTCP throughout the country the priority to ensure drug resistance levels remain low in India.

4. THE "3 BY 5" INITIATIVE AND TB CONTROL

The "3 by 5" initiative announced by the Director-General of WHO in 2003, aims to address in concert with UNAIDS and other partners, the global health emergency resulting from the AIDS treatment gap. It aims to reach anti-retroviral therapy (ART) to 3 million people living with HIV/AIDS in the 34 worst affected countries by 2005. This interim target of reaching 3 million by 2005 represents 50% of the estimated 5-6 million people needing ART worldwide, of whom only 300 000 currently benefit from these life saving drugs in resource limited settings. In Asia, only 4% of the 1 million people requiring ART receive it today. Rapidly scaling access to ART is therefore imperative. The key elements of the "3 by 5" initiative are mobilizing political commitment, ensuring uninterrupted supplies of anti-retroviral drugs, building the capacity of health systems to deliver ART, simplifying diagnosis, treatment and ensuring treatment adherence, effective monitoring and evaluation and the promotion of operational research. Recognizing the strong links between HIV and TB, the "3 by 5" initiative will address the strengthening of joint TB/HIV initiatives in order to provide better diagnostic and treatment

modalities for both TB and AIDS patients, while at the same time, addressing TB prevention among those living with HIV/AIDS.

The key challenges are that drug prices remain too high, with the cheapest WHO-approved combination treatment costing US \$300 per annum, when overall public health expenditure ranges from US\$10 - US\$200 in most affected countries; health services are weak and to deliver ART successfully requires well functioning health systems; denial, stigma and discrimination are still in force, and most do not want to know their HIV status, and that sufficient resources have not yet been mobilized.

Immediate next steps are to make available emergency response teams to countries; develop simplified treatment guidelines; publish uniform standards and simplified tools to track the progress and impact; start immediately training and capacity development for all cadres of health professionals; establish an AIDS medicines facility to assist countries to procure best priced quality drugs, and advocate for the mobilization of sufficient resources

Good progress has been made in SEA Region in coordination and strategy development, capacity building and resource mobilization. A Regional Core Group on '3 x 5', and networking with UN Cosponsors has been established. Simplified treatment guidelines and ART fact sheets have been developed, and intercountry courses on the management of HIV/AIDS have been held. Approved Global Fund proposals from India, Thailand, Myanmar, Indonesia include ART, while operational Research on introducing ART has been initiated in many countries. The next steps that will be undertaken in the SEA Region are the organizing of a regional core group meeting, drafting a regional strategy for "3 by 5" in the Region, finalizing a resource mobilization proposal covering inter-country and country activities, fielding country missions to assist planning and implementation and moving rapidly to close treatment gap, i.e., scaling up ART access from 40 000 to 400 000 by 2005.

5. CONCLUSIONS AND RECOMMENDATIONS

The key conclusions drawn by the regional technical working group on the current state of TB control in the SEA Region were as follows: (1) While good progress has been made with DOTS expansion, currently at 78% population coverage in the Region, and treatment success rates continue to be high at

close to 85%, efforts have to be made to establish effective DOTS services for the yet uncovered populations in all countries in the Region, especially those living in the border districts, hard-to access remote areas and large metropolitan cities; (2) The low case detection rate is a major concern. All Member Countries are committed to make the necessary efforts as outlined above to focus on increasing the detection of TB cases under DOTS, i.e., building partnerships with all health providers such as private practitioners, NGOs, medical teaching institutes, health facilities in work-places and with related programmes such the HIV/AIDS programme to widen the network of DOTS services; enhancing community awareness and utilization of DOTS through effective communication and social mobilization approaches, through analysing and addressing the obstacles to the utilization of available services from the patient perspective and to actively pursue innovative approaches through operational research to improve the delivery and acceptance of DOTS services. (3) Efforts must be made to simultaneously maintain and improve on the current quality and assessment of implementation through building adequate technical and managerial capacity within NTPs, attention to proper data management and effective supervision and monitoring to ensure the quality of services. In this regard, it was noted that most countries have limited capacity to monitor programme implementation due to a shortage of a trained supervisory cadre. In view of the increasing implementational requirements including stricter monitoring and evaluation, consequent to increased funding from multiple donors, the TWG emphasized the need for comprehensive plans for human resource development in all Member Countries.

Recommendations

For Member Countries

The SEA Regional Technical Working Group on TB, having reviewed the deliberations of the regional meeting of the national TB programme managers, is in overall agreement with the recommendations made at this meeting.

The SEA regional technical working group recommends Member Countries to accelerate and intensify all efforts to expand DOTS to achieve universal coverage, case detection rates of at least 50% by the end of 2004, and sustain and surpass the 70% case detection and 85% treatment success targets, in all Member Countries in the Region by 2005.

In order to do so, they should:

- (1) Review the existing human resource capacity and make need-based long-term plans to sustain and augment human resources, particularly in light of increasing implementation, monitoring and evaluatory requirements linked to increased availability of funding for TB control;
- (2) Focus on strengthening capacity to ensure that effective quality assurance mechanisms are in place at all levels in the national microscopy network;
- (3) Ensure regular quarterly cohort reporting and national and sub-national reviews to maintain the quality of recording and reporting on DOTS, make timely remedial interventions and disseminate updated information on the status and progress with DOTS in the country;
- (4) Establish effective monitoring and evaluation of programme-related aspects such as staffing, logistics, financial management at national and sub-national levels to ensure that resources are provided and optimally utilized towards achieving set targets;
- (5) Rapidly expand public-public and public-private partnerships, including with the corporate sector, through additional investments, with greater attention to encouraging and recognizing the contribution of the private sector, effectively monitoring and evaluating and documenting successful partnerships in place;
- (6) Strengthen the involvement of the medical teaching institutions in national TB control efforts, including in facilitating teaching on the principles and practice of the NTP in the core medical and paramedical curricula;
- (7) Improve collaboration between NTP and NAP programmes at the operational level in order to establish, document and scale up effective pilot projects utilizing interventions appropriate to the scale of the TB and HIV epidemics in each Member Country, and
- (8) Encourage more specifically programme-based and problem-oriented operational research, to develop innovative approaches that address improvements in the quality and acceptance of DOTS, particularly at the community level.

For WHO

The WHO Regional Office should:

- (1) Provide assistance to Member Countries in assessing human resource requirements at all levels within national health systems and to develop need-based country work plans for human resource development;
- (2) Assist Member States to implement, evaluate and scale up public-private and public-public partnerships to further intensify and expand DOTS; and promote and facilitate collaboration with multiple providers in different sectors, particularly in urban settings;
- (3) Assist countries in strengthening systems for monitoring and evaluation, including data management and disseminate updated information on the status of TB control in Member Countries in the Region, based on cohort reporting from Member Countries;
- (4) Continue to assist Member Countries in resource mobilization through support in proposal writing and review, donor coordination at regional and national levels;
- (5) Facilitate country-specific operational research by assisting in protocol writing, implementation and evaluation, and then translating appropriate findings/outcomes into national policy, and
- (6) Assist Member Countries in developing collaboration with the business and industry to establish DOTS in the workplaces.

Annex 1

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Annex 2

PROGRAMME

Wednesday, 12 November 2003

0900 – 1230 hours

1100 – 1230 hours

Plenary

- Welcome and introductions
- Meeting objectives
- Designation of office bearers
- Overview of the TB situation and progress made in the Region
- *N. Nair, WHO/SEARO*
- Summary conclusions and recommendations of NTP Managers' Meeting - *Rapporteur*

1330 – 1700 hours

TB Control in SEA - Progress and future steps

- High burden countries
 - Low burden countries
- (10 minutes by Rapporteurs for each group of countries followed by discussions)

Improving the Reach - Quality of DOTS in the Region (I)

- DOTS in the Workplace – *N Nair, WHO/SEARO*
- Urban DOTS control – *P Rattanadillo, Thailand*

Thursday, 13 November 2003

0900 – 1230 hours

Plenary

Improving the Reach – Quality of DOTS in the Region (2)

- Public-private partnerships in the Region - *S.B. Pande, Nepal*
 - Cross-border disease control – *Daw Hla Kyin, Myanmar*
 - Enhancing the quality of laboratory services – *C. N. Paramasivam, TRC, India*
 - Operational Research Priorities for national TB control programmes – *R Granich, WHO/India*
- '3 by 5' and TB control – *J. P. Narain, WHO/SEARO*

1330 – 1700 hours

Plenary

- Discussions and recommendations for the SEA Region on strategic directions towards 2005 targets
- Proposals for agenda and dates of next meeting
- Closing