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## MANAGING THE DUAL EPIDEMICS OF TUBERCULOSIS AND HIV/AIDS

### A Review of Challenge and Response

in

#### Five Countries:

Brazil  
India  
Indonesia  
Kenya  
Thailand

March 1998

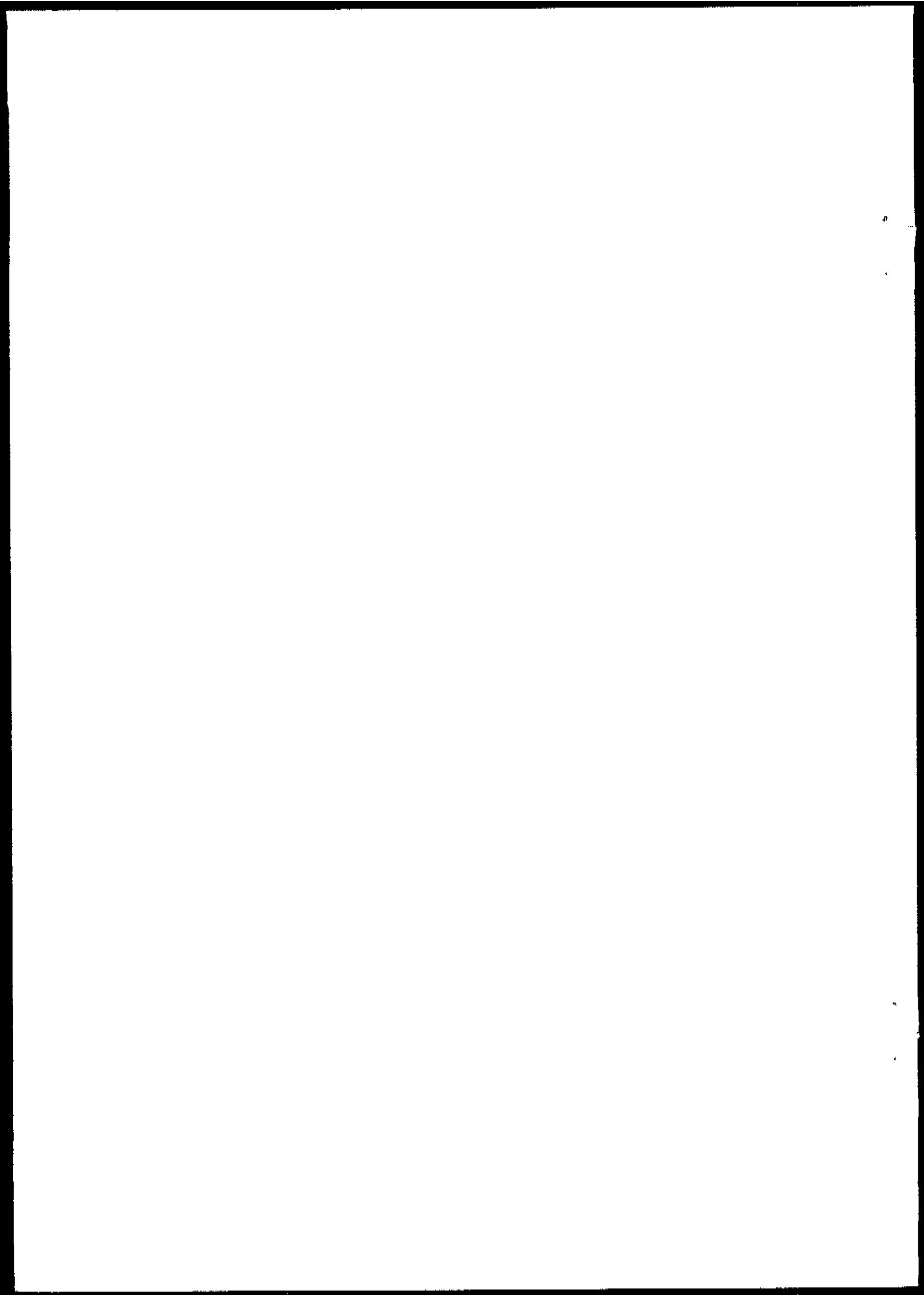
Global Tuberculosis Programme  
World Health Organization, Geneva

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## Executive Summary

This review examines the challenge of and response to the dual epidemics of TB and HIV/AIDS in Brazil, India, Indonesia, Kenya and Thailand. Country visits were made to engage public health authorities as well as leaders in civil society in a dialogue about policies and programmes relevant to the management of the dual epidemics, and assess how these Governments are positioned to cope with the ongoing or threatening dual epidemics. In this context, high-pay-off actions, which in the near-term could be taken by the respective government to strengthen the management of the dual epidemics, were identified. On this basis, the Review presents five country assessments and, in a summary report, draws some general conclusions about opportunities for more concerted management of the dual epidemics through projected actions at the national level and through better focussed international support for such national initiatives.

The Review concludes that despite ample discussion of the epidemiological interdependence between TB and HIV/AIDS in various international fora, "on the ground", the interaction of the dual epidemics is still an overlooked public health problem. Specifically, in countries with high TB prevalence, most public health officials and policy makers with some laudable exceptions, show as yet only very limited awareness that failure to contain the spread of HIV infection would have especially grave public health consequences due to the epidemiological, clinical and programmatic interdependence of the two epidemics. Lack of good epidemiological data, lack of national professional consensus about cost-effective approaches to TB control, STD control and HIV containment and limited information about the effectiveness of the ongoing control programmes were found to be formidable obstacles to increased awareness.

As regards national TB controls, the Review concludes that all of the ongoing efforts that were reviewed require significant further strengthening because none of the programmes are at present robust enough to cope with the ongoing or prospective HIV-induced increases in the number and complexity of TB cases. As regards HIV/AIDS control, despite significant differences in the nature and severity of the HIV/AIDS challenge and the quality of the national response, in all cases reviewed, the national efforts at HIV containment need to be significantly strengthened or repositioned. In all countries, except Indonesia, there is also an urgent need to implement AIDS care policies that are financially sustainable and consistent with the capacities of the existing health system.

In light of the above assessment, the Review concludes that in the fight against the dual epidemics basic strengthening of the two control activities has to take precedence over major initiatives designed to establish cross-support or integration of programme operations. Accordingly, the agenda for improved management of the dual epidemics developed in the Review reiterates the priorities for basic strengthening of the two disease control activities (see pp. 12 and 13 as well as p.16). Specifically, as regards TB control, the Review emphasises that acceptance of the DOTS strategy advocated by WHO does not dictate a centralized; "vertical" approach to the delivery of TB care. The Review notes that there is now ample experience to demonstrate that, with appropriate safeguards to ensure quality in diagnosis and treatment and reliability in the supply of TB drugs, the DOTS strategy lends itself well to decentralized delivery

of TB care as an integral part of the primary health services. To that effect, specific improvements in strategies and policies, which would improve the decentralized delivery of TB care, are suggested on pp. 12, 13 and 16. In this context, the Review also identifies selected adjustments in the current TB and HIV/AIDS control activities which would provide more effective health care for the co-infected and, to a limited extent, also strengthen the control of the two epidemics (see pp. 13 and 14).

Finally, relative to this recommended agenda, the Review comments on the deployment of international assistance, and suggests a Programme of Recommended Actions for WHO/GTB and its Collaborating Donors as well as the UNAIDS and its collaborating Donors or Co-Sponsors (see pp. 17-19).

Following the release of the Review Report in March 1998, the conclusions and recommendations of the Review have been discussed with a representative cross-section of Collaborating Donors. These discussions have highlighted the following:

- reflecting their own field experience, the donors concurred with the assessment of core programme strength and the need for caution in the introduction of cross-support and programme integration. There was agreement that the review has identified a relatively feasible menu of cross-support activities that should be promoted and internationally supported.
- several donors emphasised that, to the maximum extent possible, the strengthening of the core programmes should be designed and implemented so as to contribute to the urgently needed general strengthening of the primary health services.
- noting the comments made in the Review about the impact of health sector reform on the TB programmes in Brazil and Kenya, several donors commented, that in their assessment, there is an urgent need to design and implement health sector reforms so as to ensure that they do not inadvertently weaken the capacity for communicable disease control.
- all donors concurred in the observation that the effectiveness of the core programmes was critically dependent on a reliable supply of quality drugs and materials. It was suggested that solutions to the frequently systemic issues should preferably be sought in a sector-wide context.
- several donors would have liked to have seen greater emphasis on the contributions which patient organizations can make to advocacy and programme effectiveness. In that context the increased use of independent beneficiary assessments in programme monitoring and evaluation was endorsed.
- as regards the deployment of international assistance for more concerted management of the dual epidemics, a majority of donors emphasised the need for a global strategy for TB control and HIV containment.
- Finally, several donors expressed their expectation that priority items in the recommended Action Programme would be tabled for discussion in upcoming meetings of the government bodies of GTB and UNAIDS, e.g. the TRAC meeting in August and the second technical PCB-UNAIDS meeting later this year.

## MANAGING THE DUAL EPIDEMICS OF TUBERCULOSIS AND HIV/AIDS

### INTRODUCTION

In May 1997 the Global Tuberculosis Program (GTB), with collaboration and funding provided by UNAIDS, initiated a Review of Tuberculosis Control and HIV/AIDS Containment Efforts in countries confronted by the dual epidemics of tuberculosis and of HIV/AIDS in order to gain a better understanding of the emerging "best practices" in the concerted management of these epidemics. The review also was to identify "high-pay-off" adjustments in strategies, policies and program management which would enable the respective government to strengthen its management of the dual epidemics. Based on the review of national TB and HIV/AIDS programs, the review was to comment on the actual and potential supporting roles for UNAIDS' co-sponsors including especially WHO and GTB. This was to be further elaborated into an Action Program which was to outline how the national efforts could be made more effective by appropriate support from GTB, UNAIDS, and their collaborating donors and co-sponsors.

Five countries that are confronted or threatened by the dual epidemics were reviewed: *India, Indonesia, Thailand, Kenya, and Brazil*. Together these countries account for a large share of the global TB burden while also capturing the HIV/AIDS epidemic at different stages of challenge and response.

#### Country Data

	<u>INDIA</u>	<u>INDON.</u>	<u>THAILAND</u>	<u>KENYA</u>	<u>BRAZIL</u>
Population (millions)	929	193	58	27	159
of which Urban Pop.(%)	27	34	23	20	75
Per Capita Income (US\$) in 1995	340	980	2740	280	3640
Notified TB Cases	1 200 000	(445 000)	46 000	35 000	105 000
Incidence per 100 000	130	(225)	78	125	71
Adult HIV Prevalence (%)	0.5	-	2.0	8.0	0.3
HIV Prev.(%) in Pregnant Women	4.0	-	2.0	14.0	1.0-2.0
HIV in TB (%)	10-20	-	10	40	10-20

( ) : Estimate provided by the 1994 TB Review

The Review was able to build on recent program assessments and field reviews sponsored by WHO, UNAIDS as well as by other multilateral and bilateral organizations. Country visits were made to engage public health authorities as well as leaders in civil society in a dialogue about issues in policy and program management. In this dialogue the Review has sought answers to the following questions:

- How is the Government positioned to cope with the ongoing or threatening dual epidemics? What are the strategies and programs? How effective are they?
- How is the International Donor Community assisting the Government in the concerted management of the dual epidemics?
- What are the high "pay-off" actions that could be taken by the Government to strengthen the management of the dual epidemics?

The results of the individual country reviews, which were carried out between August and November 1997, are presented in five Country Review Notes in ANNEX 1. The overall results of the Review are set out below. The Report is organized so as to develop the recommended Action Program for GTB and UNAIDS by posing and answering the following questions:

1. Is there sufficient awareness of the emerging dual epidemics of TB and HIV/AIDS?
2. Is there sufficient professional consensus about the strategies and measures that should be employed to control and contain the dual epidemics?
3. How are the governments positioned to respond to the dual epidemics?
4. How could the governments' responses be improved?
5. What government actions would have the highest "pay-off" in controlling the dual epidemics?
6. What strategy should guide the deployment of international assistance?

The Review Team\*/ would like to take this opportunity to thank the regional and national representatives of WHO and UNAIDS as well as their co-sponsoring organizations for their support of the Team's country visits.

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## THE DUAL EPIDEMICS: AN OVERLOOKED PUBLIC HEALTH PROBLEM

In several countries it has now been demonstrated that the dual epidemics of TB and HIV/AIDS can quite rapidly create a dual disease burden which will overwhelm weak public health systems and seriously damage even the more robust systems. These unfortunate cases have also shown that the epidemiological interactions between TB, HIV/AIDS and other STDs provide strong clinical and programmatic arguments for more *concerted* management of TB control, STD control, HIV containment and AIDS care in the efforts to avert or at least contain the dual epidemic and to improve health care for the co-infected.

Numerous studies have confirmed the prominence of Tuberculosis in the global disease burden as well as its disproportionate impact as a "disease of the poor" in the developing world. TB debilitates and kills more adults than any other infectious agent. Without appropriate treatment, 50% of those with the full-blown disease will die. Moreover, an untreated or incorrectly treated smear-positive person (50% of infected adults who develop active TB tend to be smear-positive) is, on average, likely to infect about 15 persons per year. Cost-effectiveness analyses have shown that chemotherapy for TB is a health intervention with one of the highest pay-offs. When properly managed, the relatively inexpensive chemotherapy (at about US\$ 20-30 per patient) generates very high benefits in terms of disability-adjusted life years.

Nevertheless, for reasons ranging from general economic collapse, poor governance and social neglect to more limited issues of program management and coordination, many national efforts at tuberculosis control are failing to cure a significant enough proportion of the infectious TB cases and thus are not only maintaining and aiding the infection cycle, but, through the poor management of powerful drugs, are also contributing to the build-up of drug resistance.

HIV/AIDS dominates the public health agenda in a growing number of developing countries. Since there is no vaccine or cure for AIDS, primary prevention is the only way to contain the disease. In the absence of effective preventive actions, the human immunodeficiency virus (HIV) spreads rapidly in groups engaged in high-risk sexual behavior, followed eventually by a slower spread in the general public including "vertical" transmission from mothers to children. Early and well-targeted HIV containment through information, education and communication (IEC), through condom promotion and through STD control is critical because the cost-effectiveness of these interventions diminishes rapidly as the epidemic moves out of the high-risk, high transmission core groups. Failure to contain HIV infections will, with an average lag of about 8 years, lead to a growing burden of full-blown AIDS disease with very costly consequences for families, communities, productive enterprises and society at large.

While the control of both epidemics, when taken separately, is generally considered as a national public health priority, what is frequently overlooked by governments and by civil society is the extent to which the spread of HIV in a population with high TB prevalence will fuel the TB epidemic and compound other public health problems by the overload created for peripheral institutions and personnel. TB as the major opportunistic infection in patients with HIV/AIDS disease will not only threaten the life of these patients, but also of their contacts. In the dual epidemic, TB cases will increase rapidly in number and complexity, the presence of HIV infection may complicate the management of other STDs, and AIDS care will absorb limited clinical capacity and public funds.

The setting for the dual epidemics to emerge most virulently is typically as follows:

- a population with significant TB prevalence (> 0.1%);
- significant prevalence of STDs which enhances the susceptibility to HIV infection;
- HIV prevalence of 5-10% among the young adult population and, >10% among the new TB cases;
- weak public health systems and weak STD and TB control activities at the primary health level.

Without forceful counter-measures the full impact of the dual epidemics would typically manifest themselves in such a setting as follows:

- HIV prevalence in young and middle-age adults keeps on rising and moves into the 10-15% range;
- “vertical” transmission of HIV from mother to child affects a growing number of children;
- new TB cases grow at an annual rate of 10% or more;
- simultaneously, the complexity of the TB case load increases due to an increased proportion of TB patients who cannot be confirmed by the standard sputum smear microscopy, leading to an increasing number of patients who are poorly managed and remain chronically ill with attendant increased risk of drug resistant TB developing;
- there is growing prevalence of co-infection in TB patients, with HIV infection among TB patients in the range of 30-60%; and
- TB (including a disproportionately high share [ $> 2\%$ ] of MDR-TB) becomes the predominant opportunistic infection in 50-60% of the AIDS cases.

The global setting of the dual epidemics can be summarized as follows:

Approximately 21 million adults are presently living with HIV infection or diagnosed AIDS disease. Of this total about 9 million are also infected by TB. As regards TB, it is estimated by WHO that, worldwide, about 7-8 million new TB cases currently occur annually. About 10% of these new cases are attributable to the coinfection. These global average data, however, do not capture the clear and present danger of dual epidemics in some of the world’s largest countries, where very high TB prevalence, weak TB control programs and failure to contain the HIV epidemic could trigger the above described public health consequences in a large share of the world’s relatively poor population. If this danger is to be averted, or at least contained, it is urgent that the epidemiological, clinical and programmatic arguments for more concerted management of TB control, STD control, HIV containment and AIDS care be translated into specific, timely actions.

### **IS THERE SUFFICIENT AWARENESS OF THIS MAJOR PUBLIC HEALTH PROBLEM?**

Our review has shown that, with some laudable exceptions, most public health officials and health policy-makers in countries with high TB prevalence have only very limited awareness that failure to contain the spread of HIV infection would have *especially* grave public health consequences due to the epidemiological, clinical and programmatic interdependence of the two epidemics.

From our Review we have also concluded that in most countries there are basic obstacles to the creation of greater awareness. These obstacles are:

- lack of good epidemiological data on each of the dual epidemics, which, due to the resultant conjecture about the exact status of the emerging or ongoing trends, provides the policy maker with an excuse for inaction because "we really don't know whether we have a problem";
- lack of professional consensus about cost-effective approaches to TB control, STD control and HIV containment, which gives the policy makers another excuse to defer action; and
- reluctance to monitor the effectiveness (coverage and outcome) of ongoing TB and HIV/AIDS programs, which creates a sense of false security.

In combination these obstacles create doubts about the national priority and urgency of TB control and HIV containment. In turn, this undercuts the effectiveness of public health officials in their advocacy of these public health measures at the political levels of government. Best practices show that these obstacles can be overcome and that sustained political support for the containment of the dual epidemics can be obtained from the highest levels in government. However, the record also shows that poor governance, social neglect and systemic inefficiency in drug procurement and distribution can reinforce these obstacles and subvert awareness and preventive action.

#### **IS THERE SUFFICIENT PROFESSIONAL CONSENSUS ABOUT THE STRATEGIES AND MEASURES THAT SHOULD BE EMPLOYED TO CONTROL AND CONTAIN THE DUAL EPIDEMICS?**

Professional consensus about cost-effective approaches to TB control and HIV containment is important because of its cross-cutting implications for advocacy, program design, program implementation and for consumer protection in private health care.

***TB Control:*** Among the various interventions to control and contain the impact of the dual epidemics, the greatest measure of consensus exists with regard to the TB control strategy. International fora like the International Union Against Tuberculosis and Lung Disease and the Global Tuberculosis Program (GTB) of WHO are supporting the DOTS strategy (Directly Observed Treatment-Short Course) as the proven, most cost-effective approach to TB control. Experience has also demonstrated that the DOTS management approach lends itself to decentralized implementation by health workers located in peripheral community health centers and in outpatient facilities of primary hospitals, provided that these health workers maintain standardized patient registers and treatment records and are supported by small national or provincial management structures that ensures availability of drugs and materials and operates the overall registry and the case monitoring- and quality assurance system.

With the support of WHO/GTB and multilateral and bilateral aid agencies the DOTS strategy has become the predominant design standard for TB Control. It is actively disseminated and supported by WHO guidelines and by implementation assistance provided by WHO-GTB and by several multilateral and bilateral aid agencies as well as many NGOs. Globally, about one fourth of all TB cases are now reported from areas presently covered by DOTS-based TB control, with wide regional variance from 48% in Africa to 7% in Southeast Asia.

However, even in countries that have adopted the DOTS-strategy, there is still evidence of pronounced skepticism and ignorance about this strategy among public and private clinicians.

Reservations about DOTS are causing many of them to withhold support from the implementation of DOTS-based TB control in favor of different approaches to TB care. These reservations are based on the following arguments:

- the standardized DOTS regime denies the patient superior customized treatment;
- DOTS is nothing but a medical example of “intermediate technology” which denies developing countries access to high-tech approaches to diagnosis and treatment of TB that are regarded as standard treatment in the industrialized countries;
- the emphasis placed on directly observed treatment to minimize non-adherence to the chemotherapy is seen as excessive, patronizing and retarding the development of rational health seeking behavior.

While all of these objections could be easily refuted with the results of operations- and cost-effectiveness analyses, this does not make them any less real in their impact on the implementation of DOTS-based strategies in developing countries. These strongly-held reservations impede commitment to a common strategy and slow a coordinated implementation of TB care by the public health system in which all elements of the system, chest clinics, referral hospitals, outpatient facilities and peripheral health posts support the same strategy. Instead, the typical TB patient in many developing countries confronts significant differences in advice, diagnostic approaches, treatment, treatment supervision as well as direct and indirect costs dependent on where he or she presents to the health system. While it may be argued that this offers desirable scope for “consumer choice”, the hard evidence of operational research shows that it leaves TB patients uncured, chronically infectious, widely exposed to predatory practices and to low quality care with the attendant risks of developing drug resistance and ultimately, unnecessary and premature death.

Best practices show that with leadership from the Ministries of Health and from the Medical Associations, consensus building through intensive professional dialogue with public and private clinicians can remedy this situation. However, our Review also indicates that such consensus building must give special attention to two recurrent issues: First, the opposition to the DOTS strategy from the advocates of integrated health service development needs to be addressed. It must be explained that acceptance of the DOTS strategy does not dictate a centralized, “vertical” approach to the delivery of TB care. With reference to readily available examples, it should be demonstrated that DOTS can be an effective strategy in the *decentralized* delivery of TB care through the primary and secondary components of the public health system *provided that* case detection and directly-observed short-course chemotherapy in the network of health posts and outpatient facilities are effectively supported by a centralized or federalized reporting system which records new cases and monitors treatment outcomes, and by centralized institutional arrangements which ensure a regular supply of quality TB drugs. The importance of these provisos for quality assurance and protection against the build-up of drug resistance must be emphasized with reference to the by now well-documented consequences of an uncontrolled supply of TB drugs for unmanaged, low quality TB care. Second, the operational difficulties confronting the delivery of TB care to the urban poor must be acknowledged. Operational analyses show that in areas of concentrated *urban* poverty the DOTS strategy must be implemented with considerable flexibility and in the context of more holistic health strategies. This reflects the special obstacles that the living and employment conditions of the urban slum dwellers and the large contingent of rural/urban floaters create for health-seeking behavior and for the implementation of directly-observed treatment. The adaptations and enhancements of the

DOTS strategy which are required to safeguard its operational effectiveness in providing TB care for the urban poor deserve the urgent attention of GTB and the national health authorities. This matter is further addressed in the Action Program developed below.

**HIV Containment:** Given the complexities of containing a sexually transmitted disease in different cultural settings, there are fewer general policy documents and guidelines suitable to support the dialogue with policy makers and national program managers seeking advice on HIV containment. Nevertheless, several relatively successful national AIDS programs have by now clearly demonstrated that it is of overriding importance to confront and fight HIV/AIDS as a predominantly sexually transmitted disease, because this focuses HIV prevention and containment on the high risk groups, facilitates the re-targeting of condom promotion from family planning to STD control, and emphasizes the importance of STD control for HIV prevention. Overall, it provides actionable content for HIV Prevention Programs. In this context, the 1996 *Occasional Paper on HIV, AIDS and Sexually Transmitted Infections: Global Epidemiology, Impact and Prevention* prepared by the Communicable Disease Surveillance Center of the Public Health Laboratory Service of the United Kingdom has made an urgently needed contribution to the development of professional consensus about HIV prevention strategies and measures. The recent publication by UNAIDS and WHO/ASD of "Policies and Principles for the Prevention and Care of Sexually Transmitted Diseases" which is soon to be followed by country-based strategy formulation, promises to provide important reinforcement for policy dialogue at the national and international level.

#### **HOW ARE GOVERNMENTS POSITIONED TO RESPOND TO THE DUAL EPIDEMICS?**

The five countries included in this Review were selected so as to capture the dual epidemics at different stages of challenge and response. As regards TB, they account for 44% of the global TB burden with 24% of the world's population. Estimated annual incidence of TB ranges from about 225 cases per 100 000 in Indonesia to about 70 per 100 000 in Brazil. India, with a population of 935 million, reports 1.2 million new TB cases per annum or about 130 per 100 000. The HIV/AIDS epidemics in the five countries can be broadly summarized as follows: HIV prevalence among the adult population ranges from negligible in Indonesia to 8% in Kenya. Using HIV prevalence among pregnant women as an indicator of the extent to which the HIV epidemic has become a generalized epidemic, this prevalence ranges from negligible in Indonesia to 14% in Kenya, with the other countries experiencing a growing prevalence that however is still below 5%. As regards HIV among TB patients, the prevalence of co-infection ranges from negligible in Indonesia to 40% in Kenya with the other countries showing a prevalence between 10 and 20% which clearly signals the emerging co-epidemics.

In *TB Control* three out of the five countries have formulated national TB control policies which are consistent with the DOTS strategy advocated by WHO; the other two (Brazil and Thailand) are in the process of revising policies and attendant health system budget and practices in ways that would bring them close to the strategy recommended by WHO. The performance of the National Programs and the ongoing program changes are described in greater detail in the attached Country Review Notes. All of the countries, except Kenya are at the pilot or early expansion phase of the DOTS strategy and are falling far short of WHO program objectives regarding case detection (70%) and cure rates (85%). None of the national TB control programs are at present robust enough to be able to cope with the ongoing or prospective HIV-induced increases in the number and complexity of TB cases.

In *HIV/AIDS Control* the five countries provide a representative cross-section of challenge and response:

*Indonesia* is in the unique position that it does not yet confront an advanced HIV/AIDS epidemic. However, with high TB prevalence (about 425 000 new cases per year plus a backlog of about 500 000 difficult repeater cases), substantial STD prevalence and the emergence of HIV/AIDS in several parts of the country, determined, concerted action is required by all levels of Government to avert the impact of the dual epidemics. A high level National AIDS Commission was established in 1994 and a National Steering Committee for Tuberculosis has been established in 1996. Separately, both Committees are sponsoring national control programs. With already exceptionally high TB prevalence, improved control is urgent in its own right, however with the future risk of dual epidemics, there is even greater justification to make TB control a national priority. The speed with which TB control as well as HIV surveillance and containment can be made more effective will determine Indonesia's chances of averting the dual epidemics.

In *India* the sporadic, and frequently low-quality HIV surveillance makes it difficult to assess the exact status of the HIV/AIDS epidemic, especially in the populous central states of Uttar Pradesh and Bihar which account for about 25% of total population. Data from Indian States that have established meaningful surveillance suggest that the epidemic has spread well beyond the high risk groups (e.g. commercial sex workers, IV drug users and truckers) into generalized, heterosexual transmission. Co-infection among TB patients is also on the rise and a large and growing proportion of the emerging AIDS cases show TB as the predominant opportunistic infection. Strengthening of the National TB program is proceeding very slowly with protracted difficulties in the supply of drugs and equipment. While TB is a major public health problem in its own right, it has now become important that every effort be made to strengthen TB control before it is overwhelmed by the emerging HIV/AIDS epidemic. Sporadic, but reliable information about resistance to TB drugs suggests that MDR-TB is already a major problem. A National AIDS Committee was established in 1992. The Committee has sponsored a National AIDS Control Program with World Bank assistance, but has not been effective in securing the needed political support among the state governments that are responsible for program implementation. Consequently the program is only proceeding in about one third of the states, in another third it is proceeding haphazardly and ineffectively, while the remainder of the states continue in "denial". How to obtain the commitment and cooperation of the laggard states is the exceedingly urgent but as yet unresolved issue. Overall, a major effort has to be made by the Union Government, by the States and by the major municipalities to better position the country for containment of the rapidly emerging dual epidemic.

During the last decade *Thailand* has implemented a strong, well-focussed HIV/AIDS control program. Acknowledgement of HIV as a predominantly sexually transmitted disease was central to the design of the program. The AIDS control program is unique in that it has support at the highest political level through a National AIDS Committee that meets quarterly chaired by the Prime Minister. The program has been successful in containing HIV infection substantially below earlier prevalence projections. However, despite these results, the high-quality surveillance data clearly indicate that HIV has spread to the general population and is now spreading within it. The Government is now repositioning its strategy to combine continuation of proven control programs with new programs to contain the slower but more dispersed HIV transmission. At the same time it is confronting the increased need for AIDS care. Substantial efforts are being made to improve the National TB Program. The Government has acknowledged that without significant and timely improvements in TB control "it is unlikely that Thailand can successfully manage the dual threat of an emerging TB/HIV epidemic and higher levels of multi-drug resistant cases". The challenge

of advanced dual epidemics presents itself most clearly in the country's Northern Region where a generalized HIV/AIDS epidemic has emerged among a population of 4.3 million. The quality of the Government's response in the Northern Region will provide the clearest indications about its overall capacity to cope with the dual epidemics.

In *Kenya*, the AIDS control program has set a long record of ineffective program implementation with relatively liberal donor funding. In parallel with this implementation record, adult HIV prevalence has risen from about 3% in 1990 to 8% in 1997. The HIV-positive population of 1.2 million includes about 80 000 children. The National AIDS control program is being re-launched with substantial donor assistance. Support from the highest level in Government remains ambivalent. Donor finance is available to mobilize NGO and mission resources, but has so far remained unutilized. The relatively strong, externally supported TB control program is now trying to cope with increases in the number of TB cases in the order of 25% per annum which are largely attributable to the HIV/AIDS epidemic. The absence of an AIDS care program has further compounded the impact of HIV/AIDS on the control of TB. Given the strategic role which the TB Program has come to play in the management of the dual epidemics, it is very important to recognize that the program is now stretched to the breaking point, and if serious deterioration is to be avoided, the program needs to be protected from disruptions that might inadvertently flow from the ongoing health sector reform, and earliest attention needs to be given to making the program sustainable beyond the duration of the current external financing plan. As regards AIDS control, only time will tell whether the ongoing re-launch of the National program will finally make the Government a constructive force in HIV containment and AIDS care. In the meantime, the available external support for mission hospitals and AIDS NGOs, if allowed to flow without further hold-ups, could make a valuable contribution.

In *Brazil* the HIV epidemic started and was originally contained in the sizeable urban homosexual community and among IV drug users. The epidemic is still running its course within these core groups, but, some time ago, broke out of this containment into slow, but steady heterosexual transmission in the general population. The Government has acknowledged that "a new epidemic is coming out" and has started to re-orient its HIV prevention program. However, with a surveillance program which has been predominantly focussed on notified AIDS cases and which has only recently been strengthened in the surveillance of HIV, this re-orientation still seems to be handicapped by the absence of an up-to-date understanding of the status and latest dynamics of the HIV epidemic. In AIDS care, the Brazilian Government has been providing free AZT and free hospitalization from the beginning of its AIDS program. Starting November 1996, the AIDS treatment policy has been extended to include the supply of anti-retroviral drugs on public account. Access to these drugs is regulated by an elaborate protocol based on CD4- and Viral Load tests which are also being provided on public account. A budget for AIDS drugs of about \$400 million has been spent in 1997 on about 50 000 AIDS patients. With the expected addition of another 50 000 AIDS patients in 1998, a budget for AIDS drugs of about \$700 to 800 million is being provided. At this time, the free supply of AIDS drugs has not only become the driving force of the AIDS care program, but of the entire AIDS control program. In addition, the need to provide for professional supervision of the complex AIDS treatment is causing significant re-deployment of limited operating budgets in the health care system of several states and municipalities. Apart from concerns over the feasibility of effective treatment supervision for this rapidly expanding, hi-tech treatment program, this Government decision also raises concern over the balance between HIV prevention and AIDS treatment. In the medium-term there clearly will also be questions of financial sustainability. Containment of the emerging dual epidemics will require that Government address itself with priority to the strengthening of the TB program, to

the establishment of national HIV surveillance and to the redressal of the imbalance between HIV prevention and AIDS treatment. A balanced, financially sustainable strategy is needed to combat the dual epidemics.

All of the countries included in this Review have embarked on reform of their health systems. While they employ different approaches, the shared objective of these reforms is to increase the cost-effectiveness of public health care through increased devolution of health sector finances and program management to the lower levels of government. In the medium to long term these initiatives hold the promise of improved health service delivery with clearer delineation of costs chargeable to patients for patient benefits and chargeable to the government health budget for public health benefits. However in the management of the required major changes in policies, institutions and programs faulty sequencing and inadequate transition planning have inadvertently weakened the basic delivery of essential public health services. The specific examples provided in the country reviews demonstrate the need for greater attention to careful transition planning especially for communicable disease controls.

Finally, in Thailand, Indonesia and, to lesser extent also Brazil, the recent crisis in their external accounts and in their financial sectors has triggered drastic fiscal adjustments and cost pressures with serious consequences for health service delivery. At the same time, the income and employment effects of the ongoing fiscal adjustments will heighten the dependence of the rural and urban poor on the public health services. Determined effort will have to be made to protect public health care delivery in the governments' ongoing efforts to strengthen the social safety nets and mitigate the social consequences of the financial crisis.

### **HOW COULD THESE GOVERNMENT RESPONSES BE IMPROVED?**

As regards national TB controls, the Review has concluded that all of the ongoing efforts which were reviewed require significant further strengthening because none of the programs are at present robust enough to cope with the ongoing or prospective HIV-induced increases in the number and complexity of TB cases. As regards HIV/AIDS control, despite significant differences in the nature and severity of the HIV/AIDS challenge and the quality of the national response, in all cases reviewed, the national efforts at HIV prevention and containment need to be strengthened or repositioned. In all countries except Indonesia there is an urgent need to develop strategies for containment of the ongoing or emerging generalized HIV epidemic.

It follows, that in the fight against the dual epidemics strengthening of the two basic control programs has to take precedence over major initiatives designed to establish cross-support or integration of program operations. Accordingly, the agenda for improved management of the dual epidemics developed in this Review reiterates the priorities for basic strengthening of the two core programs and identifies selected opportunities for increased cross-support between the strengthened core programs.

#### **Strengthening the Core Programs:**

Based on "best practices", the Review has identified specific acts of political leadership and selected changes in program strategies and management which could significantly improve Governments' response to the emergence of the dual epidemics.

Urgently needed *political leadership* could be provided:

- by the highest political levels in Government affirming that control of the two epidemics has national priority, and by acknowledging the special threat posed by them;
- by establishing a high-level committee, chaired by the head of government or a senior member of the cabinet, which meets at pre-determined intervals to review the progress made in the implementation of the National HIV/AIDS and TB Programs. The Committee would be supported by a small, high-quality secretariat that would work closely with the Health Ministry, but would not be captive to it. Periodic progress reports would be provided to cabinet and parliament;
- by the highest political levels addressing the cultural and religious taboos which frequently stand in the way of effective control programs;
- by the highest levels in Government supporting action plans which bring international best practices to drug procurement.

Finally, important political support for communicable disease management in general and management of the dual epidemics in particular could be mobilized by the establishment of National Public Health Councils which comprise leaders of the medical profession and of civil society.

*Strategies and policies* could be improved by:

- increased reliance on performance-linked allocation of program budgets to promote improvements in the decentralized implementation of national control programs by states and municipalities;
- establishing benchmarked performance targets for all participating public health units, and by providing for independent monitoring of performance against pre-established targets;
- examining the countries' pharmaceutical policies to ensure that they do not interfere with cost-effective procurement of quality drugs for the national priority programs;
- setting a research agenda for the public health system that gives clear priority to the operational needs of the control programs;
- engaging civil society in an open, pro-active dialogue about control program strategies and policies and by promoting the establishment of self-governing NGO Consortia for program support in TB and HIV/AIDS control.

More specifically, *TB Control* could be improved by:

- nationwide implementation of the DOTS TB strategy;
- enlisting the participation of the entire public health system as well as para-statal and corporate health services;
- building broad professional consensus for the TB control strategy;
- recognizing TB as a disease of the poor and using TB care as a focal point for broader-based poverty alleviation particularly in areas of concentrated urban poverty;
- improving the planning, programming, procurement, stock-management and distribution of TB drugs to ensure an uninterrupted drug supply.

*AIDS Control* could be improved by:

- addressing HIV as a predominantly sexually transmitted infection;
- strengthening the surveillance of STDs, HIV/AIDS and HIV in TB patients to improve the epidemiological data and behavioral analyses for the formulation of strategies and policies;

- ensuring respect for patients' rights and protocols in surveillance, screening and testing for infection and co-infection;
- strengthening and targeting STD control in support of HIV containment and prevention;
- promoting the establishment of independent, NGO-operated HIV Testing and Counselling Centers;
- implementing AIDS care policies that are financially sustainable and consistent with the capacities of the existing health system.

### **Opportunities for Cross-Support:**

In parallel with the strengthening of the two basic control programs, *Concerted Management of the Dual Epidemics* could be introduced by:

- joint advocacy of TB Control and HIV/AIDS Control by the National Program Managers. Such advocacy would explain the epidemiological, clinical and programmatic interdependence of TB and HIV/AIDS and draw attention to the importance of cross-support for the effectiveness of both programs.
- modest adjustments in the current operations of both programs to provide more effective health care to the co-infected. Specifically this would entail:
- addressing the training needs of health care workers in relation to HIV and TB;
- adjusting and reinforcing the care for HIV-infected TB patients, i.e. introducing short-course regimens, eliminating Thiacetazone from the chemotherapy where it may still be used, substituting other drugs for rifampicin in the treatment of patients who are receiving antiretroviral therapy with protease inhibitors, taking special care in the sterilization of needles and syringes used to inject TB drugs, and strengthening the capacity for diagnosis and treatment of other opportunistic infections;
- making special provision for the early identification of HIV/AIDS patients with TB infection or disease and developing referral protocols between TB services and AIDS care institutions so as to provide DOTS to all TB cases among people living with HIV/AIDS;
- providing preventive therapy (PT) against TB for people living with HIV/AIDS. However, care needs to be taken that PT is only provided in settings with the capacity to exclude active tuberculosis cases and ensure appropriate counselling, monitoring and follow-up. Although responsibility for funding and running the PT service for people living with HIV/AIDS may be taken by non-governmental HIV/AIDS care organizations, active guidance of TB programs will be necessary in staff training, diagnosis of tuberculosis, treatment and registration of tuberculosis cases and in drug logistics and procurement;
- providing preventive therapy against TB for the contacts of AIDS patients with infectious TB. This PT should only be provided to contact cases where active TB has been definitively excluded and in settings where regularly supervised administration of PT can be reliably organized. The additional burden which provision of this type of PT would place on the TB program should be carefully considered in light of the programs performance in its primary mission: finding and curing infectious cases of TB;
- developing educational material which emphasizes to the HIV-infected the risks of developing TB as an opportunistic infection. This material should stress the importance of supervised treatment and recommend that households and contacts of AIDS patients urgently seek counselling;
- finally, in the provision of TB treatment in areas of high prevalence of co-infection, HIV testing could be offered to all TB patients. Those found to be sero-positive would be assisted through counselling to manage their affairs in the full knowledge of their co-infection. This would have significant benefits for the co-infected, their families, and their sex partners who would be protected from inadvertent HIV infection. The general public would benefit from

improved control of tuberculosis through better TB treatment for those who are HIV-infected and ultimately, by avoidance of MDR-TB. However, since testing and counselling must be combined, the resources required for the establishment and operation of the indispensable counselling services would have to be carefully considered prior to the introduction of such an HIV-testing policy.

### **WHAT GOVERNMENT ACTIONS WOULD HAVE HIGH PAY-OFF IN CONTROLLING THE DUAL EPIDEMIC?**

Resolution of governance issues, policy issues and systemic program management and coordination issues, i.e. actions of the type listed in the preceding sections, will always have higher pay-off than pragmatic, project-based interventions. However, in the real world where the will and capacity of governments to take such actions is severely limited, it is realistic to consider second-best, *project-based* interventions that do not have to wait on improved overall governance or basic sector policy changes in order to avert further infections and advance the control of the dual epidemics. The Country Review Notes provide country-specific recommendations; this section identifies for more general discussion selected, projectized interventions that in most country settings would bring high pay-off in improved management of the dual epidemic. *Projectized interventions are recommended because of the resultant added discipline in the setting of clear, monitorable objectives through base-lines, time-lines and performance criteria.*

## **Recommended National Projects**

### **Implementation of a National HIV, AIDS and STD Surveillance Project;**

**Implementation of a National HIV/AIDS Control Project** focussed on HIV prevention through IEC, condom promotion and STD control targeted on “core groups” characterized by high-risk sexual behavior that promotes transmission of STD and HIV infection.

**Projectized Implementation of the DOTS Strategy for TB** with special attention to the operational issues arising in urban poverty areas.

**Implementation of a Drug Procurement and Logistics Project** to effect improvements in the procurement, quality control and distribution of drugs for TB and STD control and for the treatment of opportunistic infections in people living with AIDS.

**Implementation of District-Level Health Service Delivery Projects** in 2-3 selected, most likely urban districts with high prevalence of TB and HIV. In the context of improved, decentralized health service delivery, these projects would be designed to operationalize the opportunities for cross support identified above, and to “catalyze” an improved, integrated health service response to the needs of patients with TB, HIV/AIDS and STDs, with particular attention to the needs of the co-infected.

As catalytic projects (*projects dynamisateurs*), these projects would test established program strategies, policies and procedures, highlight the requirements for change management, and provide feed-back for program management and for solicitation of high level political support. To that effect, the standards and parameters of these projects would have to be set with strict adherence to considerations of program-wide replicability.

**Implementation of a Training Project for TB and AIDS Program Staff** under which the TB program provides training to staff caring for HIV/AIDS patients and vice versa.

**Implementation of a Support Project for Independent, NGO-Operated HIV Testing and Counselling Centers.**

## WHAT STRATEGIES SHOULD GUIDE THE DEPLOYMENT OF INTERNATIONAL ASSISTANCE FOR THE MANAGEMENT OF THE DUAL EPIDEMICS?

In TB control, HIV prevention and containment as well as AIDS care, the global public health objectives suggest that the limited resources available for international assistance be deployed so as to *maximize global containment of the dual epidemics which are ongoing or threatening in many countries*. In all cases the deployment of this assistance would also have to be governed by considerations of financial sustainability in the context of the developing countries' constrained public health finances.

It is recommended that the following *Strategic Considerations* guide the deployment of international assistance in pursuit of global containment of the emerging dual epidemics:

- TB control based on the DOTS strategy is one of the most cost-effective public health interventions. Moreover, TB is predominantly a disease of the poor and disadvantaged and access to TB care must therefore also be considered an integral part of social safety nets and poverty alleviation. Accordingly, the establishment and strengthening of DOTS-based TB control deserves high priority in the deployment of international assistance for both, health sector development and poverty alleviation. The epidemiological interaction between TB and HIV/AIDS in countries that are confronted or threatened by the dual epidemic further enhances the public health priority of effective TB control. In this context, the deployment of international assistance for TB control should give special attention to:
- countries striving to maintain acceptable cure rates in TB control programs which are operating under the impact of a full-blown HIV/AIDS epidemic; and
- countries with high TB incidence which still have a chance to avert generalized co-epidemics but which nevertheless have decided to strengthen their TB controls as a centerpiece of national contingency planning.
- Concerted management of the dual epidemics requires strong, specialized national support programs in *both* TB Control and HIV/AIDS Control. It would therefore seem justified for donors to employ in countries confronting the dual epidemics, "cross-conditionality" between donor support for either TB control or HIV/AIDS control, in order to focus the attention of the governments on the need to strengthen each core program to create the preconditions for more effective cross-support between the two programs.
- TB control, STD control, HIV containment as well as AIDS care are all crucially dependent on a reliable supply of quality drugs. It is therefore important that the feasibility tests applied to control projects which are being considered for external financing pay earliest attention to the government's track record in drug procurement and distribution. Where this record shows serious problems in drug and materials supplies, donors should seek "up-front" solutions to these frequently systemic problems, *before* they commit their financial assistance. Such up-front action should be insisted upon whether or not the financial assistance is used to finance drug purchases;
- Finally, in countries where poor governance has caused serious degradation of the public health system and communicable disease control can only be implemented in the form of externally managed "enclave programs", donors could give serious consideration to "disintermediating" the respective government in favor of capacity-building in the non-government sectors. Support to government could be held in abeyance pending specific *up-front* actions that re-establish the basis for effective implementation of control programs in the public sector.

## **PROGRAM OF RECOMMENDED ACTIONS**

With reference to the urgent improvements in the national efforts at TB-,STD and HIV/AIDS controls which this Review has identified, there follows a Program of Recommended Actions for WHO/GTB and UNAIDS and their collaborating donors or co-sponsors which would promote and support the actions which need to be taken at the national level.

### **Actions by WHO/GTB and its Collaborating Donors:**

1. Intensify periodic National TB Program Reviews in cooperation with the respective national policy makers and program managers, and give highest priority in the deployment of the national program reviews to those countries that confront a high and expanding TB disease burden. Apportion the resources available for these reviews to take account of population size and program structure;
2. Strengthen the capacity of the review teams to address the economic, financial and logistical issues of program management. Support the reviews with independent beneficiary assessments focussed on the quality and accessibility of TB care and on the pass-through of public subsidies;
3. Strengthen the review teams, in cooperation with UNAIDS, to address issues of HIV in TB and TB in HIV/AIDS disease;
4. Work with the national health authorities in seminars and workshops to broaden and deepen the professional consensus among public and private clinicians regarding DOTS as a cost-effective strategy for the control and care of TB. In these effort give special attention to the operational issues that have arisen in the implementation of the DOTS strategy in urban poverty areas;
5. Promote TB care as a suitable focal point for broader poverty alleviation efforts in areas of concentrated urban and rural poverty. Support appropriate pilot projects in strategic alliance with Family and Community Health Care Programs working as extension agents for the public health care system. Use this approach to mobilize broader support for TB care among the NGO community engaged in poverty alleviation;
6. Continue and expand the surveillance of TB drug resistance;
7. In the dialogue with policy makers and program managers give increased attention to the reliability of supply, quality and cost-effective procurement of the supply of TB drugs;
8. Induce and support the coordination of external aid in support of TB control at the country level. In countries where donors have chosen to support the National TB program at a sub-national level, promote and support coordinated project implementation reviews to achieve coherent implementation of the different donor-assisted parts of the national program.

### Actions by UNAIDS and its Collaborating Donors or Co- Sponsors:

1. Accelerate policy work on strategies, standards and measures for HIV surveillance and HIV prevention and containment for use in policy dialogue and advice on program design; this could include earliest development and testing of prevention strategies and measures designed to contain generalized, heterosexual transmission of HIV;
2. Strengthen the capacity to review National Programs in cooperation with national experts;
3. Focus and structure the work of the UNAIDS Theme Groups through the preparation of country-assistance strategies for HIV/AIDS control;
4. Promote, in corporation with WHO, improved STD surveillance and control in support of HIV prevention and containment. Develop the necessary policy documents and guidelines;
5. Strengthen the links between the analysis of high-risk sexual behavior and the design of HIV prevention and containment programs;
6. Give added attention to the redressal of gender inequalities in the design of HIV containment programs;
7. Accelerate work on the methodology and standards for evaluating the cost-effectiveness of IEC in HIV prevention;
8. Examine and improve the current modalities for extending financial support to AIDS NGOs with a view to developing modalities which "disintermediate" ineffective and corrupt Government services in the flow of funds and in the procurement of NGO services;
9. Accelerate work on AIDS care strategies and policies with particular emphasis on the feasibility of care strategies in the constrained health finances of developing countries; develop financially and organizationally sustainable strategies for the treatment of opportunistic infections in HIV/AIDS disease and address the related drug supply issues;
10. Disseminate best practices in the care for AIDS orphans for advocacy and replication;
11. Develop strategies designed to protect people with HIV/AIDS from infection in the health care settings.

### Joint Actions by WHO and UNAIDS:

1. Engage in *joint* advocacy vis-a-vis governments and within the Country Theme Groups;
2. Amend and enhance all major strategy documents and guidelines prepared by UNAIDS and WHO/GTB to take cognizance of the epidemiological, clinical and programmatic interdependence of TB control, STD control, HIV containment and AIDS care;
3. Make joint efforts to develop training material for health care workers in relation to TB and HIV/AIDS; and sponsor operational research regarding counseling of coinfecting persons;

4. **Jointly promote District-Level Health Service Delivery Projects.** Focussed on areas with high prevalence of both TB and HIV/AIDS, these projects should be designed to operationalize cross support between TB and HIV/AIDS programs (see above pp.14 and 15). The projects should be implemented to “catalyze” an improved, integrated health service response to the needs of patients with TB, HIV/AIDS and STDs with particular attention to the needs of the co-infected;
5. Jointly promote and support the implementation of Drug Procurement and Logistics Projects to effect improvements in procurement, quality control and distribution of drugs for TB and STD control and for the treatment of opportunistic infections in people living with AIDS.

The highest priority actions have been **highlighted**.

# MANAGING THE DUAL TB/HIV EPIDEMIC

## COUNTRY REVIEW NOTES: BRAZIL

As part of the GTB-UNAIDS-sponsored review of Government responses to the emerging co-epidemics of TB and HIV/AIDS, Messrs Vergin and van Gorkom visited Brazil from November 10 to 21. Discussions were held with public health officials of the Federal Government in Brasilia, with state officials in Sao Paulo State and Ceara state, and with municipal officials in Sao Paulo, Rio de Janeiro, Santos and Fortaleza.

Based on prior review of descriptive and evaluative reports about Brazil's response to these epidemics, the discussions focussed on the following questions:

- How is the Government positioned to control TB, contain the spread of HIV infection and ameliorate the growing HIV/AIDS disease burden?
- How has the Government responded to the emerging dual epidemic?
- What are the operational implications of the Government's November 1996 decision to supply, on public account, anti-retroviral drugs for the amelioration of HIV/AIDS disease?
- Does the concerted management of the dual epidemic require adjustments in the ongoing TB- and HIV/AIDS programs?

### **Background**

Brazil's health system has been shaped by:

- the substantial socio-economic disparities within Brazil's population of 162 million which are summarized by the fact that the poorest 50% of the population only accounts for about 13% of total income;
- the advanced urbanization of Brazil's population and its concentration in the coastal areas where two out of every three Brazilians live;
- the migration from rural poverty areas which has given rise to the formation of large poverty belts around Brazil's principal cities;
- the federal structure of Brazil's government which comprises 27 states and about 5000 municipalities;
- a constitution which declared health a constitutional right and has been interpreted to commit the Government to provide free and universal access to all levels of the health system; and
- the gradual devolution of responsibility for public health administration and financing from the Federal Government to the states and municipalities.

The devolution of responsibility for public health administration to the states and municipalities is as yet incomplete with major unresolved issues regarding health financing, cost-sharing and priority setting. A "temporary" tax on all financial transactions is currently being used to finance a major share of public health expenditures. Under the circumstances, health sector finance will be one of the central issues in the major fiscal adjustment on which Brazil's Government has recently embarked.

## Status of the Ongoing Programs

### *Status of TB Control*

Tuberculosis is an important public health problem for Brazil especially among the sizeable population that lives at or below the poverty line. Annually about 5000 to 6000 persons die of Tuberculosis. Notified cases of TB totalled 91 000 (56 per 100 000) in 1995, up from 85 000 in 1991 and about 82 000 in the second half of the eighties. With incomplete reporting from Sao Paulo State, notified case in 1996 totalled 89 000. Estimates for 1996 have placed the number of notified cases as high as 96 000 or 60 cases per 100 000. The notified incidence in urban poverty areas with 100 to 120 cases per 100 000 is about twice the national average. Overall, it is estimated that about 10% of the recent TB incidence are directly attributable to the HIV/AIDS epidemic.

A National Tuberculosis Program based on self-administered short course chemotherapy was operating until the mid-seventies as a federally-managed program that delivered TB care through the general health services. Since then the management of the National Program has been decentralized to the states and municipalities. In 1990 the National Program was entirely abolished and the central supply of TB drugs was discontinued.

While it had been hoped that the decentralization of the TB program would bring further improvements in the rather well-functioning program, these hopes did not materialize. By 1992, reduced TB coverage by the state and municipal institutions, deteriorating performance in case-finding, case retention and cure rates as well as frequent shortages of TB drugs signalled a general deterioration of TB control which caused the Government to re-instate the central TB Unit in an advisory capacity and to resume the central procurement and distribution of TB drugs.

Since then several efforts have been made by the Federal Government to strengthen the TB program in its decentralized operation. While the results of these efforts are still quite uneven between states and municipalities, aggregate measures of program performance have started to show a gradual turn-around in the effectiveness of the program. Moreover, there is now a growing awareness that more intensive case supervision and follow-up is essential for improving cure rates. Government also seems to have taken note that it can ill afford deteriorating TB control at the same time that the HIV epidemic is causing an increase in TB case load and complexity.

Accordingly, Government has initiated a three-year Emergency Program (97/98/99) which is designed to assist municipalities with high TB incidence to improve their TB programs. The program is designed to provide incremental operating budget (\$100 per notified patient per year) on the basis of bench-marked, monitorable performance plans with specific targets for improved case retention and cure rates. This type of program is well suited for improving the decentralized program, if realistic performance plans can be established, and if it proves politically feasible to uphold the performance-linked allocation of the funds. Unfortunately, the program has had a slow start due to budgetary constraints and protracted bureaucratic maneuvering over the content of the performance plans.

It is likely that the importance attached by Government to improved TB control will also underlined by a change in the reporting relationship of the National TB Program Coordinator, whom from now on, would be reporting directly to the Secretary/Special Programs in the Ministry of Health. This arrangement would parallel the reporting relation that had earlier been established for the Coordinator of the National AIDS Program.

Overall, the rehabilitation of the decentralized TB Program to the standards that it had achieved prior to the decentralisation is still incomplete. In addition to earliest implementation of the Emergency Program, attention will also have to be paid to:

- improving the morale of the advisory program staff at the Federal, state and municipal levels, and increasing its authority in standard setting and quality control;
- providing the advisory program staff with the operating budget needed to accomplish their mission;
- enforcing of case reporting and notification standards;
- implementing the action plan for the strengthening of the network of TB laboratories;
- reducing the turnover of professional TB staff; and
- dealing with the disregard for established TB care protocols by a large number of hospital clinicians.

Federal influence and financial incentives will have to be brought to bear on the resolution of these issues at the state and municipal level. The help of the National and State Health Councils that include influential members of the medical profession and of civil society should be enlisted in this effort.

Among ongoing Federal programs, two programs, the PSF ( Programa Saude da Familia) and the ACS ( Agentes Comunitarios de Saude) are particularly well placed to support the TB and the AIDS program. These programs deploy teams of health workers within the service areas of established health centers to improve the out-reach for clinical and preventive services to target groups of 200-250 families per team. In several municipalities these teams have already proven that they can provide important assistance to the TB program in case-finding, including contact examination, as well as case retention.

Attention will also have to be given to the management of the drug supply and buffer stocks. The supply is still subject to interruptions, and, at the average cost of \$100 per treatment, the cost of TB drugs that are procured from selected state laboratories on a sole-source basis is high when compared to the cost of about \$40 per treatment for quality drugs procured by other National Programs on a competitive basis in the world market.

Finally, it is important that the Government's efforts to re-build a quality TB program not be jeopardized in the drastic fiscal adjustments which have been triggered by the crisis in Brazil's external accounts and financial markets. At present the public expenditure compression in the health sector as well as the massive set-aside of funds to cover the cost of AIDS drugs, threaten to crowd out the modest expenditures needed to implement the TB Emergency Program.

### ***HIV Containment***

Unlike other countries, Brazil has chosen to base its monitoring and analysis of the HIV/AIDS epidemic predominantly on the "notification " of symptomatic AIDS cases. For this purpose a highly sensitive and specific AIDS case definition, including the PAHO/Caracas criteria, is being employed to guide the identification and notification of AIDS cases. A parallel system of HIV surveillance based on STD clinics, Ante-Natal clinics and Army conscripts has been started, but to date this surveillance system has not produced any systematic, published results. By adopting a surveillance system which is focussed on AIDS symptoms which occur

five to ten years after the HIV infection, the Government has obtained a very detailed understanding of the HIV epidemic as it occurred five to ten years back. However, compared to HIV surveillance, the emphasis on AIDS surveillance does not provide Government, and with it civil society, with a good understanding of the *current* status and dynamics of the HIV epidemic which needs to be contained.

Based on the systematic surveillance of AIDS cases supplemented by sporadic HIV prevalence data, Government seems to be acting on the following understanding of the epidemic:

- the epidemic started and was originally contained in the sizeable urban homosexual community and among IV-drug users. Some amplification of the epidemic took place through contamination of the blood supply.
- the epidemic is still running its course within these core groups, but some time ago has broken out of this containment into slow, but steady heterosexual transmission. The most telling evidence in support of this hypothesis is provided by the decline in the male/female ratio among notified AIDS cases from 7:1 at the end of the eighties, to 3:1 in 96/97. This hypothesis is further supported by the results of sporadic HIV screening of pregnant women that show HIV incidence in the order of 1-2%. Further reason to believe that the epidemic has changed its dynamics can be found in the growing predominance of TB among the opportunistic infection of AIDS cases and in the increased prevalence of HIV among TB patients.

In 1994 a Government report about the National AIDS Program announced that "a new epidemic is coming out" and that prevention and control efforts were being reoriented according to the results of sentinel surveillance (of HIV). It appears that this reorientation is still ongoing. Details about the new strategy and its components were not available to the Review.

As regards aggregate HIV/AIDS data, notified AIDS cases are reported to total 116 000. With correction for under-notification, the Government's estimate for AIDS prevalence seems to be in the order of 150 000. The Government's working estimate regarding the underlying total HIV prevalence seems to be in the order of 450 000 HIV infections.

In its response to the HIV epidemic the Ministry of Health consolidated in 1986 all activities against HIV and AIDS and made AIDS a notifiable disease. In 1988 the National Program on Sexually Transmitted Diseases and AIDS was created within the structure of the Ministry of Health.

The ongoing HIV prevention program clearly recognizes HIV as a predominantly sexually transmitted disease. The program comprises:

- information, education and communication about HIV/AIDS;
- behavior intervention projects directed to population groups at higher risk;
- projects directed to specific audiences, such as schools, mining areas, street children etc.;
- social marketing for condom promotion;
- IEC regarding AIDS in the workplace;
- strengthening of centers devoted to sexual disease control;
- treatment of STDs and summons and treatment of sexual partners;

- integration of STD/AIDS services in the primary and secondary health care institutions;
- analysis of the cost-effectiveness of interventions and of the socio-economic impact of HIV infection and AIDS.

Since 1994 this program has been supported by an IBRD loan of \$ 160 million for an AIDS and STD Control Project.

The implementation of the prevention program is decentralized with program coordinators placed at nodal points in the state and municipal health systems. By comparison with other National Programs the organizational and physical location of the state and municipal coordinators close to the actual service delivery is commendable.

Management information about the effectiveness of the prevention program could not be obtained. Even for the IBRD-financed control project, which is now well past its mid-term review, the establishment of a benchmarked performance monitoring system is still ongoing.

It is not clear how far the re-orientation of the decentralized HIV prevention program has actually progressed in taking account of the increased importance of general heterosexual transmission in the current course of the epidemic. It would appear that, despite the messages conveyed by the ongoing IEC, the general public continues to identify AIDS with the homosexual community and prefers to ignore the risks of HIV infection through general, heterosexual transmission. Sentinel surveillance of HIV is urgently needed to provide up-to-date information about the dynamics of the epidemic, to review and calibrate the current prevention strategy, and to assess the effectiveness of the different interventions.

In parallel it would be important to give increased attention and priority to surveillance, notification and control of other sexually transmitted diseases which are a major, but controllable contributor to the transmission of HIV. With proper targeting through improved STD and HIV surveillance, STD control could become a much more important focal point of HIV prevention than it is at present.

### **AIDS Care**

In accordance with the Government's sweeping, general commitment to provide free and universal access to all levels of the health system, free AZT treatment and free hospitalization for AIDS patients has been provided from the start of the AIDS program. As of November 1996, the AIDS treatment policy has been extended to include the supply of anti-retroviral drugs on public account. Access to these drugs is regulated by an elaborate protocol based on the results of CD4 and Viral Load tests that are also provided on public account. A budget for AIDS drugs of about \$400 million for about 50 000 AIDS patients has been established for 1997. With the expected addition of another 50 000 patients in 1998, a budget of \$ 700-800 million for AIDS drugs is being provided. With the current annual increase in the number of notified AIDS cases of about 20 000, it is likely that the number of AIDS cases under treatment will increase to about 200 000 cases over the next 3-5 years. Based on current average costs this would require a budget for AIDS drugs in order of \$ 1.5 billion three to four years from now.

Concerns over the financial sustainability of such an expenditure path are being allayed by references to expected reductions in the price of the anti-retroviral drugs and other expected technological breakthroughs. Confronted by the rapidly expanding Government supply of the most advanced AIDS drugs, the public health system is making a major effort to cope with the burdens of responsible treatment supervision. Except for funds provided by the Federal

Government for the establishment of CD4 and Viral Load testing capacity, the overhead costs of AIDS treatment supervision are being absorbed by the current operating budgets of the state and municipal health systems. A cost-operating plan could not be obtained.

At this time the free supply of AIDS drugs has not only become the driving force of the AIDS care program but also the center-piece of the entire AIDS control program. In addition, the need to provide for AIDS treatment supervision is causing significant redeployment of limited operating budgets in the health care system. Apart from concerns over the feasibility of effective treatment supervision, this approach to AIDS care raises concerns over the balance between HIV prevention and AIDS care in the operation of the National AIDS program. In the medium-term there will also be questions of financial sustainability. Overall, there are still fundamental questions about the public health priority and cost-effectiveness of public expenditures for the prolongation of the life of AIDS patients at a cost of \$10 000 to 15 000 per patient per year while curable diseases with significant public health benefits may go untreated for lack of public funds and attention.

At this stage in the implementation of the Government's decision to provide anti-retroviral drugs for AIDS treatment on public account, it is most urgent:

- to prevent a diversion of limited financial and professional resources from HIV prevention to AIDS treatment;
- to counteract the emerging perception that, with the available free treatment, AIDS has now become nothing more than a *chronic* disease; and
- to provide for earliest possible, independent monitoring and evaluation of the cost-effectiveness and feasibility of the AIDS treatment program.

### **Management of the TB/HIV Co-Epidemic**

By comparison with most other countries, the management of TB in AIDS cases and the increasing prevalence of HIV among TB patients is receiving substantial attention from the health authorities at all levels of Government. The detailed monitoring of opportunistic infection in the notified AIDS cases has drawn attention to the increasing importance of TB. Starting in fourth place among the opportunistic infections in the late eighties, TB has now moved into first or second place. More specifically, in the states of Sao Paulo and Rio de Janeiro which together account for about 70% of the notified AIDS cases, 24 % of the AIDS patients have TB. In a hospital sample of TB patients in Sao Paulo City the percentage of HIV positives has increased from 6% in 1991 to 21% in 1996. In Rio's Primary Health Centers, the percentage of HIV in TB has increased from 1% in 1987 to 12% in 1996.

In response to the growing prevalence of TB among the opportunistic infections of notified AIDS cases, the AIDS treatment protocols are explicitly addressing the coordination between AIDS and TB treatments. Also, in the establishment of AIDS Care Centers an effort has been made to develop AIDS care capacity in institutions which already have a capacity to provide TB care. In the absence of such capacity, referral arrangements are being devised. TB training is being extended to AIDS Center staff and HIV/AIDS training is available to the institutions extending TB care.

In the operations of the TB program it is currently considered best practice to offer HIV tests to patients who by symptoms or case history are suspected to be HIV-positive. Referral of co-infected TB patients to the AIDS Centers for specialized counselling and follow-up is part of the established protocol in most state and municipal health institutions. Consideration is presently being given by the Federal coordinators of the TB and AIDS programs to making the offer of HIV testing general policy in the operation of the TB program.

While good progress has been made in responding to the dual epidemic, finding and treating the co-infected could be further improved by:

- improved adherence by AIDS Centers to the diagnostic protocols for TB established by the National TB program;
- coordinated case supervision and follow-up with the help of the PSF/ACS program especially in urban poverty areas;
- refresher training about TB and TB in HIV for the clinicians working in AIDS Care Centers;
- enforcement of standard TB reporting practices in AIDS care institutions;
- improved sentinel surveillance of HIV in TB;
- introduction of systematic voluntary HIV testing of TB patients in areas and groups with significant HIV prevalence.

## Conclusions and Recommendations

Containment and control of the dual epidemic will require that Government address itself with priority to the strengthening of the TB program, to the establishment of national HIV surveillance and to the redressal of the emerging imbalance between HIV prevention and AIDS treatment. With HIV infection now spreading among Brazil's poorer population with higher TB prevalence, these tasks are acquiring added urgency. .

While the Government in the design of its programs is correctly positioned for concerted management of the dual epidemic, the overriding attention that is presently being given to AIDS treatment not only threatens the balance between HIV prevention and AIDS care, but also shows signs of crowding out and side-lining the urgently needed efforts to improve TB control. A balanced, financially sustainable strategy is needed to combat the dual epidemic. The following actions are recommended to strengthen the Government's management of the dual epidemic.

### *As regards TB Control:*

- earliest implementation of the TB Emergency Program with special emphasis on capacity building and performance improvements in municipalities which are confronting high HIV prevalence (>5%);
- operational research on case retention and health-seeking behavior, particularly among the urban poor;
- implementation of pilot projects in the poverty belts of Brazil's principal cities which use the supply of TB care to these areas of high TB prevalence as the focal point for broader, family- and community-based poverty alleviation; these pilot projects would serve as focal points for the establishment of strategic alliances between the TB program, the PSF/ACS program and NGO's working in the field of maternal and child health, women's development, micro-credit etc.
- continuation and strengthening of the recently initiated systematic surveillance of resistance to TB drugs;
- preparation of guidelines which address the risks of nosocomial infection;
- systematic sentinel surveillance of HIV in TB;
- systematic, voluntary HIV testing of TB patients in areas with high prevalence of co-infection;
- earlier review of planning, programming, procurement and stock management of TB drugs to eliminate interruptions in drug supplies and to enhance the cost-effectiveness of drug procurement through transparency and competition among qualified national and international suppliers.

*As regards HIV Prevention and AIDS Care:*

- earliest establishment and operation of representative, national HIV surveillance;
- earliest reassessment of the current HIV prevention strategy in light of improved HIV surveillance data and expanded behavioral analyses of sexual high-risk practices;
- improved STD surveillance and improved STD notification to achieve the quality of TB and AIDS reporting;
- improved STD control in the service of HIV containment;
- increased coordination between STD clinics and AIDS Care Centers;
- redesign of IEC to address the pronounced divergence between increased HIV/AIDS awareness and the reported absence of significant behavior changes as regards high-risk sexual practices.

Overall, the above program of priority actions would be greatly facilitated by coordinated, joint advocacy of TB control, HIV prevention and AIDS care by the Coordinators of the two National Programs.

Attachment

PERSONS MET

National Program on STD/AIDS

Dr Pedro Chequer, National Coordinator

Dr Valdilea Veloso

Dr Maria Goetti Pereira Fonseca

National Tuberculosis Control Program

Dr Miguel Aiub Hijjar, former National Coordinator

Dr Ademir de Albuquerque Gomes

Dr Josue Haguardia

Ms Ivanize de Oliviera Cunha

PAHO/WHO

Dr Reinaldo E. Gil Suarez

Dr Angel Valencia Telleria

State of Sao Paulo

Dr Artur Olhovetchi Kalichman, Director/Coordinator, Program on STD/AIDS

Dr Jose Casio de Moraes, Director Epidemiologic Surveillance

Dr Vera Maria Neder Galesi, Coordinator , Tuberculosis Control Program

Dr Laedi Alves Rodrigues dos Santos, Epidemiology and Surveillance, Tuberculosis Control Program

Municipality of Sao Paulo

Dr Jose Claudio Domingos, Program on STD/AIDS

Dr Maria Agarecida Miyaoka

Dr Emilio Sebe

Municipality of Santos

Dr Ricardo Leite Hayden, Coordinator, Program on STD/AIDS

Dr Sylvia Maria P. Borges, Coordinator, Tuberculosis Control Program

Ms Carolina Ozawa Rodrigues, RN, Chief, Epidemiology Section

Dr Mauro Rosman

State of Ceara

Dr Anastacio de Queiroz Sousa, Secretary of Health,

Dr Telma Alves Martins, Coordinator, Program on STD/AIDS

Dr Ana Margarida Rosemberg, Coordinator, Tuberculosis Control Program

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Ms Maria Alix Leite Arauji, Coordinator, Program on STD/AIDS

Ms Cileide Joca Freire, Coordinator, Tuberculosis Control Program

Ms Alicemaria Ciarlini Pinheiro, Chief, Epidemiology and Surveillance

Centro de Referencia Professor Helio Fraga, Rio de Janeiro

Dr Miguel Aiub Hijjar, Director

Dr Margareth Dalcolmo, Medical Director

Institutions Visited:

Santana Health Center/CRDST/AIDS , Mandaqui, Sao Paulo

Associacao Alianca Pela Vida ( ALIVI ); Hostels and Hospiz, Sao Paulo

TB Clinic, North Sao Paulo

AIDS Reference Center, Santos

Hospital Sao Jose, AIDS Reference Center, Fortaleza

TB Clinic, Fortaleza

Public Health Center, Jacarepagua, Rio de Janeiro

# MANAGING THE DUAL TB/HIV EPIDEMIC

## COUNTRY REVIEW NOTES: INDIA

In the review of Government responses to the emerging co-epidemics of TB and HIV/AIDS sponsored by WHO/GTB and UNAIDS, Messrs Vergin and van Gorkom and Ms Shankar visited India from 8/3 to 8/10. They met with officials of the Ministry of Health and Family Welfare in the Government of India, with officials of the Ministry of Health in the Government of the State of Maharashtra, with officials of the National Tuberculosis Research Center in Chennai and with representatives of non-governmental organizations engaged in public health and social development. Under the chairmanship of the WHO Representative in India a meeting was also held with the UNAIDS Theme Group for India. Representatives of bilateral donors supporting India's TB and HIV/AIDS programs attended the meeting. A list of people met is provided in Att. I.

Based on prior review of reports about India's programs in TB control and HIV/AIDS containment, the dialogue with Government and NGOs focussed on the following topics:

- How is the Government positioned to cope with the co-epidemics?
- How effective are the ongoing TB control and HIV containment programs that are being implemented by the states?
- What is the Government's near-term agenda to strengthen these programs?
- What priorities are there for more concerted management of the co-epidemics?

### **Country Size, Diversity and Governance**

India is characterized by great cultural diversity and substantial differences in the socio-economic development of its various regions. The Union of India, with a total population of 845 million (1991 Census), comprises 25 states; 96% of the total population is concentrated in 15 major states which range in size of population from the state of Haryana with 17 million to the state of Uttar Pradesh with 140 million. Reflecting different rates of economic development, there are substantial differences between states in their per capita income levels: the state of Punjab (Pop.: 20million) is 50% above the All-India average; by contrast, the state of Bihar (Pop.: 86million) is 44% below the national average. In India as a whole about 45% of the rural population is estimated to live below the poverty line; this percentage is as high as 66% in Bihar and Orissa while it is only 21% in Haryana and 23% in Punjab. Contrasts are even sharper in social development: the female/male ratio in state populations, an indicator of the composite effects of gender discrimination, ranges from 865 per 1000 in Haryana and 879 per 1000 in Uttar Pradesh to 1036 per 1000 in Kerala, with several other major states clustering around 975per 1000. Equally relevant for all aspects of future social development, the female literacy rate varies from 20% in Rajasthan (Pop.: 44 million) to 86% in Kerala (Pop.: 30 million).

This diversity in economic development and social achievement is highly relevant for the implementation of *National Programs* such as TB Control or AIDS Control, because a wide range of Government activities are under India's Constitution defined as "state subjects", that are to be handled at the level of the states, rather than the central government. Specifically, the development and operation of the general health system is a "state subject" and therefore the responsibility of the governments of the Indian states. With more than 90% of the public

spending in the health sector being the responsibility of the states, India's ability to improve and expand public health programs is critically dependent upon the states' ability to mobilize the necessary resources. Moreover, to the extent that many states have not been able or willing to devote enough of their resources to maintain and operate the assets created through internationally or nationally (centrally) funded programs, many programs with high national priority have failed to achieve sustainability.

Under India's constitution the control of communicable diseases is a *concurrent* subject involving both state and central governments in program implementation. However, the protocol observed by the Ministry of Health in the Central Government is such that it very rarely intervenes directly with state-run programs to ensure compliance with national standards and objectives. It follows, therefore that the *National Programs* in TB Control and in HIV/AIDS Containment function essentially as "enabling frameworks" for program implementation by the state governments.

## **Status of the National Programs**

### ***Status of TB Control***

*Epidemiology:* It is estimated that about 50% of the Indian population are infected with tuberculosis. Prevalence of active TB has remained stagnant at around 1.5% of the population, but the number of new cases is estimated to have grown steadily. At present about 1.2 million cases are being reported annually through the National TB Program. About 75% of the cases occur in the 15-45 age group; two thirds of the cases occur in males.

*Past Efforts:* A National Tuberculosis Program (NTP) was launched by GOI in 1962. Designed as a decentralized program, District TB Centers were established to support the TB diagnosis and treatment which was to be provided by the expanding network of village-level public health centers. A District Tuberculosis Officer, under the direction of the District Medical Officer, was made responsible for implementing the program through the general health care system.

In the 1980s several studies of availability, quality and accessibility of public and private health services to the urban and rural poor reported disappointing results of the NTP. The following excerpts are indicative of the findings of these reports:

- While the NTP envisages all services to be delivered at the peripheral health institutions, their poor functioning made rural patients take a circuitous route from these centers to the city-based District Tuberculosis Centers and back again to the peripheral institutions. The rural public health centers, lacking both technical and administrative support from the District Tuberculosis Centers, implemented the TB program in a perfunctory manner. Even the minimum essential things- sputum cups, slides, stains, drugs, treatment cards, registers etc were not in place, all at a time. The public health centers' contribution to TB control was thus reduced to routing and re-routing patients from the villages to the district headquarters or rural hospitals if they were functioning." (FRCH Assessment of NTP in Pune District, 1991-94);
- Not even one of the eleven Public Health Centers came anywhere near the norm implementing the NTP. At most some of the Centers referred those patients with compelling symptoms of TB for X-ray at the district hospital and offered the diagnosed cases treatments whenever they happened to have supply of some of the drugs. Failure of the NTP to meet the felt needs amongst the tuberculosis patients has created a thriving "market" for all sort of exploiters, who extract large sums of money from the victims as charges for X-ray, ESR and other relevant or irrelevant tests and for various forms of medicines and tonics."(Micro-Studies of NTP in 19 villages in 8 states, 1995).

*Revised TB Strategy:* In response to these widely reported problems, the Government of India conducted in 1992 a nation-wide review of NTP with assistance from WHO and SIDA. The salient findings were:

- less than 30% treatment completion.
- inadequate budgetary outlay and shortage of drugs.
- undue emphasis on X-ray diagnosis.
- poor quality of sputum microscopy.
- target-driven emphasis on case detection ( with clear evidence of over-diagnosis) rather than cure.
- poor organizational set-up and support for the peripheral centers.
- multiplicity of treatment regimens.

Based on these findings the Government decided in 1996 to adopt a revised strategy that addresses the weaknesses of the NTP and stresses the effective utilization of available infrastructure.

The objectives of the revised TB strategy are:

- emphasis on the cure of infectious and seriously ill patients of tuberculosis through administration of supervised Short Course Chemotherapy, to achieve a cure rate of 85%.
- augmentation of the case finding activities to detect 70% of estimated case only after having achieved the desired cure rate.

The revised TB strategy itself comprises:

- use of sputum testing as the primary method of diagnosis among self-reporting patients.
- standardized treatment regimens.
- augmentation of the peripheral level supervision through the creation of a sub-district supervisory unit.
- ensuring a regular, uninterrupted drug supply to the most peripheral level.
- augmentation of organizational support at central and state levels for meaningful coordination.
- more emphasis on training, IEC, Operational Research and NGO involvement in the program.
- increased budgetary outlays.

The Government tested the feasibility of the revised strategy in a series of pilot projects across urban and rural India covering at first a population of 2.3 million and subsequently a population of 14 million. In these pilot projects cure rates of about 80% have been reported.

*The Revised National Tuberculosis Control Program :* At present the revised strategy is being implemented in a five year program(1997-2001) financed by the World Bank. The Revised National Tuberculosis Control Program (RNTCP) will cover 102 districts in 15 states with a population of 270 million. Preparations are under way to extend the RNTCP to the remaining 203 districts in a subsequent phase. The implementation of the revised strategy is also receiving assistance from WHO, ODA and DANIDA.

The RNTCP represents a major Government commitment to long-term capacity building for TB control in the primary health system. Given the lessons learned from past efforts, this represents exceedingly complex change management. Only time will tell whether the political commitment to the revised strategy demonstrated by the Union Government can be replicated in the states and municipalities where the most important issues of change management have to be addressed. For the management of the RNTCP at the center the most important issues in the current start-up phase are: the establishment of a reliable drug supply, the strengthening of management information systems, the strengthening of central program management and the modalities for pro-active implementation assistance to states which are not responsive to the demands of the revised strategy. Among these issues, the solution to the protracted drug supply problems is central to the successful launch of the revised strategy, since continued drug shortages would seriously undermine the credibility of the revised strategy and the accountability of the program managers.

*Broadening the Capacity Building for National TB Control:* While the emphasis on capacity-building in the primary health system is fully justified as part of the broader effort to give the poor improved access to preventive and promotive health care, the general dilapidation of the primary health system in the poorer states and in the urban slums will make this a very difficult and *slow* task. Given the urgent need for improved TB control, implementation of a more *diversified* strategy would seem to be prudent. A more diversified strategy would still emphasize capacity building in the primary health system, but would *also* enlist the support of qualified private providers and of the health services operated by para-statal and corporate entities. In this way it would not only be possible to hedge against the failure of the difficult core strategy, but also broader-based, improved TB care would be available in the event that the emerging co-epidemic of HIV/AIDS and TB cannot be contained. Finally, the strategy also recognizes the fact that currently the majority of the TB patients, for better or worse, seek help from private practitioners because the public health service has lost its credibility by failing to meet their needs. This being so, it is important that the private practitioners be given training and incentives to use best practices in diagnosis and treatment of TB that are in line with those used the RNTCP.

Specifically, this diversified strategy would:

- enlist the cooperation of the Indian Medical Association and of the Teaching Hospitals to upgrade the TB care provided by private physicians and to promote, with appropriate safeguards and incentives cooperation between RNTCP and private health care providers.
- enlist the cooperation of the health services operated by Indian Railways, Coal India, National Thermal Power Corporation and other centrally or state-owned para-statals to extend standardized TB care in line with RNTCP protocols to their employees and their dependents.
- enlist the cooperation of the health services operated by large private corporations in heavy industry, construction, plantation agriculture and other businesses with large geographical concentrations of employees.

It is recognized that the implementation of such a broad-based strategy would require a change in the governance applied to National TB Control in India. The establishment of a National Steering Committee for TB Control chaired by the Ministry of Health with members from the private sector and from NGOs would seem to be a suitable first step.

## **Status of HIV Containment**

*Epidemiology:* National data on HIV prevalence and incidence are "soft" and leave substantial room for conjecture about the exact status and dynamics of the epidemic. This reflects the very uneven performance of states and municipalities in HIV surveillance. Prevalence of HIV infection is estimated to be in the order of 2.5-3.0 million or about 0.5% of the adult population.

Overall, the HIV epidemic in India can be described as being in transition from the *concentrated* stage to the *generalized* stage: HIV prevalence has reached very significant levels (25-50%) in several, sizeable high risk groups which, while geographically concentrated like injecting drug users and establishments of commercial sex workers, have relatively mobile memberships. Moreover, these centers of high frequency transmission of HIV infection are scattered across the subcontinent with high concentrations in the mega-cities and along the major trunk routes. Transmission of HIV is also facilitated by the prevalence of other sexually transmitted diseases (STDs) which are known to enhance the susceptibility to HIV infection.

While there are indications that HIV incidence may have peaked within some of the highest risk groups; the epidemic has spread beyond these groups as is evidenced by the fact that HIV infection among women attending ante-natal clinics is in several locations now approaching 5%.

Relatively few data are available for the large rural population of India, however, the well-developed transportation system, similar lifestyle changes among urban and rural youth, and the linkages of commercial sex workers and recent rural migrants to their home-villages are all contributing to increasing HIV prevalence in rural areas.

Overall, the situation requires that highest priority be given to the establishment of a seamless, high quality network of National HIV/AIDS Surveillance to guide the formulation of strategies and policies for HIV containment and AIDS care.

*The National AIDS Control Program:* Realizing the potential consequences of an HIV/AIDS epidemic, the Government in 1992 strengthened and consolidated the National AIDS Control Program established in 1987. A National AIDS Control Organization (NACO) was set up as a separate unit in the Ministry of Health and Family Welfare for more effective implementation of the national control program. A National AIDS Committee under the chairmanship of the Minister of Health, and a multisectoral committee under the chairmanship of the Secretary of Health were constituted to promote effective intersectoral collaboration. Simultaneously, funding for the National AIDS Control Program was increased substantially in 1992 by a US\$ 84 million IDA Credit. Specifically, the NACO Program provides an enabling framework and funding for states and major municipalities to:

- promote public awareness of HIV/AIDS and gain community support for behavioral changes;
- promote general and targeted distribution of condoms for safe sex;
- improve blood safety;
- build surveillance and clinical management capacity;
- improve STD control through stronger public STD Centers and through training of private practitioners in metropolitan areas;
- strengthen program management, and
- enlist the participation of NGOs.

The Program has generated uneven results that fall short of national objectives. The major issue is the differential commitment and performance of the states; with about one third performing satisfactorily overall, another third showing mixed results and the remainder showing themselves unresponsive with entirely unsatisfactory results in the few areas in which action was taken. In light of the poor performance of several large and strategically placed states in a *National* Program involving a *concurrent* subject, it is noteworthy that the Union Government so far has not chosen to intervene with laggard states in the same manner in which "guidance" is being provided in the management of *concurrent* subjects in other important sectors.

With more than five years having passed since the establishment of NACO, a state-by-state review of the response of the state authorities to the enabling framework and funding provided by NACO since 1992 is needed in order to create a transparent base-line for future AIDS control activities. Such a Review would best be carried out by an independent team of Indian experts drawn mainly from public and private health professionals, with some representation of the social sciences. To give it the necessary stature vis-a-vis the state authorities, the review should be sponsored by the National AIDS Committee. The terms of reference should focus the work on the 15 major states and the NE-border states. For each of these states the Review should provide an assessment of AIDS control activities and achievements under the headings of: Surveillance of HIV/AIDS, Epidemiological and Behavioral Analysis of High Risk Behavior, Effectiveness of IEC, Condom Promotion, STD Control, Improvements in Blood Safety and Capacity for Clinical Management of HIV/AIDS Disease. State-by-state the Review would identify the major constraints to more effective AIDS control, establish the base-line as regards progress to-date, and make actionable recommendations to achieve improved results in the future. While the focus of the Review would be on HIV/AIDS containment, the Review should also assess the readiness of the state to address its prospective burden of HIV/AIDS disease through appropriate AIDS care programs.

Arrangements should be made to have the Review managed under a contract with an independent professional organization so as not to divert NACO's management capacity from its priority tasks. With an efficient design and a sizeable, well-chosen review team, the Review should not take more than six months to cover the 15 states and to generate an overview of the recurrent systemic issues. Present information suggests that the findings of the Review could provide the urgently needed national "wake-up call" about the inadequate state-level responses regarding HIV/AIDS containment in roughly two thirds of the Indian states, and draw attention to the fact that their inaction is putting the entire nation at risk. At the same time, "best practices" in states such as Maharashtra and Tamil Nadu could be highlighted to provide reinforcement for the HIV containment efforts in other states.

### **HIV/AIDS Care**

More and more cases of HIV/AIDS disease will have to be dealt with in those metropolitan areas with a high HIV prevalence in their high-risk groups.. It is therefore surprising that the ongoing planning and policy work in NACO and even in the otherwise more responsive states is giving only limited attention to the planning and testing of AIDS care. Overall, the Government seems to count on the ready absorption of the AIDS cases by their families and communities. However, no systematic effort has been made to test the feasibility of community-based home-care. As regards clinical care for the opportunistic infections of the people with AIDS (PWAs), the assumption seems to be that the existing capacity for clinical care will suffice.

This lack of detailed forward planning in the face of a health problem that, in the larger municipalities will already have to be confronted in the next two to three years poses major risks to the unprepared health system. This gap in national and local planning needs to be urgently closed in cooperation with civil society and in consultation with the emerging groups of PWAs. Highest level political support and leadership will be needed to ensure that compassion does prevail over fear and stigma.

### *Concerted Management of the Dual Epidemics*

Co-infection among TB patients is on the rise with samples of urban TB patients already showing HIV prevalence rates in the range of 10-20%. Similarly, as in other countries, the emerging AIDS cases show TB as the preponderant opportunistic infection. Projections of the emerging co-epidemics suggest that over the course of the next 3-5 years a 20-25% increase in TB cases might be directly attributable to co-infection. In addition to the strain that the increased caseload will place on the TB Control program, these cases will be more taxing in diagnosis, treatment and case retention. The co-epidemics also make systematic monitoring of drug resistance more urgent. GOI recognizes the complications which the emerging co-epidemics are creating for the ongoing TB control efforts and the RNTCP has started to give special recognition to these complexities in the training of health staff (see Att.2: Technical Guidelines for Tuberculosis Control, Ch.8, Management of Patients with HIV Infection and Tuberculosis). In addition, the RNTCP managers have identified the following areas for potential collaboration between the TB and the AIDS Program:

- TB programs can provide training for staff caring for HIV/AIDS patients, and vice versa;
- HIV/AIDS programs can provide directly observed therapy ( DOT) for patients at their facilities;
- TB diagnosis and TB treatment of HIV-infected persons can be provided or supported by the TB program;
- HIV counselling and testing centers can provide TB screening and education;
- TB and HIV programs can work individually and jointly to advocate more effective services for patients with HIV and TB.

While these are clearly the areas for greater collaboration, the most immediate problems are arising due to the absence of any policy regarding surveillance of HIV in TB patients. The emerging practice of surreptitious HIV testing of TB patients which gives the clinician information about the patient's status that he feels under no obligation to share with the patient, should, as a matter of policy, be prohibited. However, with the growing percentage of HIV in TB, it would be prudent to consider the role RNTCP could and should play in the identification and management of the co-infected. There is an opportunity for the TB program through expanded counselling to induce TB patients to voluntarily undergo HIV testing to clarify their status. If found seropositive, RNTCP or another program could assist the co-infected to better protect themselves from opportunistic infections and in general better manage their personal affairs in the full knowledge of their HIV infection. Such a modification of RNTCP's case management would have significant benefits for the co-infected, their families and for their sex partners who could be protected from otherwise inadvertent HIV infection. However, for these benefits to be realized, it would be necessary for RNTCP to establish a new policy regarding counselling, testing and management of the co-infected. It would also have to increase its counselling capacity and re-train its existing counsellors. Finally, it would have to support the establishment of testing capacity. With all other important demands on the management of RNTCP, it would only seem warranted to introduce these policy changes in districts in which HIV in TB is substantial

(e.g.15%) and where an AIDS care program is available to share in and reinforce the expanded case management. However, where counselling capacity is available, voluntary HIV testing should generally be promoted among TB patients with HIV/AIDS symptoms.

**REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME**

**JULY, 1997**

**TECHNICAL GUIDELINES  
FOR  
TUBERCULOSIS CONTROL  
IN  
SHORT – COURSE CHEMOTHERAPY AREAS**

**CENTRAL TB DIVISION  
DIRECTORATE GENERAL OF HEALTH SERVICES  
NIRMAN BHAVAN, NEW DELHI 110 011, INDIA**

# Management of Patients with HIV Infection and Tuberculosis **8**

## 8.1 Introduction

Infection with the Human Immunodeficiency Virus (HIV) is the cause of AIDS. HIV infection destroys the immune system, especially the lymphocytes. As a result, patients with HIV/AIDS are much more susceptible to many infections, including TB. In some studies, more than half of all AIDS patients in India had TB.

HIV infection is increasing in India. Although the exact size of the HIV epidemic in our country is not known, it is certain that with increasing cases of AIDS, there will be more patients with both AIDS and TB, increasing the need for anti-tuberculosis treatment. HIV-infected people who develop TB further spread the disease in their community.

The HIV epidemic heightens the need to ensure identification and cure of smear-positive TB patients. The principles and priorities of TB control are the same for tuberculosis patients with and without HIV co-infection.

Despite the increased susceptibility to TB, patients with HIV/AIDS can be cured of TB. Such treatment not only prolongs the life of patients with AIDS, but also stops the spread of TB, both to HIV-infected persons and to the general public.

## 8.2 Diagnosis of TB in patients with HIV

The diagnosis of TB in patients with HIV is more difficult than in those without HIV for three reasons:

- HIV-infected patients are more likely to have negative sputum smears, especially in the later stages of AIDS. HIV therefore reduces the proportion of TB patients who are sputum smear-positive.
- X-ray abnormalities, which are not specific for TB in HIV-negative patients, are even more non-specific in HIV-infected patients. In HIV-infected patients, TB may be present

with only minor abnormalities on chest X-ray or with abnormalities which do not look like "classic" TB. This may result in under-diagnosis of TB by X-ray.

Patients infected with HIV have frequent pulmonary infections. Each time such an infection occurs, the patient must be evaluated for TB. Because of the frequent pulmonary infections in HIV infected patients, there is a strong possibility of overdiagnosis of tuberculosis in such cases.

When patients with HIV have a pulmonary infection, they should be evaluated for TB with 3 sputum examinations for AFB. If sputum negative, they should receive treatment for bacterial pneumonia, which is also common in such patients. If routine antibiotics do not relieve the symptoms, then after appropriate diagnostic studies (chest X-ray, sputum culture for mycobacteria, if available), the patient can be treated for TB. Clinical diagnosis based on X-ray examination in sputum smear-negative patients should only be made by an experienced Medical Officer.

In patients with HIV and TB, extra-pulmonary forms of TB are more common. These include lymphatic disease, pleural effusion, pericardial disease, miliary TB and tuberculous meningitis.

### **8.3 Treatment of TB in HIV-infected patients**

Treatment of HIV-infected TB patients is identical to that of HIV-negative TB patients, with the exception of the use of thiacetazone. Because of the risk of fatal skin reactions to thiacetazone this drug should not be used in HIV-infected patients. Streptomycin and other injections remain useful provided that sterilization of needles and syringes can be ensured.

Because patients with HIV have weaker immune systems, it is particularly important that treatment recommendations be fully adhered to. Patients with HIV infection also appear more susceptible to developing drug resistant strains of the disease. For these reasons, treatment of TB patients with HIV should be carefully monitored.

### **8.4 Management of HIV-TB co-infection**

Management of HIV-TB co-infection should emphasize:

- promotion of early identification of AIDS patients with suspected TB, with improved referral services for diagnosis, initiation and completion of treatment;

- development of educational materials emphasizing the modes of transmission of HIV, risk of developing TB in AIDS cases as well as the need for regular and complete treatment. Emphasis needs to be placed on the importance of screening households/ contacts of AIDS patients with TB. Educational material on the risk of AIDS transmission through the use of syringes/needles is also required for TB service providers;
- involving NGOs working locally so that they take up activities of both TB and AIDS programmes; and
- coordination by means of regular interaction, joint coordination committees, etc.

#### 8.5 Training needs of health care workers in relation to HIV and TB

Health workers who care for patients with HIV/AIDS should, at the minimum, be trained to:

- recognize symptoms of TB;
- importance of sputum microscopy in the diagnosis of TB;
- be aware of the increased possibility that sputum microscopy will be negative in HIV-infected patients with TB, and the need for further evaluation of these patients;
- know that HIV-infected patients have increased susceptibility to TB. They need to promptly diagnose TB in order to prevent HIV/TB patients from infecting others;
- know the modes of spread of HIV and be able to counsel patients and family members on HIV/AIDS.

*Note:* It is extremely important to ensure that all patients with TB who are in a hospital or residential facility for HIV-infected persons have an uninterrupted drug supply and take every dose of their anti-TB medicine. If these patients do not take anti-tuberculosis medications as prescribed, they may spread the disease rapidly to HIV-infected persons and others.

Health workers who care for TB patients should be aware of the following in relation to HIV/AIDS:

- difficulty of diagnosing HIV/TB patients;
- increased frequency of smear-negative and extra-pulmonary TB in HIV-positive patients;
- effectiveness of treatment, even if TB patients are HIV-infected;
- importance of avoiding thiacetazone in HIV-infected patients, and in high-risk groups and high-risk areas;
- strict adherence to treatment protocols in patients with HIV infection and TB;
- need to be non-judgemental in caring for patients with HIV infection;
- importance of correct sterilization and disposal of needles used for streptomycin injections;
- need to promote the use of condoms to reduce spread of HIV; and
- location and details of services available for HIV-infected patients in their area.

*Note:* TB control staff need to coordinate closely with other services to provide support and care for HIV-positive patients.

#### **8.6 Areas for collaboration between TB and AIDS programmes**

There are many potential areas for collaboration between TB and AIDS programmes. Examples include:

- TB programmes can provide training to staff caring for HIV/AIDS patients, and vice versa;
- TB diagnosis and treatment of HIV-infected persons can be provided or supported by the TB programme;
- HIV counselling and testing centres can provide TB screening and education;
- care of HIV-related illnesses of TB/HIV patients can be provided by the HIV/AIDS programme.
- TB and HIV programmes can work individually and jointly to advocate more effective services for patients with HIV and TB.

### *Conclusions*

The state level responses to the enabling frameworks which the Central Government has established in the form of the National Tuberculosis Control Program and the National AIDS Control Program are, with very few exceptions, insufficient to provide India with the TB control and HIV containment needed to avert the emerging co-epidemics of TB and HIV/AIDS. The AIDS control programs of the majority of states are too weak to contain the HIV/AIDS epidemic within the high-risk groups. Renewed, stepped-up efforts should be made to accelerate targetted IEC, targetted condom promotion and syndromic management of STDs.

With relatively high prevalence of latent and active TB in the Indian population, the TB control program is still too weak to cope with existing prevalence. In the event that the spread of HIV cannot be contained, it is at risk of being overwhelmed by the increased volume and complexity of the HIV-induced caseload. A more diversified strategy is needed to establish TB control more quickly and more broadly than would appear to be possible by exclusive reliance on TB control through the primary health care system.

Finally, the absence of well-prepared AIDS care programs, unless remedied quickly, will cause the public health care system in areas of high HIV prevalence to be overwhelmed by the needs of the growing volume of HIV/AIDS disease. With TB as the predominant opportunistic infection in AIDS disease, this will compound the burden on the TB program and put AIDS care givers at risk of TB infection. In addressing these challenges the Government of India can draw on the following strengths:

- Precedents of political support for HIV/AIDS control at the center and in several important states;
- a National AIDS Committee which has been established and could be revitalized;
- a revised and fully funded NTCP;
- existing STD control capacity that could be quickly shifted into syndromic management;
- high quality training and research institutions that could be mobilized for staff training and operational research;
- well-performing states like Maharashtra, Tamil Nadu and Gujarat, that could be mobilized to testify in support of "best practices" in national workshops and seminars;
- NGOs and private sector institutions that are able, willing and advanced in their own efforts to fight these epidemics;
- a free press, independent courts and self-confident NGOs that can be counted on to support patient rights and protect patients as "consumers" in their dealings with private providers of health care.

### *Recommendations*

The following actions could significantly strengthen India's efforts to avert the co-epidemics of HIV/AIDS and TB:

- re-affirm at the highest political level the national priority of HIV containment and the importance of financially sustainable AIDS care programs;
- revitalize the National AIDS Committee and broaden its terms of reference to include cooperation with TB control programs;
- commission an independent, state-by-state review of the status and prospects of HIV/AIDS control and care activities;
- prevail upon the state authorities to accelerate those parts of the AIDS control program which in other countries have proven their effectiveness in the containment of HIV infections: i.e. targetted IEC with condom promotion and STD control based on syndromic management;
- give highest priority to the establishment of a *national* network of HIV/AIDS surveillance, invoking where necessary the powers provided to the central government under the constitution for the management of "concurrent" subjects;
- establish and disseminate clear policies about patient rights in HIV surveillance, screening and testing;
- stop all surreptitious HIV testing in the public health system;
- support sites for anonymous HIV testing;
- promote the establishment of regional consortia of AIDS NGOs to facilitate GOI-NGO cooperation in HIV containment and AIDS care;
- establish a National Steering Committee for TB Control with high level representation from Government and civil society comparable to the National AIDS Committee;
- implement a more diversified TB control strategy which draws on the improved capacities of the primary health system, the corporate and para-statal health services as well as private physicians;
- establish systematic surveillance of resistance to TB drugs;
- act upon the areas of collaboration with NACO identified by NTP management and convene national and regional workshops of TB and AIDS program managers to promote concerted management of the co-epidemics;
- strengthen the counselling capacity of the public health system giving priority to institutions serving areas with high prevalence of TB/HIV co-infection;
- implement district-level pilot projects to operationalize concerted management of TB and HIV/AIDS (including AIDS care) in urban as well as rural districts with high prevalence of co-infection;
- address the systemic problems of drug supply to the public health system with particular attention to the supply of TB drugs, STD drugs for syndromic management and drugs for the treatment of first and second line opportunistic infections in HIV/AIDS disease;
- examine the pharmaceuticals policy as regards importation and local production of HIV test kits and AIDS drugs.

Attachment 1

PERSONS MET

New Delhi, Ministry of Health and Family Welfare

The Honorable Minister of State for Health and Family Welfare

Mr P.P. Chauhan , Health Secretary

Dr P. Das Gupta, Drugs Controller General

Mr J.V.R. Rao, Additional Secretary and Project Director NACO

Ms Shailaja Chandra, Additional Secretary

Mr Alok Perty, Joint Secretary (TB)

Dr G.R. Khatri, Deputy Director General, TB

Dr S.K. Sathpathy, Additional Director NACO

WHO-India

Dr Olavi Elo, WR to India

Dr Thomas R. Frieden, Medical Officer (TB)

UNAIDS

Dr Cornelia Davis & Members of UNAIDS Theme Group

Others

Dr S.K. Biswas, Ramakrishna Mission

Dr Deepak Meshram, Voluntary Health Association of India

Dr P.N. Sehgal, Voluntary Health Association of India

Ms Momin Jaan, CII

Dr Sandhya Bhalla, CII Consultant

Mumbai

Ministry of Health, Government of Maharashtra

The Honorable Minister of Health

Mr Ramanant Tiwari, Secretary of Health

Dr Subash Salunke, Director of Health Services

Others

Dr I.S. Gilada, Secr.General, Indian Health Organisation

Dr and Mrs Atul Shah, Comprehensive Leprosy Care Project (Ciba-Geigy)

Dr D.G.Saple, G.T. Hospital

Dr J.M. Phadtare, G.T. Hospital

Dr J.K. Maniar, G.T. Hospital

Chennai

Dr P.R. Narayanan, Director, TB Research Centre

# MANAGING THE DUAL TB/HIV EPIDEMIC

## COUNTRY REVIEW NOTES: INDONESIA

As part of the GTB-UNAIDS-sponsored review of Government responses to the emerging co-epidemics of TB and HIV/AIDS, Heinz Vergin visited Indonesia from 8/18 to 8/22. Discussions were held with officials of the Ministry of Health, the Coordinating Ministry of Public Welfare, the National Planning Board and with non-governmental groups engaged in public health and social development activities. For a list of people met, please, see Attachment 1. The professional support of Dr Liisa M. Parkkali, WHO Medical Officer (TB) and Dr Stefano Lazzari, WHO Medical Officer (STD/AIDS) is gratefully acknowledged.

Based on prior review of descriptive and evaluative reports about Indonesia's ongoing TB and HIV/AIDS programs, the discussion focussed on the following questions:

- How is the Government positioned to control TB and to contain HIV/AIDS?
- What is the Government's current assessment of HIV prevalence and incidence?
- What is the HIV containment strategy?
- What needs to be done to strengthen the National Tuberculosis Program?
- Considering the risks of an emerging dual epidemic, what are the measures that Government could be taking to prepare for this eventuality?

### **Status of the Ongoing Programs**

Among the countries included in the GTB-UNAIDS review, Indonesia is in the unique position that it does not yet confront an advanced HIV/AIDS epidemic. However, given high TB prevalence, substantial STD prevalence, and the emergence of HIV/AIDS in several parts of the country, the dialogue focussed on the concerted actions that could avert the dual epidemic with which so many other countries are presently forced to cope.

### **Status of TB Control**

In its 1995 review of the Indonesian TB program WHO characterized TB in Indonesia as "one of the most important and neglected health priorities". Among communicable diseases TB is the most frequent cause of death. Surveys of the prevalence of TB infection and TB disease show very high levels for Indonesia compared to countries at similar levels of economic development. Specifically, it is estimated that there are about 500 000 new cases of TB each year of which about half go undetected. It is also estimated that inadequate therapy in the public and private sector has created a backlog of more than 500 000 chronic cases of TB which require special attention because they are a continued source of infection to others and a potentially dangerous source of drug-resistant TB.

A National Tuberculosis Program (NTP) was established by the Government in 1969. Program management was assigned to a TB sub-directorate within the Directorate of Communicable Disease Control in the Ministry of Health. Over the decades NTP's performance has suffered from lack of political support, lack of a clear, state-of-the-art strategy, lack of funding and lack of a reliable drug supply. As a result, the coverage of the program has been limited, and the cure rates have remained below 50%.

In the face of these disappointing results, Government has taken the following actions:

- in 1993 a pilot project employing short course chemotherapy with directly observed treatment was started in Sulawesi with support from the Dutch Government and implementation assistance from the Royal Netherlands TB Association (KNCV). The project started with a coverage of about 900 000 people and was gradually extended to cover all three Sulawesi provinces with a total population of about 12 million people. It is reported that high cure rates at around 80% were successfully maintained throughout the expansion.
- in 1994 Government requested WHO to assist in a review of the NTP. Reflecting the recommendations developed in the review, Government declared TB an urgent health problem and adopted a revised national strategy based on short course chemotherapy with increased treatment supervision. National training programs and demonstration projects were initiated in East Java and Jambi Province in Sumatra.
- in 1995 Government decided to provide free drugs for the treatment of smear-positive patients under the NTP.
- in 1996 a National TB Manual which reflects the revised strategy was prepared and its distribution was started. Staff training in the new approaches was stepped up and the upgrading of laboratories for smear microscopy was started.
- also in late 1996, a National Steering Committee for Tuberculosis was established . Chaired by the Secretary General of the Ministry of Health, the committee has an advisory function vis-a-vis the Minister.
- in 1997 the free drug supply was extended to smear-negative patients.

External financial support for the NTP was secured from the World Bank and from the ADB. Implementation assistance is being provided by WHO, the Netherlands, and Australia.

Despite these initiatives, implementation of the revised TB strategy is still too slow and too uncoordinated to bring the desired improvements in case-finding and cure rates. Among the clinicians in the public health system there is still only limited acceptance of the new strategy as regards case-finding, treatment and treatment supervision. In the absence of broad-based commitment to the new strategy the decentralization of TB care to the often weak and underutilized community health centers is frequently taking place without coordination and cross-support between hospitals and community health centers. Thus, despite the adoption of a *national* strategy for TB care, TB patients continue to receive substantially different treatments from different parts of the public health system. This problem is further compounded by a wide-range of TB treatments being offered by private providers.

Within the public health system coherent implementation of the revised TB strategy urgently requires intra-ministerial coordination between four separate Directorates General: the DG of Community Health Services, the DG for Hospital Systems, the DG Food & Drug Control, and the DG Communicable Disease Control who has the line responsibilities for the NTP. Within the existing organizational structure of the Ministry of Health the required cross-cutting coordination can only be provided by the Secretary General of the Ministry who is also, as of 1996, the Chairman of the National Steering Committee for Tuberculosis. These formidable coordination issues built into the organizational structure of the Ministry are compounded by the fact that the Sub-Directorate which is in charge of NTP management and which is located two tiers down in the Directorate General for Communicable Disease Control, is too weak in quality and quantity of

staff and in the status of its management to induce and monitor the required intra-ministerial coordination.

More specifically, these basic weaknesses currently manifest themselves in:

- low quality of TB surveillance and reporting;
- lack of coordination and cooperation between community health centers and the hospital-based outpatient services as regards adherence to basic protocols; and
- lack of surveillance of drug resistance.

Most importantly however, for at least two years running, the supply of free TB drugs to NTB (under the INPRES program) has gotten substantially ahead of the Ministry's efforts to actually prepare the community health centers for responsible, supervised use of these drugs. The exclusion of hospitals and lung clinics from NTP and therefore from the use of these drugs is compounding the imbalance between the liberal supply of TB drugs and the capacity for their responsible use. The distribution for FY 97/98 of over 200 000 combipacks of TB Drugs with a total value of about US\$ 5 million without regard for the reported availability of carry-over stocks from previous years, also highlights weaknesses in the programming and management of these valuable, but dangerous drugs.

The strategic importance of the above listed implementation issues and the gravity of their operational consequences justifies the preparation of a time-bound action plan which, under the supervision of the National Steering Committee, would hold the different parts of the Ministry responsible for their contribution to more effective implementation of national TB control. In parallel, better coordinated donor support for NTP is needed to ameliorate the effects of geographically and functionally dispersed donor finance.

### ***Status of the HIV/AIDS Program***

The Government of Indonesia has acknowledged Indonesia's vulnerability to HIV and the negative social and economic effects of a possible epidemic. A 1994 Presidential Decree created a National AIDS Commission (NAC) headed by the Coordinating Minister for People's Welfare, with the Ministers of Health, Religious Affairs, Social Affairs and Population serving as vice chairmen and heads of working groups. With support from a small Secretariat, the NAC is expected to coordinate national policy and program development as regards AIDS. Establishment of the NAC was reinforced in the same year by a Ministerial decree that identifies HIV and AIDS as health problems with significant political, economic, social, ethical and legal consequences. The Ministerial decree and subsequent policy statements set the following priorities:

- strengthening of HIV/AIDS surveillance, targeting those who engage in risky behavior, reliance on and empowerment of local bodies including NGOs, improving STD and HIV diagnosis and treatment, and preparation of laboratories and blood banks to deal with STDs and HIV. External support in the form of a US\$ 25 million IDA Credit was arranged for an HIV/AIDS and STDs Prevention and Management Project .

While these precautions were taken, the findings of HIV/AIDS surveillance have remained reassuring: All of the HIV/AIDS data collected in Indonesia indicate that HIV seroprevalence rates continue to be very low (below 1/1000). This even includes the highest heterosexual risk groups such as female commercial sex workers. Drawing on these data, Dr Chin, CDC Atlanta,

earlier this year advanced a revised working estimate of HIV prevalence at a workshop on HIV/AIDS held in Jakarta. Noting that HIV/AIDS projections made in 1993/94 had projected that there would be close to 400 000 HIV infections in Indonesia by 1996, Dr Chin concluded that "a seroprevalence estimate ranging from a low of about 2000 to 3000 to a high of about 20 000 to 25 000 HIV infections appears to be more consistent with the estimated number of AIDS cases to date, and with the low seroprevalence levels found in 1996 among high and low risk groups in Indonesia". This revised estimate has also been endorsed by the Director General of the Government's Department of Communicable Diseases.

These favorable assessments notwithstanding, the Government's position is that "the relatively swift spread of HIV in Merauke (attributable to Thai fishermen), among commercial sex workers in Batam and in the homosexual community, makes an upgrading and acceleration in the HIV/AIDS program imperative. Such upgrading and acceleration are especially needed for various components of the program which remain deficient, namely:(a) STD/HIV/AIDS surveillance, and (b) a survey of behavior covering both sexual practice and substance abuse especially among adolescents." With continuation of the other components of the ongoing program i.e. IEC, condom promotion, STD control and the beginning support for NGO activities in community-based AIDS care, this constitutes a prudent effort to manage the HIV/AIDS uncertainties. However, highest priority needs to be given to the upgrading and acceleration of STD/HIV/AIDS surveillance in order to strengthen the early warning system and to reconfirm the correctness of the current strategy. Intensive international assistance is already available for the upgrading of surveillance, but could be better utilized with improved coordination within Government and clearer assignment of accountabilities.

### **Concerted Management of the Co-Epidemics**

#### **Conclusions:**

Indonesia is in the relatively unique position that it still has good chances to avert a generalized co-epidemic of TB and HIV/AIDS. However there are also substantial risks that this objective may not be attainable. Contingency planning must therefore be an essential element of the current strategy. The centerpiece of this strategy has to be the strengthening of the TB Control Program, both, to reduce the growing TB disease burden, and to safeguard against the eventuality of a co-epidemic that would put substantial additional burdens on the TB program. In addition, positioning the improved TB program and the HIV/AIDS Program for more concerted, synergistic management would further strengthen the overall strategy.

#### **Recommendations:**

Indonesia would maximize its chances of averting a co-epidemic of TB and HIV/AIDS by:

- giving high national priority to the strengthening of TB control based on the improved and coordinated capacities of Hospitals, Lung Clinics and Community Health Centers;
- extending the terms of reference of the National AIDS Commission to include TB control in recognition of the strategic role which TB control would have to play in the containment of a possible co-epidemic;
- accelerating the design and implementation of TB program improvements in the more difficult urban areas such as Jakarta;
- addressing the drug supply issues;

- including TB among in the accelerated upgrading of STD/HIV/AIDS surveillance;
- giving priority in the capacity building for TB control to those districts in which HIV among TB patients is already an emerging problem. On present information, this would seem to apply to North Jakarta, Batam and Merauke;
- establishing systematic surveillance of resistance to TB drugs;
- including HIV/AIDS control and care in all training programs for counsellors and health care workers; as well as in the TB curriculum of the teaching hospitals;
- evaluating the feasibility of counselling all TB patients routinely about the risks of co-infection;
- developing guidelines to protect people with AIDS from TB infection in the health care setting;
- strengthening the cooperation with NGOs engaged in the development of community-based AIDS care;
- encouraging gender-sensitive IEC about STD and HIV/AIDS;
- using beneficiary assessments to establish independent monitoring of the TB and STD programs in such aspects as access to services, quality of services and pass-through of subsidies;
- arranging for World Bank and ADB to join WHO and KNCV in well-coordinated, periodic reviews of the implementation of the NTP so as to spare the borrower the burden of separate, multiple supervision missions. These reviews could also be used to program and fund specialized implementation assistance for TB control.

Attachment 1

PERSONS MET

Ministry of Health:

Dr Hidayat H., Secretary General, Chairman of National Steering Committee for Tuberculosis

Dr Brotowasisto, Senior Adviser to the Minister of Health on Epidemiology

Dr H M. Abednego, Director General, Communicable Disease Control and Environmental Health

Dr Abdul Manaf, Director Communicable Disease Control

Dr Andajaningsih, Director, Division for Drug Control, POM

Dr Wibosono Wiyono, Secretary, Directorate General of Community Health

National AIDS Committee:

Dr Suyono Yahya, Secretary to the National AIDS Committee, Secretary to the Coordinating Minister of Public Welfare

BAPPENAS:

Dr Triyono Sundoro, Head of Bureau for Social Welfare, Health and Nutrition

NGOs :

Mrs Supardjo Rustam, Chairperson, National Tuberculosis Association (PPTI)

Dr Adhyatma, Chairperson of NGO AIDS Forum

Dr Jubairi Joerban, Pelita Ilmu Foundation

WHO, UNAIDS, World Bank :

Dr Robert J. Kim-Farley, WR Indonesia

Dr Liisa M. Parkkali, WHO Medical Officer (TB)

Dr Stefano Lazzari, WHO Medical Officer (STD/HIV/AIDS)

Dr George Loth , UNAIDS, Country Program Adviser

Dr Karin Timmersman, WHO , Consultant-Essential Drugs

Mr S. Lieberman, Senior Officer, World Bank Resident Staff

# MANAGING THE DUAL TB/HIV EPIDEMIC

## COUNTRY REVIEW NOTES: KENYA

As part of the GTB-UNAIDS-sponsored review of Government responses to the emerging co-epidemic of TB and HIV/AIDS, Messrs Vergin and van Gorkom visited Kenya from 9/19 to 9/26. Discussions were held with officials of the Ministry of Health and with non-governmental groups engaged in public health and social development. For persons met, please, see Att.1.

Based on prior review of descriptive and evaluative reports about Kenya's response to the dual epidemic the discussion was focussed on the following questions:

- how is the Government positioned to control TB, contain HIV infection and cope with the growing burden of HIV/AIDS disease?
- Does the concerted management of the co-epidemic require adjustments in the ongoing TB and HIV/AIDS programs?

In the pursuit of these questions special attention was paid to the impact of the ongoing Health Sector Reform on the operation of the TB and HIV/AIDS programs. Specifically, the following aspects of the reform were considered relevant:

- the restructuring of the Ministry of Health and the establishment of an STD/AIDS/TB/Leprosy Division within the Department of Preventive and Promotive Health Services;
- the decentralization of planning, programming and budgeting to the District level;
- the expansion of cost recovery by entrepreneurial District-level managers;
- the re-organization of the drug supply and the contemplated distribution of drug-budgets to the District level.

### **Status of the Ongoing Programs**

#### ***Status of TB Control***

Reported tuberculosis cases have been on the increase over the last ten years, with increases in the order of 25% per annum in the last 2-3 years. Urban clinics have report 40% increases per annum in recent years. In absolute numbers the case load has increased from about 15 000 cases per year to about 35 000 cases over the four years since 1992. While some of the increase reflects improved case detection and changes in reporting practices, about 20-25% of the TB cases are directly attributable to the HIV/AIDS epidemic.

A Tuberculosis Control Program was established by the Government in 1956. It was integrated with Leprosy Control Projects in 1986 to constitute the National Leprosy and Tuberculosis Program (NLTP). The program has been implemented with support from the Government of the Netherlands through the Royal Netherlands TB Association (KNCV) and the Netherlands Leprosy Relief Association (NSL). NLTP is currently operating under a third five-year extension of the Netherlands' financing agreement that covers the period 1996-2000. The Government's contribution to the cost of the program is about 55 %.

Multi-drug therapy for Leprosy commenced in 1986, short course chemotherapy was introduced for nomads in 1986 and for the entire TB program in 1992. Transition from hospital treatment to ambulatory treatment during the first two months of chemotherapy was made in 1995. The activities of the program are fully integrated into the general health services: district hospitals and community health centers offer diagnosis and treatment while NLTP provides drugs and materials together with management support and quality assurance. Despite a general environment of deteriorating public health services and acute general drug shortages in the public system, TB care has gained in managerial and technical strength and has achieved and sustained cure rates of about 80%. Extension of program coverage to the urban poor and to the nomadic population has also been relatively successful. This commendable record is now challenged by the largely HIV-driven increase in case load and by the added complexity of the co-infected cases. Also, in the absence of an AIDS care program for subsequent referral, treatment of the co-infected under the NLTP is reported to frequently extend well beyond the duration of the TB treatment. Anticipating further rapid growth in case load, NLTP management is reaching out to qualified private and NGO providers to increase the overall capacity of TB care. While strategically correct, these initiatives are nevertheless putting further demands on an already over-stretched management team.

Overall, "management" of the program is now yielding to "coping", and there is a real risk that the excess demands placed on the program by the dual epidemic will erode the quality of the TB program. There is also the additional risk that specific aspects of the ongoing reform program will, inadvertently, impact adversely on the NLTP. This could be the case if reorganization and decentralization of the drug supply were to be extended to TB drugs. Similarly, case-finding could be affected if cost recovery at the district level were to be allowed to interfere with the health seeking behavior of the generally very poor TB patients. Finally, the program could be seriously disrupted by the withdrawal or reduction of donor finance. Given the strategic role that the NLTP is playing in the management of the dual epidemic, it is very important to recognize that the program is now stretched to the breaking point. If serious quality deterioration is to be avoided, the program needs to be protected from disruptions that might inadvertently flow from the ongoing health sector reform; the programmed share of GOK support needs to be provided on time; and earliest attention needs to be given to making the program sustainable beyond the duration of the current external financing plan.

### ***Status of HIV Containment Programs***

HIV infection started to spread in Kenya in the late 1970s with the first case of AIDS was reported in 1984. Since 1990 the Government has been conducting sentinel surveillance of antenatal clinic attendees and STD patients. On this basis it is estimated that national adult prevalence has increased from 3% in 1990 to 8% in 1996. Urban adult prevalence was estimated in 1996 to be slightly above 12%. There is significant geographical variance in the prevalence of HIV, with estimates ranging from 27% in some western areas to 5% in the east. Using the sentinel surveillance data, the Government estimates that in 1996 the HIV positive population totalled about 1.2 million including about 80 000 HIV- positive children. The major mode of HIV transmission in Kenya is through heterosexual relations with a growing proportion of vertical transmission to children. The epidemic primarily affects young, working-age adults. Women and men have become infected in roughly similar numbers, although women tend to become infected at a younger age than men.

The Government's response to the epidemic can be summarized in the following chronology:

- 1984 : first case of AIDS in Kenya;
- 1985: National AIDS Council is established;
- 1987: National AIDS Control Program is announced;
- 1989: National STD program is initiated with funding from Belgium;
- 1990: sentinel surveillance is started showing prevalence of 3% in adult population;
- 1992 (Prev.:5%): Government releases surveillance data for the first time;
- 1994 (Prev.:7%): National Development Plan for 1994-96 includes chapter on AIDS; Work on Sessional Paper on AIDS is started; STD program is integrated with HIV/AIDS program; National AIDS Control Program for 1994-96 is launched;
- 1995 (Prev.: 7.5%) : Government secures funding for STI Project from IDA and Co-financiers;
- 1997 (Prev.: 8%): STI Project is about two years behind schedule; End-Term Review of the 1994-96 National Aids Control Program concludes that the program "was overambitious, the detailed workplan developed for 1994-1996 was not adequately implemented, and annual work plans were not developed;" National AIDS Control Program is being "re-launched"; Sessional Paper on AIDS is presented to Parliament and approved.

The shortfalls in the implementation of the National AIDS Control Program have been candidly documented in the recent independent End-Term Review of the 1994-96 phase. Only time will tell whether the "re-launch" of the program, which can now draw on the AIDS policy framework provided by the Sessional Paper, will be more effective than earlier initiatives. The "mid"-term review of the STI Project by IDA which is scheduled for early 1998 and the quality of the Government's response to the specific recommendations of the End-Term Review Team will provide the tests and milestones with which to assess the credibility of NASCOP's re-launch. The UNAIDS Country Theme Group will be an important instrument in maintaining the needed dialogue with Government about the NASCOP re-launch.

In light of the pronounced uncertainty over the eventual quality of the Government's programs, and with all projections of HIV prevalence in Kenya clearly pointing towards prevalence rates of 12-15% by the year 2000, a prudent donor strategy for HIV containment would place major emphasis on NGO and private-sector-based control programs. Such a strategy would:

- accelerate the mobilization of NGOs for well-targeted, gender-sensitive IEC, safe sex promotion and syndromic management of STDs;
- accelerate the cooperation of NGOs, private providers and corporate health services with the NLTP, and
- implement as large a share of the STI Project as possible through NGOs.

With non-governmental organizations already providing a substantial share of both preventive and clinical services, and with the majority of Kenya's physicians already working outside the public health system, this strategy would seem entirely feasible. At the same time, it would leave ample room for Government if and when it organizes itself for effective AIDS control.

### ***HIV/AIDS Care***

Reported AIDS cases have grown from about 10 000 cases in 1990 to about 70 000 in 1996. The actual number of AIDS cases is estimated to be about three times larger than reported because many PWAs don't seek hospital care and doctors tend to report the opportunistic infections rather than AIDS. Correction for under-reporting would place the number of cases within the range of 200 000 to 250 000. In the absence of an AIDS care strategy, the public health services are coping haphazardly with this complex disease burden. Efforts are being made to get the drugs needed for the treatment of opportunistic infections to the hospitals and health centers, but these efforts are overwhelmed by the general shortage of drugs in the public health system and by the "marketability" of the drugs supplied on public account. Home-based care is being advocated by the Government; with overcrowded and under-supplied public hospitals it needs little promotion. However, for many of the PWAs among the urban poor home-based care in their village of origin is no longer an option. NGOs have established a few very effective AIDS care programs; but their replication is generally defeated by the weaknesses of the clinical care which the public health services can provide as well as by the absence of orphan care. With most of the "best practices" having been established by the NGOs, Government would be prudent to invite these parties to formulate an AIDS care strategy and, together with donors and charities, to empower the NGOs to implement the strategy.

### **The TB/HIV Co-Epidemic**

#### ***Impact on the TB Program***

There is clear evidence that for more than a decade HIV infection has been a major driving force behind the increased TB case load. Reliable information about HIV in TB was up to 1993 confined to Nairobi where hospital surveillance showed the following increases in HIV seroprevalence: in the Infectious Disease Hospital seroprevalence increased from 16% in 1987 to 42% in 1990, in the Rhodes Chest Clinic it increased from 9% in 1988 to 25% in 1990. A 1994 survey conducted by NLTP in 17 districts with a total sample size of about 2000 TB patients showed a weighted HIV seroprevalence of 41%.

With such a high percentage of HIV in TB it is necessary to consider the role which NLTP could play in the management of the co-infected. Specifically, there is an opportunity for NLTP, through expanded counselling to induce TB patients to undergo HIV testing in order to clarify their status. If found seropositive, NLTP or another program could assist them to better protect themselves from opportunistic infections and in general manage their personal affairs in the full knowledge of their co-infection. Such a modification of NLTP's case management would have significant benefits for the co-infected, their families and for their sex-partners who could be protected from otherwise inadvertent HIV infection. For these benefits to be realized, it would be necessary for NLTP to establish a new policy regarding counselling, testing as well as management of the co-infected. It would also have to increase its counselling capacity and retain its existing counsellors. Finally, it would have to establish or sub-contract the required HIV-testing capacity. With the general overload which the expanding TB case load is already placing on NLTP, it is questionable that the program management could be realistically expected to address this additional challenge. However such an initiative would become more feasible if an

AIDS care program were to be available to which the co-infected identified by NLTP could be referred for specialized counselling and follow-up care. In the absence of such a major modification of NLTP's case management, it would however still be useful to include in the NLTP manuals and training programs explicit recognition of the co-epidemic. IEC designed to inform the co-infected is also urgently needed for use in TB and STD clinics.

### ***The Impact of TB on People with HIV/AIDS Disease***

With growing prevalence of HIV/AIDS disease, TB now plays a major role as the predominant opportunistic infection. As such it creates risks of infection for AIDS care givers and complicates AIDS care in the home or hospital setting. With many patients bent on hiding their AIDS symptoms, these cases are difficult to find and to diagnose. Pro-active AIDS care programs are urgently needed to get the patient to present earlier for TB treatment and to reduce the risk of infecting others. Where NGO-sponsored AIDS care programs are available, it has proven possible to get AIDS patients to present early for TB treatment, and cooperation with the NLTP has been found feasible and effective.

## Conclusions

For the better part of a decade Kenya has failed to establish an AIDS control program capable of containing the spread of HIV infection. With national HIV prevalence among adults having now increased to 8%, Kenya is left in a situation in which it urgently needs to strive for HIV containment while having to address, at the same time, a heavy and rapidly growing burden of AIDS care. Simultaneously, the failure in HIV containment is causing a drastic increase in the TB disease burden that is threatening to overwhelm the TB Control Program.

With no time to spare, only time can tell whether the "re-launch" of the Government's AIDS Control Program will do better than previous similar initiatives in actually breaking the vicious circle of the co-epidemics. If the re-launch succeeds, the recent reorganization of the Ministry of Health, which, *inter-alia*, has brought NLTP and NASCOP into the same Division, provides the opportunity for the Divisional Management to address the most important aspects of the epidemiological, clinical and programmatic interdependencies of TB and HIV/AIDS.

## Recommendations

The following actions would enable Kenya to both deal with the uncertainty over the eventual effectiveness of the Government's AIDS Control Program and start a more active management of the dual epidemics of HIV/AIDS and TB:

- earliest implementation of the recommendations of the End-Term Review of the 1994-96 National AIDS Control Program;
- mobilization of civil society for HIV containment and AIDS care. Specifically, this would entail earliest possible deployment of the IDA and ODA funds (US\$ 5 million) that have been available for such NGO activities since August 1995;
- improved coordination between NASCOP and NLTP within the newly established Division of STD/AIDS/TB and Leprosy;
- joint NASCOP/NLTP training programs for health care workers in relation to HIV/AIDS and TB;
- joint NASCOP/NLTP-sponsored IEC including preparation of targeted, gender-sensitive IEC material on HIV/AIDS for use in TB and STD clinics;
- design and implementation of concerted, synergistic management of TB and HIV/AIDS in three districts. These pilot projects would be designed and operated by the Districts' Health Management Teams with joint guidance from NASCOP and NLTP and with the assistance of qualified NGOs;
- jointly implemented adjustments in referral protocols and counselling to recognize the high prevalence of co-infection among TB patients and HIV/AIDS patients;
- protection of an uninterrupted supply of high quality TB drugs and materials for NLTP;
- reaffirmation of free TB care in the public health system;
- support for NLTP's efforts to expand the availability of quality TB care through cooperation with private providers and corporate health services.

Attachment 1

PERSONS MET

Ministry of Health

Dr Mwanzia, Director Medical Services

Dr P. Gaturuku, Head, Preventive and Promotive Health

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Dr Nyarango, Health Sector Reform

Dr Makotsi, Health Sector Reform, Consultant

Mr I. Hussein, Secretary, Health Sector Finance

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Dr J. Mansoer , NLTP

Dr J. Onsongo, NLTP

Dr T. Mboya Okeyo, Head, NASCOP, STI Project Coordinator

Dr M. Kahindo, NASCOP

Dr Omollo, Head, STC Casino

Dr Obongo, Health Department, Nairobi

UN Organizations

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Mr Lyons Frederick, UNDP Resident Representative

Dr G. Tembo, UNAIDS

Mr S. Kalama, World Bank Liaison Officer, Ministry of Health

Other Contacts

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Dr J. Ndinya Achola, University of Nairobi

Dr F. Plummer, University of Nairobi and University of Manitoba

Dr A. Mwalugongo, Head of District Health Management Team, Machakos District

Dr Allan Ragi, Secretary, NGO AIDS-Consortium (KANCO)

Rev. E. Phillips, Eastern Deanery

Ms Njoroge, Eastern Deanery

Institutions Visited

Mbagathi Hospital, Nairobi

STC Casino, Nairobi

Rhodes Chest Clinic, Nairobi

Machakos District Hospital

CBHC & AIDS Relief Programme of the Archdiocese of Nairobi, Eastern Deanery

# MANAGING THE DUAL TB/HIV EPIDEMIC

## COUNTRY REVIEW NOTES: THAILAND

As part of the GTB-UNAIDS-sponsored review of Government responses to the emerging co-epidemics of TB and HIV/AIDS, Messrs Vergin and van Gorkom visited Thailand from 8/12 to 8/15. Discussions were held in Bangkok and in the Northern Region with public health officials and with non-governmental groups engaged in public health and social development. For persons met, please, see Att.1.

Based on prior review of descriptive and evaluative reports about Thailand's response to these epidemics, the discussion focussed on the following questions:

- How is the Government positioned to control TB, contain HIV infection and cope with the growing HIV/AIDS disease burden?
- Does the concerted management of the co-epidemic require adjustments in the ongoing TB and HIV/AIDS programs?

### **Status of the Ongoing Programs**

#### ***Status of TB Control***

As the result of general economic development as well as the introduction of short-course chemotherapy reported TB cases had declined steadily during the 1980s, with the reported total incidence rate reaching 76/100000 (approx. 46000 cases) in 1991. An increase in case notifications, largely attributed to the influence of the HIV epidemic, has been observed during the last five years. Correcting the case notifications for under-detection and under-reporting, it is currently estimated that the number of new TB cases will total about 100 000 in 1997. Half of these cases are expected to be smear-positive. Recent studies predict that, under the impact of the HIV epidemic, overall annual TB incidence will continue to rise to about 120 000 over the next three to five years. Short course regimens (up to 6 months duration) have been used in Thailand's TB program since 1986 for all categories of patients. Treatment is concentrated in zonal TB Centers and district hospitals. The treatment is largely unsupervised and fixed drug combinations are not used.

In the presentation of its TB Control Plan for 1997-2001, the Department of Communicable Disease Control in the Ministry of Health evaluated the status of TB control as follows:" In addition to the projected substantial increase in case numbers, there is a threat from the emergence of multi-drug resistant (MDR) strains of the tuberculosis bacillus. Data from the Central Chest Clinic in Bangkok indicate that the percentage of (new) cases with MDR- TB has risen substantially during recent years. This effect can be attributed to currently insufficient control policies resulting in low detection and cure rates. National statistics on treatment outcome reveal that the cure rate (calculated on the basis of internationally standardized definitions) is currently less than 50%. If the performance of the National Tuberculosis Control Programme is not improved, it is unlikely that Thailand can successfully manage the dual threat of an emerging TB/HIV epidemic and higher levels of multi-drug resistant cases."

Acting on the findings of a detailed Program Review conducted by Government in 1995, the TB Control Plan for 1997-2001:

- gives higher priority to TB control in the programs of the Ministry of Health;
- decentralizes TB control activities within Thailand's well developed health infrastructure to make greater use of peripheral structures such as community health centers;
- commits to the establishment of a comprehensive system of quality control for diagnostic procedures centralized at the hospital level;
- provides for improved district-level coordination through the appointment of District TB Officers;
- commits to direct supervision of treatment through the delegation of treatment services from the hospitals to the patient's local health center; and
- establishes an implementation plan which, starting in 1997, expands the new approach to all of Thailand's 800 districts over five years at the rate of 150 districts a year.

This is an exceedingly ambitious plan. It responds to a correct sense of urgency and priority, however, given the complexities of the required change management, it may have to be rephased based on actual experience with large-scale replication of the new approach. Also, the Bangkok Metropolitan area, with an estimated population of 10 million, a large number of different health providers, and a large population of migrant laborers among TB patients, poses special challenges to TB control which have yet to be addressed in the Government's implementation plan.

Compared to other countries, Thailand's ambitious TB control plans benefit from the fact that there have been no problems with the supply of drugs and diagnostic materials in the past operations of the program. However, the cost of TB drugs, which are mainly supplied by one Government company, is high (US\$ 100 per SCT) compared to the international market cost of about US\$ 35. This suggests opportunities for cost reduction through more competitive procurement. Moreover, fixed drug combinations (RH, RHZ) are not available from the sole source supplier. In the presence of weak DOT, this increases the risk of selective non-adherence of patients to the prescribed SCT and with it the risk of subsequent secondary drug resistance.

The 1997-2001 National TB Control Program is not supported by any external funding. This reflects the position of the Government that the program costs can be fully met from the country's own resources. In the ongoing severe fiscal adjustment, which has been triggered by the recent foreign exchange and banking crisis, it will be important to safeguard the budget required for the upgrading of Thailand's National TB Control Program.

### ***HIV Containment***

During the last decade Thailand has implemented a strong, well-focussed HIV/AIDS control program comprising:

- high quality national HIV surveillance focussed on iv drug users, commercial sex workers, blood donors, STD clinic attenders, attenders of ante-natal clinics and army conscripts;
- candid IEC campaigns targetted on high risk groups e.g. sex workers and their clients, as well as on the general public with particular emphasis on adolescents and students;
- condom promotion among high risk groups; and

- STD control through a network of STD clinics as well as through the private health care sector.

Since 1991 this Program has been lead and coordinated by a National AIDS Committee that meets quarterly chaired by the Prime Minister. The Committee draws its members from the leadership of Government Ministries (Public Health, Interior, Agriculture, Defense, Education, Labor and Social Welfare, University Affairs), the National Economic and Social Development Board and NGO's.

This strong and well-focussed Control Program has been successful in containing HIV infections below earlier prevalence projections. Specifically, prevalence of HIV in the year 2000 is now projected to total only 1 million instead of 2-3 million projected in 1992. These revised projections are corroborated by the following developments: condom use by sex workers is reported to be almost 100%; the incidence of STD has dropped sharply and HIV prevalence among conscripts has dropped from 4% in May 1993 to 1.9% in Nov.1996. However, the emerging HIV prevalence among ANC attenders which has been found to be around 2% in 1995 and 96, as well as the male/female ratio in reported AIDS cases which decreased gradually from 6:1 in 1990 to 2:1 in 1997 clearly signal the spread of HIV from high risk groups to the general population.

Within these national averages, the Northern Region (Region10) with a population of 4.3 million shows the transition from a concentrated HIV/AIDS epidemic to a generalized epidemic most clearly: while HIV prevalence among army conscripts has declined from the high of 13% in 91-93 to about 5% in 96/97, HIV prevalence among ANC attenders reached 5% in 1993 and has been holding approximately at that level.

With declining prevalence of HIV infection within high risk groups, but with clear indications of an emerging *generalized* epidemic, the Government's strategy seems to be to continue the proven control programs in parallel with new efforts designed to contain the slower, but more general HIV transmission. Increased attention is now being given to vertical transmission and to transmission in the sexual behavior of adolescents and migrant workers *outside* the commercial sex network. Additional behavioral and demographic surveys are being initiated in support of new program design.

### **HIV/AIDS Care**

A rapidly increasing number of the HIV- infected persons are now suffering from HIV disease and AIDS. This places an increasing burden on families and health system. Reported AIDS cases and HIV symptomatics now total 85 000 with 40% of the cases concentrated in Northern Thailand. Actual cases are likely to be significantly higher due to under-reporting and inability to correctly diagnose the opportunistic infections. By comparison, only about 30 000 cases had been reported by the start of 1995.

Responding to these developments, the National Plan for Prevention and Alleviation of HIV/AIDS for 1997-2001 gives primary attention to AIDS care and to social programs designed to address the needs of AIDS orphans and to mitigate AIDS-related family distress. The overall approach is described as multi-disciplinary, participatory and community-based. Under the headings of "Modifying Basic Services" and "Health Promotion and Medical Services" the Plan sets out clear and actionable objectives, strategies and measures for:

- improving the basic social and economic services for persons affected by AIDS;
- increasing the availability of counselling services for AIDS;
- empowering the general public to manage the AIDS and health problems themselves;
- improving services, both curative and preventive for persons living with HIV/AIDS; and
- improving the access to health and medical care of people living with HIV/AIDS.

While the AIDS care strategy advanced in the Plan is comprehensive and actionable, only its translation into an operational plan will allow conclusions about feasibility and readiness of the programs and projects needed to achieve the AIDS care objectives set by Government. At the time of this review such an operational plan was not yet available. In shaping the operational plan it would be important to give explicit recognition to the needs for improved and expanded TB care in order to deal with TB as the most frequent opportunistic infection of persons with HIV/AIDS.

## **The TB/HIV Co-Epidemic**

### ***The Impact on the TB Program***

Nationwide surveillance of HIV among TB patients was instituted in 1989. Once a year, in the months of November and December, all newly registered TB patients are screened for HIV. This surveillance program shows that country-wide, HIV in TB has increased from 3.1% in 1989 to 10% in 1994. The impact of the co-epidemics is most pronounced in the Northern Region where the prevalence of HIV in TB has increased from 5% to 40% between 1990 and 1994 and the mortality rate among the co-infected has reached 30%. There has also been a significant increase in the proportion of new patients diagnosed with sputum-negative and extrapulmonary tuberculosis. Some Chest Hospitals and Referral Hospitals have made it a part of their routine counselling of TB patients to urge them to undergo voluntary HIV testing. About 90% of the patients so counselled are reported to have undergone testing. In the case of TB patients that have been found to be HIV positive, these hospitals adopt a broader care plan and counselling which gives added attention to the prevention of other opportunistic infections. It is not clear whether this approach represents general Government policy or "best practice" by the more advanced institutions.

### ***The Impact of TB on People with HIV/AIDS Disease***

Tuberculosis has been found to be the most important opportunistic infection in people with HIV/AIDS (PWAs). Nationwide about 40% of the PWAs suffer from tuberculosis either as the result of reactivation of previously latent TB infections or as a fast progressing disease after a new infection. In Bangkok this percentage is as high as 61%.

While HIV is perceived as a major additional burden in the operation of the National TB Program by the program managers, Tuberculosis is not mentioned once in the 1997-2001 National Plan for Prevention and Alleviation of HIV/AIDS, despite the fact that the Plan places substantial emphasis on improving the access to health and medical care for people living with HIV/AIDS. There also does not seem to be any coordinating mechanism between the National TB Program and the National AIDS Control Program. Finally, it is noted that the UNAIDS Action Plan for Thailand (1996-1997) does not address any issues related to the containment of the co-epidemics of TB and HIV/AIDS other than a brief reference under "research" to chemoprophylaxis for TB in HIV-positive persons.

## Conclusions

During the next five years the Government confronts three major challenges in the management of the dual epidemic of HIV/AIDS and TB:

- it has to sustain and adjust the successful HIV containment program in a climate in which the public may be inclined to be less vigilant about the risks of infection which are now increasingly arising in normal rather than high risk settings;
- it has to operationalize its AIDS care strategy under the pressures of a rapidly rising case load;
- it has to up-grade the National TB Program to improve its general effectiveness and to enable it to cope with the increasing volume and complexity of the HIV-induced cases.

In meeting these challenges Government can draw on the following *strengths*:

- extensive, high-quality surveillance of HIV infection and HIV/AIDS disease;
- highest level political support for the HIV/AIDS Program;
- an active UNAIDS Theme Group;
- extensive care for STDs;
- successful condom promotion which has increased condom use by commercial sex workers to almost 100%;
- candid, compassionate IEC which is mobilizing civil society in support of program objectives;
- counselling on HIV/AIDS which is widely practiced by professionals and includes routine counselling of TB patients about HIV/AIDS;
- PWAs are beginning to mobilize support for the AIDS program;
- the TB program is not burdened by the credibility problems that in many other countries have been created by an unreliable drug supply.

At the same time the Government needs to address the following *weaknesses*:

- there is as yet only limited recognition of the problems created by the co-epidemics and of the opportunities for more synergistic action in the fields of surveillance, IEC, patient management and operational research;
- the high level political support of the HIV/AIDS program has not extended to the TB Program despite the obvious public health issues resulting from TB as the preponderant opportunistic infection in HIV/AIDS disease;
- the ongoing TB program is relatively weak and not well placed to cope with the emerging complexities of the co-epidemic. As such it lacks the capacity to work more closely with private providers, NGOs and PWAs;
- although there is growing evidence of a sizeable MDR problem, there as yet no systematic surveillance of drug resistance;
- there is as yet no operational plan setting out the programs and projects that are to implement the AIDS care strategy.

## Recommendations

The following actions could bring about a more concerted, synergistic management of the dual epidemic:

- Assignment of national priority to TB control and inclusion of TB in the high-level coordination accorded to the HIV/AIDS program;
- Preparation and dissemination of the urgently needed operational plan for AIDS Care with particular emphasis on the role of the TB program in the provision of clinical care for opportunistic infections;
- Closer coordination of TB and HIV/AIDS surveillance under the National HIV/AIDS program;
- Accelerated introduction of the new TB control policies and regimen in districts where the impact of the co-epidemic is most severe;
- Accelerated introduction of the new TB control policies and regimens in the Bangkok Metropolitan area;
- Promotion of best practices in diagnosis and treatment of TB among private practitioners;
- Introduction of competitively priced, fixed drug combinations (RH,RHZ) for routine management of all TB patients whether in the public or private sector;
- Inclusion of HIV/AIDS and TB issues (control and care) in all training programs for counsellors and other health care workers;
- Introduction of systematic national surveillance of resistance to TB drugs;
- Development of guidelines to protect persons with HIV/AIDS from TB infection in the health care setting;
- Evaluation of the operational aspects, effectiveness and patient perception of routine counselling of TB patients about HIV/AIDS;
- Independent monitoring of the operation of ongoing programs in such aspects as pass-through of subsidies, access to service and quality of service by means of beneficiary assessments;
- Earliest implementation of a project designed to pioneer synergistic management of the co-epidemic in the Northern Region.

Attachment 1

PERSONS MET

Ministry of Health

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UN Organisations

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