Chapter 6

Meeting the target in UN Millennium Project pilot countries

One core task of the UN Millennium Project is working with several countries to identify the specific, integrated public policy interventions and investments required to enable the countries to meet the Millennium Development Goals by 2015. Working with the relevant UN Country Teams, the UN Millennium Project is assisting governments to develop Goals-based, three- to five-year poverty reduction strategies (including Poverty Reduction Strategy Papers) in the context of 2015 planning horizons.

UN Millennium Project pilot country case studies

The UN Millennium Project is working in a number of countries where the government is committed to the Millennium Development Goals: Bangladesh, Cambodia, the Dominican Republic, Ethiopia, Ghana, Kenya, Senegal, Tajikistan, and Yemen. Of these, Cambodia, Ethiopia, and Kenya are high-burden tuberculosis (TB) countries.

The Working Group on TB has undertaken a set of four country case studies that review the progress each country has made to date toward the achievement of the TB-related Millennium Development Goals target, assess remaining gaps, and discuss necessary future steps. A detailed study has been undertaken for Kenya because it is a TB high-burden country, is representative of many Sub-Saharan African countries with concomitant high levels of TB and HIV, and has a well-established and effective national TB control program (appendix 2). Briefer studies are provided for three other countries: Cambodia (appendix 3), the Dominican Republic (appendix 4), and Ethiopia (appendix 5). Key findings are summarized below; the full reports can be found in the appendixes.

No field research or new analyses were conducted for these studies; they draw on a wide array of existing documents, including country TB program

The funding gap for TB control activities must be closed

material and Global Fund Applications, and WHO, World Bank, and other UN databases. The goal for these analyses has been to provide a brief country overview and to draw from multiple sources to begin to discuss how best the countries can meet the target of reversing the incidence of TB by 2015.

Meeting the tuberculosis target in Kenya

Kenya's basic health indices have worsened over the past decade, indicating the continued deterioration of the population's health status and quality of life. The country's total expenditure on health has not changed much over the past five years, with roughly 4 percent of total health spending being devoted to TB control. Total health expenditure per capita was $29 in 2001 with only $6 coming from the government. Poverty levels in Kenya are also evidence of the deteriorating economic situation. In addition, the HIV/AIDS epidemic has had devastating economic effects for the country.

In 2004, Kenya ranked 12th among the 22 high-burden TB countries. The total number of TB cases reported to the National Leprosy and TB Control Program in 2003 was 95,310, a sevenfold increase since 1990. Case notification rates for sputum smear–positive pulmonary TB cases have been rising over the past decade. Currently, WHO estimates that 51 percent of adult TB cases in Kenya are among people infected with HIV.

Although Kenya's treatment success rate of 80 percent is close to the 85 percent target, the 49 percent case detection rate of new sputum smear–positive cases is far from the 70 percent target. Identifying those "missing cases" and improving surveillance to determine the actual outcomes of all cases must be addressed for Kenya to achieve the Millennium Development Goals target.

Challenges

Kenya has formidable challenges in its path to reversing the rising trend of TB incidence. Its health system is suffering tremendously under the burden of chronic inadequate resources and from the toll taken by the HIV/AIDS epidemic.

There is a shortage of both financial and human resources available to combat TB in Kenya. Although external funds will help decrease the gap over the next five years, a shortfall of finances will remain. The health expenditure per capita for Kenya is well below the estimated level necessary for providing essential services.

TB/HIV modeling data suggest that if the current course is continued in Kenya, TB incidence will continue to rise. Projections indicate that the incidence of TB in Kenya can be halted or reversed only if HIV prevalence decreases.

In Kenya, there is a significant association between TB case detection rates and the prevalence of poverty in a province, with the poorest provinces reporting the most cases. However, recent studies have suggested that the poor are under-

Joint activities between TB and HIV/AIDS control programs must be stepped up

represented in the health system overall and in TB services specifically. This combination suggests that many of the "missing" cases are among the poor.

A significant proportion of TB patients in Kenya receive care from the private sector, which provides approximately half of all health services. TB patients diagnosed and treated in the private sector are frequently not reported to the National Leprosy and TB Control Program and, therefore, are not included in annual morbidity and mortality data or reports of treatment outcomes.

Since DOTS relies on passive case finding, general knowledge among the population about common TB symptoms and where to seek care is essential. Data from Kenya has shown a lack of community knowledge about TB symptoms, TB transmission, and the potential for cure in the presence of HIV coinfection. A study in 2000 noted lengthy diagnostic delays as patients often tried multiple home remedies, nonprescription medicines, and herbal or traditional therapies before presenting for medical care. Stigma was also reported to exist within families, among healthcare providers, and in the community. Few patients with TB symptoms who had accessed care knew that TB treatment was available free of charge through the public sector.

Recommendations

Kenya has achieved great progress in its TB control efforts over the past decade: the DOTS strategy has been accepted as national TB control policy and implemented countrywide, and treatment success rate is close to the 2005 target of 85 percent. Case detection, at 49 percent, is well above the global average of 37 percent. However, if Kenya remains on its current course of TB control activities, it will not reach the Millennium Development Goals target of halting and reversing TB incidence by 2015. The extraordinary challenges Kenya is facing require extraordinary action.

- Human resources development is critically needed. The prime requirement of strengthening the human capacity at all National Leprosy and TB Control Program levels must be complemented by more targeted training and improved staff development to allow better use of existing human resources.
- The funding gap for TB control activities must be closed. Government health expenditures per capita should be increased from $6 to $35–$40, a range that will cover scaling up the activities necessary for achieving the Millennium Development Goals target for TB.
- Joint activities between TB and HIV/AIDS control programs must be stepped up. In addition to plans for intensified case finding, improved case holding, and treatment of latent TB among HIV-infected individuals, the introduction of antiretrovirals on a broad scale is needed. This will require greatly increased access to HIV testing and counseling for TB patients. Widespread antiretroviral use has been predicted to prevent about 50 percent of active TB cases.

Many of the recommended activities are overlapping and interdependent

- TB control programming must include interventions to target the poor. Directed interventions are needed to improve access to care in the public sector by removing hidden costs, raising awareness of TB symptoms and appropriate care options, and offering community-based options.
- A national communication strategy is needed to address the issues of stigma and lack of knowledge about TB and care options, and, once it is diagnosed, to improve adherence to treatment.
- To rapidly scale up DOTS delivery by private sector providers, DOTS must be promoted as the standard of care through existing private association and academic forums. Private sector involvement in TB care can improve access, link TB care with HIV care, develop human resources, target the poor, and close the private provider reporting loophole. It thus addresses multiple constraints simultaneously.

The constraints and recommended strategies have been outlined to indicate the path forward. Many of the recommended activities are overlapping and interdependent. For example, human resources development is necessary for essentially every proposed activity, and mobilizing the private sector will help target services to the poor. Significant resources will be needed if Kenya is to set the example for other high-burden TB countries (particularly high-burden TB/HIV countries) and reach the Millennium Development Goals target by 2015.

This analysis of meeting the TB target in Kenya has been reviewed by the Kenya National Leprosy and TB Control Program to ensure that it accurately reflects the constraints, priorities, and current direction of the program.

Meeting the tuberculosis target in other UN Millennium Project pilot countries: Cambodia, the Dominican Republic, and Ethiopia

A quick profile of the current TB and HIV status for other UN Millennium Project pilot countries shows the significant association of these diseases with poverty and public health spending (table 6.1). Figures reflect the most recent data available for each country from World Development Indicators, WHO, and UNAIDS.

The three brief country case studies included in appendixes to this report were chosen from three distinct regions of the world. Each of these countries has unique cultural traditions, social institutional systems, regional influences, and political and historical trajectories. There are also significant commonalities, many of which are the consequences of a large number of people living in poverty. Vulnerability to both chronic health problems and a wide array of serious infectious diseases including TB stems from the negative impact of poverty on every feature of life including housing, water and sanitation systems, quality and quantity of reliable food supplies, quality and accessibility of educational institutions, and access to both primary and specialized health services.

Table 6.1
Tuberculosis and poverty

Note: SS+ is sputum smear–positive.

Source: WHO 2004j.

Country	SS+ TB prevalence per 100,000 population	SS+ TB incidence per 100,000 population	TB incidence, all cases per 100,000 population	TB mortality per 100,000 population	DOTS population coverage (percent)	Percent adult TB cases that are also HIV+	Percent population reported below poverty line	Public health expenditure (percent of GDP)
Bangladesh	188	99	221	52	95	0.1	50	1.5
Cambodia	311	242	549	107	100	14	36	1.7
Dominican Republic	56	42	95	18	40	13	29	2.2
Ethiopia	265	159	370	88	95	29	44	1.1
Ghana	156	93	211	51	100	16	40	2.8
Kenya	296	223	540	132	100	51	52	1.7
Senegal	170	108	242	108	100	2.9	NA	2.8
Tajikistan	79	49	109	19	13	0	NA	0.9

What is needed now is expansion, adaptation, and investment of demonstrably successful approaches

Of these three countries, two—Ethiopia and Cambodia—are classified by the World Bank as low-income countries; the Dominican Republic is classified as a low-middle income country. All three countries are indebted to varying degrees, but only Ethiopia has qualified for debt relief. All three have a significant number of their populations below, or near, the poverty line.

Both Ethiopia and Cambodia are among the 22 countries with a high burden of TB. The Dominican Republic has lower incidences of TB relative to the other two countries, but it carries a higher burden of drug-resistant TB. Not coincidentally, all three countries also carry significant burdens of HIV infection. While Cambodia has had decreased HIV prevalence over the last two years, both the Dominican Republic and Ethiopia continue to see increasing prevalence.

Addressing the TB epidemic in an individual country must necessarily reflect societal structures, local culture, and the characteristics of existing health and governance systems that comprise the country-specific context. However, because many of the constraints encountered relate both to the burden of poverty shared to varying degrees by these countries and to the HIV pandemic, there are some common themes in recommendations made to assist countries in halting and reversing the incidence of TB:

- Include the economic and social burden of the TB epidemic, as well as a detailed plan of action to address it, as part of all poverty reduction strategies developed within the countries.
- Address and remove barriers of access to health services in general and TB treatment in particular. These barriers include economic obstacles for poor people. In all three of these countries (but especially in Ethiopia and Cambodia), geographic issues of rural distance and isolation from services and affordable transportation to services must be addressed.
- Increase health spending per capita.
- Strengthen collaborative relationships between TB and HIV units at all levels of the health system.
- Develop community-based services tailored to the needs and characteristics of communities.
- Promote program-based operational research, including an appraisal of the local barriers to TB services and proposed interventions to overcome them. Develop and document country-specific best practices.

Conclusion

I am living proof that TB can be beaten. With treatment, TB patients can be cured; TB untreated is life-threatening. Share the responsibility and share the reward of knowing you are saving lives. Every breath does count, so stop TB now and let people live!

—Archbishop Desmond Tutu, Nobel Laureate
(2nd Stop TB Partners' Forum, March 2004)

Box 6.1

Recommended key interventions to meet the Millennium Development Goals target for tuberculosis

Problem	Key interventions	Focus and level of interventions
TB: 2 million deaths and 9 million new cases per year.	To ensure access for all to high quality TB care: • Implement the DOTS strategy: 1. Political commitment. 2. Diagnosis with sputum smear microscopy. 3. Standardized short-course chemotherapy. 4. Consistent supply of essential TB drugs. 5. Standardized recording and reporting systems. • Implement collaborative interventions against TB and against HIV, to control HIV-related TB. • Mainstream DOTS-Plus adaptation in high MDR-TB settings. • Accelerate development and use of new tools for diagnosis, treatment, and prevention.	The full range of providers in the public and private sectors and the community should deliver the international standard of care, in line with the DOTS strategy. • Community partnership and outreach, grassroots mobilization. • Strategic focus on 1. 22 TB high-burden countries, which account for 80 percent of all TB cases. 2. Sub-Saharan Africa, because of poverty and HIV-related TB. 3. Poor people. • Public-private partnerships for developing new tools, and local engagement for testing new diagnostics, drugs, and vaccines.

The target to halve the prevalence of TB disease and deaths by 2015 is certainly achievable. The basic pillars of a successful plan are understood and widely accepted. They include structures, strategies, and supplies.

What is needed now is expansion, adaptation, and investment of demonstrably successful approaches based on DOTS. In many cases, the necessary instruments are already in place, though tackling TB/HIV effectively demands more far-reaching changes in approaches and attitudes. Also critical are the mainstreaming of DOTS-Plus into DOTS programs and intensified support for creating new drugs, diagnostics, and vaccines.

Key interventions recommended in this report are summarized in box 6.1. A full list of recommendations is given in appendix 8. These recommendations must be accompanied by a broader initiative to strengthen depleted health systems. Success will require political commitment and effective advocacy and communications. Backed by sufficient and sustained support nationally and internationally over the next 10 years, these measures provide the blueprint for turning the tide of TB by 2015.