

TB POLICY IN Bangladesh



A Civil Society Perspective

*A series of reports on TB policy in
Bangladesh, Brazil, Nigeria, Tanzania, and Thailand*

PUBLIC HEALTH WATCH



OPEN SOCIETY INSTITUTE
Public Health Program

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Preface

On the first World TB Day of the new millennium, ministerial representatives of the 20 countries carrying 80 percent of the global tuberculosis (TB) burden adopted the Amsterdam Declaration to Stop TB. By adopting the Declaration, these governments pledged to take bold new steps in addressing the TB epidemic in their countries and affirmed their commitment to “implement, monitor and evaluate” their national TB programs according to the TB control strategy recommended by the World Health Organization (WHO).

In the Declaration, the governments also expressed their will to “promot[e] the development of . . . partnerships to stop tuberculosis with all stakeholders in society, including government departments and organizations, the private health sector, industry, *non-governmental organizations and the community*” (emphasis added).

Public Health Watch supports independent monitoring of governmental compliance with the Amsterdam Declaration as part of its mandate to promote informed civil society engagement in policymaking on tuberculosis and HIV/AIDS—two closely linked diseases that lead to millions of preventable deaths annually. Established by the Open Society Institute’s Public Health Program in 2004, Public Health Watch also supports civil society monitoring of governmental HIV/AIDS and TB/HIV policies, examining compliance with the United Nations Declaration of Commitment on HIV/AIDS and the WHO Interim Policy on Collaborative TB/HIV Activities.

For the TB Monitoring Project, Public Health Watch civil society partners in Bangladesh, Brazil, Nigeria, Tanzania, and Thailand have prepared assessments of national TB policies based on a standardized questionnaire, which facilitates structured review of governmental compliance with key elements of the Amsterdam Declaration and the WHO TB control strategy. Public Health Watch researchers come from a range of backgrounds, including academia, development, journalism, and independent activism, and from both large and small nongovernmental organizations (NGOs).

The Public Health Watch monitoring methodology incorporates multiple opportunities for dialogue and exchange with a range of policy actors during report preparation. Researchers convene an advisory group of national TB experts, activists, and policy actors. They prepare draft reports on the basis of input from the advisory group, desktop and field research, interviews, and site visits. Researchers then organize in-country roundtable meetings to invite feedback and critique from policymakers, academics, government officials, representatives of affected communities, and other key stakeholders. Finally, Public Health

Watch supports researchers in conducting targeted advocacy at the domestic and international levels around their report findings and recommendations.

To access all five country reports of the TB Monitoring Project or to learn more about Public Health Watch, including the HIV/AIDS Monitoring Project and the TB/HIV Monitoring and Advocacy Project, please see: www.publichealthwatch.info.

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BRAC organized two roundtable meetings in Dhaka, Bangladesh, the first on December 12, 2005, and the second on December 13, 2005, cohosted with *The Daily Star* newspaper. Public Health Watch would like to thank *The Daily Star* and all the roundtable participants, whose comments and suggestions were invaluable in finalizing this report.

Public Health Watch TB Monitoring Project

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Public Health Program

The Open Society Institute's Public Health Program promotes health policies based on social inclusion, human rights, justice, and scientific evidence. The program works with local, national, and international civil society organizations to foster greater civil society engagement in public health policy and practice, to combat the social marginalization and stigma that lead to poor health, and to facilitate access to health information.

Open Society Institute

The Open Society Institute works to build vibrant and tolerant democracies whose governments are accountable to their citizens. To achieve its mission, OSI seeks to shape public policies that assure greater fairness in political, legal, and economic systems and safeguard fundamental rights. On a local level, OSI implements a range of initiatives to advance justice, education, public health, and independent media. At the same time, OSI builds alliances across borders and continents on issues such as corruption and freedom of information. OSI places a high priority on protecting and improving the lives of marginalized people and communities.

Investor and philanthropist George Soros in 1993 created OSI as a private operating and grantmaking foundation to support his foundations in Central and Eastern Europe and the former Soviet Union. Those foundations were established, starting in 1984, to help countries make the transition from communism. OSI has expanded the activities of the Soros foundations network to encompass the United States and more than 60 countries in Europe, Asia, Africa, and Latin America. Each Soros foundation relies on the expertise of boards composed of eminent citizens who determine individual agendas based on local priorities.

www.soros.org

Abbreviations

ARV	Antiretroviral drug
BRAC	Bangladesh Rural Advancement Committee
CCM	Country Coordinating Mechanism
CDC	U.S. Centers for Disease Control and Prevention
CIDA	Canadian International Development Agency
DGHS	Directorate General of Health Services
DOT	Directly observed treatment
DOTS	The internationally recommended strategy for TB control
ERD	Economic Relations Division
GDF	Global Drug Facility
GDP	Gross Domestic Product
HNPSp	Health Nutrition and Population Sector Program
HRD	Human Resource Development
ICCDR	International Center for Diarrhoeal Disease Research
ISAC	Intensified Support and Action Countries
LTCC	Lung and Tuberculosis Coordination Committee
MDR-TB	Multidrug-resistant TB
MDG	Millennium Development Goal
NATAB	National Anti-TB Association of Bangladesh
NGO	Nongovernmental organization
NIDCH	National Institute of Diseases of Chest and Hospital
NASP	National AIDS/STD Programme
NTP	National Tuberculosis Control Programme
STI	Sexually transmitted infection
SWAp	Sector-wide approach
TB	Tuberculosis
Tk	Taka (Bangladeshi currency)
UPHCP	Urban Primary Health Care Project
WHO	World Health Organization

I.

PUBLIC HEALTH WATCH

Overview

Estimated Global TB Burden Among High-Burden Countries, 2004

		Population 1,000s	TB Incidence (all forms) number 1,000s*	TB Incidence (all forms) per 100,000 population	TB Mortality (all forms) per 100,000 population	HIV Prevalence in Incident TB Cases %
1	India	1,087,124	1,824	168	30	5.2
2	China	1,307,989	1,325	101	17	0.9
3	Indonesia	220,077	539	245	46	0.9
4	Nigeria	128,709	374	290	82	27
5	South Africa	47,208	339	718	135	60
6	Bangladesh	139,215	319	229	51	0.1
7	Pakistan	154,794	281	181	40	0.6
8	Ethiopia	75,600	267	353	79	21
9	Philippines	81,617	239	293	48	0.1
10	Kenya	33,467	207	619	133	29
11	DR Congo	55,853	204	366	79	21
12	Russian Federation	143,899	166	115	21	6.8
13	Viet Nam	83,123	147	176	22	3.0
14	Tanzania	37,627	131	347	78	36
15	Uganda	27,821	112	402	92	19
16	Brazil	183,913	110	60	7.8	17
17	Afghanistan	28,574	95	333	92	0.0
18	Thailand	63,694	91	142	19	8.5
19	Mozambique	19,424	89	460	129	48
20	Zimbabwe	12,936	87	674	151	68
21	Myanmar	50,004	85	171	21	7.1
22	Cambodia	13,798	70	510	94	13

* The WHO ranks the high-burden countries by the absolute number of new TB cases in each country and is not adjusted due to population size.

Source: "Table 6: Estimated TB burden, 2004," in WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, p. 28.

The Public Health Watch TB Monitoring Project partners with civil society researchers in Bangladesh, Brazil, Nigeria, Tanzania, and Thailand, all of which are WHO-designated TB high-burden countries, to monitor and advocate for improved governmental policies and services to control TB. The five reports that have resulted from their monitoring efforts reveal a number of overarching themes regarding TB and TB/HIV.

Researchers all found low levels of awareness of the basic facts about TB and TB/HIV coinfection among political officials and the general population, including within high-risk groups such as people living with HIV/AIDS. Widespread ignorance of how TB is spread and the fact that the disease can be cured contribute to high levels of stigma and discrimination against people living with TB. Media coverage of TB is limited, and national TB programs (NTPs) generally lack strong communications strategies and staff with the experience and skills to interact effectively with the press.

Reports from all five countries highlight a number of other issues as well.

First, inadequate attention to the linkages between TB and poverty has resulted in a paucity of government measures to address the hidden costs of treatment that burden the poor and other vulnerable groups, including women.

Second, the fact that TB patients often rely on private service providers leads to inequitable access to quality services, constrains government capacity to monitor the course of the epidemic, and raises concerns about the potential of increasing resistance to first-line TB drugs.

Third, context-specific approaches to TB control that integrate community participation are showing positive results but require additional support and funding from domestic and international sources.

Finally, Public Health Watch research suggests that in the absence of public awareness and engagement around TB and TB/HIV, political and financial accountability for TB control efforts falters. At present, there are few structured mechanisms to encourage broad public participation in the design, implementation, and evaluation of TB policy at the domestic or international level.

In addition to the common themes and findings outlined in this overview, country-specific recommendations can be found at the end of each national report.¹

High-level political commitment?

The adoption of the Amsterdam Declaration to Stop TB in 2000 marked an important milestone in the attempt to muster high-level political commitment to a reinigorated global TB control effort. Governments of the countries with the highest burden of TB pledged to expand access to the WHO-recommended DOTS framework for TB control in their countries;² to ensure sufficient human and financial resources to support implementation; to monitor and evaluate their national TB programs in line with WHO standards; to ensure “quality, access, transparency and timely supply” of TB drugs; and to support partnerships with NGOs and the community.³

However, rhetorical commitment to the Declaration has not been reflected in adequate budgetary allocations at the national and subnational levels. Without strong national leadership, state and local officials are less likely to give budgetary priority to either TB control, particularly in highly decentralized political systems as in **Brazil** and **Nigeria**, or health care reforms, as in **Tanzania** and **Thailand**, where cost-cutting measures have had a dramatic impact on the capacity of national TB programs, particularly with regard to monitoring and evaluation, staffing, and training.

Underfunding of the health sector in general has compromised capacity to treat TB within existing public health systems in **Bangladesh**, **Nigeria**, and **Tanzania**. The executive director of Nigeria’s National Primary Health Care Development Agency commented that “where [primary health care] services are available, the quality is such that people prefer to go elsewhere for the services.”⁴ Public Health Watch researchers from all five countries judged that government spending on TB was inadequate to ensure the effective implementation of national TB policies. For example, only about two-thirds of all Bangladeshi laboratories have the capacity to perform high-quality smear tests,⁵ and laboratory rooms in some subdistricts are small and poorly ventilated, creating health risks for staff. As researcher Afsan Chowdhury noted, “If you measure political commitment [in Bangladesh] in terms of resource mobilization—if you see this as a measure of the extent to which TB is on the political agenda—it’s low, there’s not much.”⁶ TB workers are underpaid and overworked, leading to high turnover, sagging morale, and low recruitment. As funding for TB control has declined in Brazil over the past few decades, so has the prestige of TB work, even as increased investment in HIV/AIDS since the early 1990s has helped enhance the status of HIV/AIDS workers.

In **Brazil**, **Nigeria**, **Tanzania**, and **Thailand**, the HIV/AIDS epidemic has fueled a dramatic resurgence in TB rates and put an additional strain on health infrastructures, yet governments have been slow to respond with corresponding increases in TB budgets and personnel. In **Tanzania**, the resurgence in TB rates—a six-fold increase in the number of cases between 1983 and 2003—has largely been attributed to the HIV epidemic. HIV preva-

lence among TB patients in **Nigeria** increased more than four-fold over the period between 1991 and 2001.⁷ In **Thailand**, the resurgence of TB and the number of patients coinfecting with TB/HIV has been similarly dramatic, yet the integration of the TB control program into the more powerful and better funded National AIDS Control Programme—intended to promote collaborative TB and HIV policies and services—has instead dissipated the authority and resources of the TB program.

International donors cover a large share of TB control budgets in **Bangladesh**, **Nigeria**, and **Tanzania**. For instance, the Tanzanian government in 2003 contributed 10 percent of the National TB and Leprosy Programme’s total annual budget.⁸ As one Nigerian health care provider noted, “remove the donor, and everything would crash.”⁹ Public Health Watch researchers unanimously recommend that donors should take greater care to ensure that assistance programs strengthen long-term capacity to conduct TB control activities without external support. “Most international cooperation is project-based,” researcher Akramul Islam of Bangladesh said. “But we’re trying to do long-term thinking. Many international organizations think they will come here and transfer knowledge—but how can you just transfer knowledge and then wash your hands?”¹⁰

Even in countries such as **Brazil** and **Thailand**, where domestic spending accounts for the greater part of the health budget, donor resources are playing an increasingly significant role in TB control. In 2005, 45 percent of the Thai National TB Programme budget came from the Global Fund to Fight AIDS, Tuberculosis and Malaria. In recent years, bilateral agencies such as the US Agency for International Development (USAID) and other external public and private funding sources have provided most of the investment in clinical and operational research in Brazil. Access to global funding streams is making a clear contribution to national TB control efforts in all five countries. Yet Public Health Watch researchers all expressed concern about the potential for displacement of government responsibility and the impact on the capacity of governments to sustain TB control efforts in the long term.

There has been minimal public mobilization around the need to hold governments accountable for their commitments to reach Amsterdam Declaration targets. Without effective pressure from domestic constituencies, governments have had little incentive to improve their performance on TB control. Researcher Ezio T. Santos Filho believes that the position of a middle-income country such as **Brazil** on the list of TB high-burden countries can only be explained by the absence of mechanisms to ensure that critical scrutiny of government TB control efforts includes the participation of people from communities most directly affected by TB. And **Bangladeshi** researcher Afsan Chowdhury insists that the involvement of dedicated National TB Programme officials is not enough; other sectors must lend their support as well. “We need a broad cross-section of actors involved to have an effective TB control policy,” Chowdhury said. “We need advocates *around* the minister of health—we need to make TB activists out of politicians. And TB needs to be pushed onto

the political agenda, not only of the health ministry, but also of the ministries of finance and planning.”¹¹

The marginality of the Declaration at the country level is symptomatic of a broader issue: insufficient public awareness of the scope and seriousness of the TB epidemic. Global incidence of TB has increased over the past 10 years.¹² TB kills approximately 2 million people a year¹³ and is a leading cause of death by infectious disease for people living with HIV/AIDS. Yet when contrasted with the extent of social mobilization around health issues such as HIV/AIDS, the general lack of awareness that TB is a serious health threat is striking.

Lack of awareness

There is nothing more than a poster on the wall in health facilities to promote awareness.

—Ezio T. Santos Filho, *Public Health Watch* researcher, Brazil¹⁴

Public Health Watch researchers from all five countries identified lack of awareness about TB at all levels as a critical issue—one that has multiple adverse consequences and implications for the effectiveness of TB control efforts.

In the high-burden countries under study, many people do not know the basic facts about TB: how the disease is transmitted; that it can be treated and cured; and where to access free treatment. In **Bangladesh**, where over half of the population is infected with the TB bacillus, a recent study found that some women believed they could get TB by wearing torn slippers.¹⁵ According to one Nigerian doctor, “most people [in Imo State] still think that TB patients have been poisoned. Some think it is a curse from the gods—especially when many family members get infected—and go to fortune tellers and prayer houses for deliverance.”¹⁶ Even groups at an elevated risk of TB infection, including people living with HIV/AIDS, appear to lack information about TB. For example, a recent series of social mobilization workshops among HIV/AIDS activists in **Brazil**—where TB is one of the leading causes of death by infectious disease for people with HIV/AIDS—revealed that few participants knew even the basic facts about TB transmission and treatment.¹⁷

Lack of information can lead to delays in accessing treatment, increasing the potential for transmission of the disease. One recent study in Tanzania found that only 42 percent of TB patients visited a health facility within three months of the onset of symptoms; the median duration between onset of TB symptoms and visiting a health facility was about eight months.¹⁸

The low level of awareness extends to high-level political officials as well. The leader of one faith-based organization in **Thailand** remarked that “the general perception among political leaders as well as in Thai society is that TB has been completely eradicated.”¹⁹

In **Tanzania**, where over 50 percent of people living with HIV/AIDS are coinfecting with TB, many politicians and local government leaders believe that TB is a “disease of the past” that affects relatively few people and therefore do not consider TB a priority.

The scarcity of information and educational resources adapted for use at the community level is an obstacle to the initiation of awareness-raising efforts. And patients who do not understand the requirements of treatment are more likely to default, raising the risk of multidrug-resistant TB (MDR-TB), which few high-burden countries, including **Bangladesh**, **Nigeria**, **Tanzania**, and **Thailand**, have the capacity to detect and treat. **Brazil** has a strong system in place for treating its relatively few cases of MDR-TB but has undertaken a national investigation to determine whether high treatment default rates could be affecting national rates of drug resistance. A prominent TB doctor in Bangladesh expressed frustration that so little effort has been made to produce and disseminate culturally sensitive materials in the local language: “We are producing documents in English—for whom? For the donors! [We need TB materials] in Bangla, Bangla and more Bangla. And we have to remember that only one in three people can even read Bangla.”²⁰ Researcher Jamillah Mwanjisi reported that available information on TB in **Tanzania** is overly technical and jargonistic, especially in comparison to resources on HIV/AIDS, and that TB officials make little attempt to communicate the basic, essential information that people need in language they can understand. “There is quite a lot of room for social mobilization around TB—for activists to get involved,” she said. “The problem is that TB is so closed to [everyone except] the experts.”²¹

People from the communities most affected by TB and TB/HIV must be involved in the creation of materials about TB that are accurate and sensitive to local social and cultural contexts. Direct support to community activists and leaders would help them develop and use such materials to promote TB awareness in their communities.

Media involvement

[World TB Day is like] a flash of the camera, and then it's gone.

—Somsak Akksilp, director, Office of Disease Prevention and Control, Thailand²²

Except for official statements on World TB Day, the NTPs in all five countries have made little attempt to communicate important information about TB through newspapers, television or radio outlets on a systematic and continuous basis. NTPs generally lack strong communication strategies and staff has little experience working with the media.

Mirroring the situation within the general population, most journalists know little about TB. **Nigerian** researcher Olayide Akanni—a journalist herself—found that journalists are reluctant to report on TB because they are not sufficiently aware of the issues. “The majority of journalists,” she said, “do not even know that TB is an issue.”²³ At one recent

meeting organized by Akanni’s organization, Journalists Against AIDS, a group of health correspondents from major Nigerian media outlets acknowledged that they had limited knowledge about the seriousness of the TB epidemic, how TB is spread, the linkage between TB and HIV, and other related issues.²⁴ “Journalists are not able to write articles about [TB], because we lack information,” a **Bangladeshi** journalist said. “We don’t receive information from TB experts and programs in a way that we can use it.”²⁵ Editors and media owners in **Nigeria**, **Tanzania**, and **Thailand** are reportedly reluctant to cover TB and other health topics because they do not believe these “softer” issues will generate enough public interest. Few government or donor-supported media training programs have focused on TB and TB/HIV.

In the absence of a well-articulated NTP communications strategy, few government TB officials have received media training or support in obtaining the necessary skills for working with the press. Journalists in **Nigeria** and **Tanzania** have found that the primary sources of information on TB—public health officials and health care workers—are reluctant to grant interviews. According to Akanni, to reach Nigerian public health officials, “there are bureaucracies you have to overcome, and you have to book an interview about two weeks in advance.”²⁶ Mwanjisi added that in Tanzania, “When you go to interview [TB officials], they’ll tell you a string of expert jargon, and when you ask, ‘Can you please explain it to me?’ they say, ‘Oh, you would not be able to understand it.’ That kind of attitude puts off a lot of journalists.”²⁷

The fact that few civil society organizations are dealing with TB further limits potential sources of information for journalists. Mwanjisi commented that “even HIV support groups, who are referring people living with HIV to TB services, do not know anything about what is happening with the national TB program.”²⁸

Stigma and discrimination

Stigma is frustrating access to TB treatment especially for people living with HIV . . . [and] the hostile attitude of health care officials . . . is responsible for this. Nobody would want to go to a place where he or she is likely going to be treated like an outcast. No matter how effective the treatment becomes, at the end of the day, you will simply avoid such places. If that is the only place where such treatment exists, so be it; some individuals would rather die than go there.

—Yinka Jegede-Ekpe, coordinator, Nigerian Community of Women
Living with HIV²⁹

Lack of public awareness contributes to an environment in which people living with TB are more likely to feel shame and to face stigmatization and discrimination, even from health care workers, reinforcing their reluctance to seek treatment and care. Women, migrants, and members of other at-risk groups are particularly stigmatized. In areas of high HIV prevalence, people with TB are often assumed to have HIV as well, intensifying the level of stigmatization they experience.

Without an understanding of how TB is spread and that it can be cured, an atmosphere of suspicion, fear, and hostility toward people with TB can easily develop. In **Bangladesh**, BRAC research has shown that “common people would not like to associate with TB patients [for] fear of transmission,” making people with TB reluctant to seek diagnosis and care.³⁰ Though TB prevalence is reportedly quite high in factories (particularly among garment workers and in Export Processing Zones) and on tea plantations in Bangladesh, BRAC reports that factory owners are reluctant to allow access to TB service providers, and workers are reluctant to be tested for fear of losing their jobs if they test positive for TB.³¹ A **Nigerian** TB patient reported that many TB patients abandon their jobs due to stigmatization from fellow workers who fear infection as well as more blatant forms of discrimination, including being fired by their employers.³²

Mwanjisi sees a direct link between lack of reliable information about TB and TB/HIV coinfection and the high level of stigma attached to TB in **Tanzania**: “As soon as it is suspected that someone might have TB, everybody thinks that he or she also has HIV. . . [and t]his is because there is very limited information about TB—almost nothing—especially at the community level.”³³ The fears and prejudices of some health workers also add to the stigmatization of people living with both diseases.

Public Health Watch research strongly suggests that women are particularly vulnerable to stigmatization and discrimination and may be more hesitant to seek diagnostic and treatment services as a result. For example, research in Kanchanburi, **Thailand**, uncovered a common belief that TB is a “male” disease, associated with a high-risk lifestyle and “unfeminine” behaviors, so for women the onset of TB symptoms is accompanied by intense feelings of shame and loss of esteem.³⁴ In many communities in **Bangladesh**, women with TB face social disapproval for displaying physical symptoms such as coughing in public as well as a greater prospect of rejection by their husbands (or by prospective husbands if they are unmarried). As a result, Bangladeshi women are more likely than men to attempt to hide or deny TB infection, trying home and traditional remedies first and seeking professional services only as a last resort.³⁵

Gender-related stigma is exacerbated by the fact that women typically face greater barriers in accessing health care than men. Women often have more restricted access to private income to cover the hidden costs of treatment such as nutritional supplements and transportation. In both **Bangladesh** and **Tanzania**, women cited cost as a significant

barrier; reportedly, **Tanzanian** women often have to “choose between traveling [to a clinic] and getting their medications or buying food for the family”³⁶—and often opt against accessing TB care.

There are strong indications that TB is a serious health threat among migrants to **Thailand** from neighboring Burma, Laos, and Cambodia. Unable to read or speak Thai, lacking official documentation, and fearing deportation if they come into contact with public authorities, many are hesitant to seek treatment. Those who do seek treatment move so frequently that their treatment is often interrupted, raising serious concerns about MDR-TB.

TB is having a devastating impact on other vulnerable groups as well, including prisoners, refugees, and minority groups. Yet some NTPs have failed either to conduct the necessary monitoring and data analysis themselves or to support the collaborative research with academic institutions and NGOs that would allow them to identify vulnerabilities and to develop appropriately targeted programs and services. For example, in **Brazil**, since Brazilians of African descent are overrepresented among the poor, it seems likely that Afro-Brazilians—and particularly Afro-Brazilian women—also suffer higher rates of TB, yet there has been little research on this issue.³⁷ Where such data exists, as with regard to prisoners in **Thailand**, the government has been able to design and implement effective outreach programs.

TB and poverty

There is abundant evidence that poverty increases vulnerability to TB. The malnutrition, overcrowding, poor air circulation, and unhygienic sanitation facilities commonly experienced by the poor all increase the probability of TB infection. People living in poor communities are also harder hit by the hidden costs of diagnosis and treatment and are therefore less likely to access TB services. One recent government study in Bangladesh found that 70 percent of patients at DOTS centers were below the poverty line.³⁸ TB prevalence and mortality rates in Brazil reflect broader socioeconomic patterns, with poor and disadvantaged communities suffering most.

TB, in turn, can make patients more vulnerable to poverty. TB treatment and associated costs are relatively higher for poor people. TB decreases an individual's mental and physical capacity to work, further adding to the financial burden of treatment and multiplying the extent and impact of poverty. As 90 percent of **Bangladeshi** TB patients are in the most economically productive age group (15–54 years), the economic and social burden to their families is massive. According to a document prepared by the Bangladeshi government, the economic impact associated with TB and TB coping strategies is credited with pushing 30 percent of nonpoor patients below the poverty line.³⁹

The hidden costs of treatment

It is true that we receive free diagnosis and treatment, but [TB] drugs are very powerful, and they need to be taken with sufficient food. A majority of us [patients] are from poor families and we have only one meal per day. So sometimes we are forced to skip the drugs.

—TB patient, Dar es Salaam, Tanzania⁴⁰

Adhering to the six-month TB treatment regimen is a challenge, particularly for patients who are malnourished, taking antiretroviral drugs, grappling with other illnesses, or poor. Strict compliance with treatment requires a serious investment of patients' time, energy, and household resources. Reports from all five countries revealed that even though TB treatment is free, patients are often confronted with significant "hidden costs," including outlays for diagnostic tests, transportation to health facilities, nutritional supplements (since patients require an adequate diet to take their medications), and time away from work. In Tanzania, patients from rural areas in particular may spend several hours traveling to and from health facilities and one to six hours in the clinic waiting to receive medications—every day for the first two months of treatment. Similarly, in Nigeria, research revealed that states in the north, which are typically poorer, have far fewer TB centers available per capita, meaning that patients have to travel much farther for treatment. For example, as of January 2005, Zamfara State in the north had only 10 DOTS centers for a population of 3.6 million people, while Ogun State in the south had 116 DOTS centers for 2.3 million people.⁴¹ For many patients, who also have to think about earning a livelihood and familial responsibilities, traveling such a long distance for TB care is simply untenable.

Yet despite the clear connection between TB and socioeconomic factors, governments continue to deal with the disease primarily as a public health problem rather than as a broader development issue. TB is usually left to the "experts," a small circle of medical and health professionals working within or connected to the Ministry of Health. For example, while maternal and child health, infant mortality, and HIV/AIDS are highlighted in **Thai** poverty reduction schemes, TB is not mentioned. The **Brazilian** government has long acknowledged that providing "incentives" such as nutritional supplements and transportation subsidies to TB patients is necessary to ensure treatment adherence. Yet under Brazil's decentralized system, individual states and municipalities have the responsibility to budget for the incentives, and thus their availability in practice varies greatly from state to state and within states.

Patterns of TB prevalence and the crippling hidden costs of treatment may help to explain why there has not been more civil society involvement around TB. People living in poverty, women, and members of other vulnerable groups are not generally well

represented in policymaking processes; these groups are most likely to lack higher education, political access, and allies in policymaking circles. People struggling to stick to a demanding treatment regimen are more likely to be focused on survival (while they are ill) and putting the experience behind them (after they are cured) rather than policy debates. Yet involving people living in the communities most affected by TB—especially those who have successfully completed treatment—is crucial to the development of more effective public outreach programs and to improving the quality and accessibility of services overall. Given the marginalization often faced by the people and communities most affected by TB, governments and international donors must take an active role in encouraging and supporting partnerships with community-based organizations to reach these groups more effectively.

Public-private collaboration

Management of TB patients in private practice is not of acceptable quality.

. . . [D]ifferent anti-TB regimens are prescribed depending on the experience of the private provider and on the patient's purchasing power.

—Report of Third Joint International TB DOTS/ HIV/AIDS Monitoring Mission to Nigeria⁴²

Many people with TB symptoms turn first to private practitioners in their communities, even in areas theoretically “covered” by governmental DOTS programs. People seek services from private providers because they lack knowledge about or sufficient access to free treatment, or because they are looking for better service than they expect to receive at publicly managed clinics. TB treatment regimens in private facilities are often based upon an individual’s purchasing power rather than on national guidelines for TB treatment. In Nigeria, for example, rather than relying solely on smear tests, private providers use chest x-rays to diagnose TB in people who can pay for this service. Widespread reliance on private providers who are not collaborating with the government also has a negative impact on the accuracy of official TB case recording and reporting and the likelihood of treatment default.

While those who can afford it often seek treatment from licensed private medical doctors, large numbers of TB patients seek treatment from a range of other, less qualified private providers, including traditional healers, pharmacists, and unlicensed doctors, few of whom can be counted on to follow NTP guidelines. A recent study in **Bangladesh** found that up to 70 percent of poor TB patients had consulted traditional healers, homeopathic providers, or allopathic doctors before seeking out DOTS services;⁴³ because these private providers charge fees for TB services, patients are more likely to appear for treatment only when they have enough money to buy drugs, or drop out entirely when their money runs out. Defaulting on treatment increases patients’ risk of developing (and spreading) MDR-TB.

Few private providers in **Bangladesh, Nigeria, Tanzania, and Thailand** systematically refer TB patients to public health clinics or report on the outcomes of the cases they treat. In **Brazil**, although most public health care providers also “moonlight” as private doctors to compensate for low public sector salaries, most TB patients access free treatment through the public health system. Private and public providers alike often view official case recording and reporting requirements as complicated and time-consuming, especially if no incentives to encourage compliance are in place.

Building incentives into public-private partnership agreements can have a positive impact. TB reporting from private hospitals in Bangkok, **Thailand**, improved significantly when the city’s Metropolitan Authority introduced a user-friendly computerized case recording and reporting system as well as concrete incentives such as free x-ray and sputum testing services, training, and TB education materials.⁴⁴ By contrast, similar public-private pilot projects have yielded less promising results in **Bangladesh** and **Nigeria**. As one Bangladeshi expert noted, “It’s very easy to say ‘public-private partnership,’ but it’s very hard to implement. . . . We have no dearth of policies; the question is how to implement them—that is the real challenge.”⁴⁵ Careful study is needed to assess why some pilot projects have succeeded and others have failed.

The practicability of DOTS

People living with HIV/AIDS become actively involved [in their own treatment]; they do home visit projects; they join committees at hospitals; they have a role in encouraging and supporting their fellow people living with HIV/AIDS to stick to treatment. This is the crucial role local communities have played in making AIDS programs successful [and] this . . . story could be replicated for TB patients.

—Rev. Sanan Wutti, *The Church of Christ in Thailand*⁴⁶

Quality-assured TB sputum microscopy and access to “directly observed treatment” (DOT) are two of the principal components of the WHO-recommended DOTS TB control strategy. Public Health Watch research suggests that financial and human resource constraints pose serious obstacles to guaranteeing DOT by public health care workers in many high-burden countries, and that ensuring strong community participation in TB control efforts can both help fill this gap and enhance public awareness and engagement around TB and TB/HIV. The emergence of the HIV/AIDS epidemic has highlighted the inadequacy of current TB diagnostic tools, even where these are available.

In many parts of the world, NTPs have interpreted DOT to mean that trained health care workers should supervise and observe patients on a daily basis in taking their

daily medication. This is one response to the acknowledged challenge of assuring treatment completion. However, in **Thailand** and **Bangladesh**, TB programs have recognized that it is simply not feasible for health care workers to observe all TB patients on a daily basis. For example, statistics from one TB treatment center in Chiang Mai, Thailand, indicate that fully 42 percent of patients self-administer treatment.⁴⁷ According to the director of a health facility in Bangkok, “The government and . . . the international community . . . say that people must receive DOT in every single case, . . . [but] . . . we can’t do this 100 percent. . . . Nurses have a lot of duties and many diseases to take care of—so no, they don’t get to everyone. We try to utilize community workers. . . . But [without] financial support, this won’t be sustainable.”⁴⁸ TB clinics in the **Brazilian** city of Rio de Janeiro offer patients the option of traveling back and forth to the clinic every day (or three times a week) to receive DOT, but many decline and choose to take responsibility for treatment themselves, often due to work responsibilities or a wish to avoid being identified publicly as a TB patient.⁴⁹

In fact, a shortage of trained health care personnel and, particularly, of dedicated TB staff, affects the practicability of offering DOT in all five countries. In **Nigeria**, national debt and restrictions on public spending imposed by the World Bank and the International Monetary Fund (IMF) have historically placed major limitations on health sector allocations and spending, including on securing and retaining personnel.

The challenges for TB control are even greater in areas of high HIV prevalence, as many TB clinics are not equipped to meet the added challenge of diagnosing coinfecting patients. According to reports from **Brazil**, **Nigeria**, **Tanzania**, and **Thailand**, many HIV-positive patients die from TB without ever being diagnosed or treated. As a staff member from the National Reference Laboratory in **Nigeria** said, “Sputum tests alone [often do] not give the right diagnoses of TB, especially if the patient is HIV-positive. . . . We no longer refer TB patients to DOTS centers because they are often lost [seldom diagnosed or treated].”⁵⁰

Though the WHO has issued an Interim Policy on Collaborative TB/HIV Activities⁵¹ to help countries frame a coordinated response to the challenges of diagnosing and treating coinfecting patients, few countries—even those with high HIV prevalence such as **Nigeria** and **Tanzania**—have progressed beyond the planning and “pilot project” phase.

Though the importance of close supervision of TB treatment by trained medical experts is not debated, “top-down” efforts to ensure compliance need to be balanced with consideration for the importance of patient autonomy and the value of enlisting community-based support, as the WHO has increasingly recognized.⁵² Still, Abdul-Mayeed Chowdhury, the executive director of BRAC, noted that within the current TB control paradigm, “Ordinary people are treated as the recipients of the services that are being delivered to them, rather than as equal partners in their treatment.”⁵³ Many TB advocates urge TB policymakers to draw upon examples of community-based ARV distribution among people living with HIV/AIDS as a useful model for developing community-based DOTS programs.

Community-based DOTS

TB should not be seen as an ‘experts-only’ disease; it affects everyone and everyone has a role to play.

—Jamillah Mwanjisi, Public Health Watch researcher and director of
Media Bank, Tanzania⁵⁴

National TB programs in Bangladesh, Tanzania, and Thailand have sought to make TB treatment more accessible and affordable by initiating community-based TB programs, often in collaboration with NGOs. Though many of these programs have shown impressive results at relatively low cost, few have attracted sufficient investment and support for scale-up, either from domestic sources or international donors.

In response to lack of government capacity to administer DOT through health care workers in every community, BRAC and other NGOs provide community-based TB services in over two-thirds of **Bangladesh**. The BRAC approach—the most widely used model of its kind in the country—revolves around the *shastho shebika*, or female community health worker. *Shastho shebikas* are trained to identify TB symptoms and refer patients to TB diagnostic centers in the communities in which they live. Once a community member is diagnosed with TB, *shastho shebikas* obtain free TB drugs, administer DOT at the household level, and record and report relevant data to BRAC and to the NTP. *Shastho shebikas* receive significant support from BRAC in the form of regular training and refresher courses as well as the opportunity to earn income: they are permitted to sell pharmaceutical supplies in their communities, and for each TB patient cured, they receive a small fee of Tk 125 (approximately \$1.90). Many reportedly gain personal satisfaction and prestige from their jobs as well. As one *shastho shebika* noted in a recent interview, “I enjoy my work because it has gained me respect in my community.”⁵⁵

The BRAC model of community-based care has achieved impressive results: treatment success rates at or above the global target of 85 percent,⁵⁶ at a cost of 50 percent less than the equivalent services in areas covered by the NTP.⁵⁷ BRAC’s community-based DOTS program has also reaped impressive social dividends. *Shastho shebikas* distribute information and raise awareness not only about TB, but about a range of health issues, and not just to people with TB symptoms, but to the entire community, thus defusing stigma. *Shastho shebikas* report that people who have recovered from TB are often their greatest allies in encouraging others to report symptoms and seek treatment. And the fact that BRAC’s TB services are implemented in collaboration with the Bangladeshi government, which provides free drugs, monitoring, and supervision, reinforces governmental capacity and leadership on TB control.

Pilot community-based DOTS programs have also demonstrated positive treatment outcomes at relatively low cost in the Kilombero and Temeke districts of **Tanzania**.

Following the initiation of the program, the cure rate in Kilombero jumped from 48 to 78 percent.⁵⁸ One district representative commented that the program was able to maintain a high quality of treatment services at a fraction of the cost to patients because travel costs had been eliminated.⁵⁹ One patient from the Temeke district of Dar es Salaam described the program as a “savior,” especially for communities far from health facilities or where roads are impassable during rainy seasons.⁶⁰ In Temeke, too, the program both maintained quality of services and improved cost effectiveness by 37 percent.⁶¹ However, both pilot projects have now been terminated due to lack of funding. Community health workers continue to implement some community-based TB services on an ad hoc basis,⁶² but without financial support for transportation or training from district health management teams these efforts have remained limited in scope.

In **Thailand**, village health volunteers and family members assist health workers in the provision of health services, including the distribution of TB drugs and the administration of DOT. However, there are some indications that the government has not devoted sufficient attention and resources to providing training and support for these volunteers. In addition to administering DOT, village health volunteers provide a wide range of primary health services, including TB education, in return for free medical care. Family volunteers do not receive even this level of compensation. Some village health volunteers report that they find their jobs are unappealing,⁶³ and others report that the responsibility of providing community and patient education is too great to be left to volunteers.⁶⁴ Many Thai health administrators agree that volunteer workers “need to be supported and salaried. We can’t make them work for free all the time.”⁶⁵

Community-based DOTS programs provide a promising model for extending the capacity of government TB programs and engaging affected communities and individuals in becoming actively engaged in TB control efforts. However, Public Health Watch research suggests that NTP participation and leadership, particularly in providing infrastructural and technical support and training, may be important if the “scaling-up” and long-term sustainability of such programs is to be considered.

Civil society engagement in TB policymaking

Public pressure is still not felt by the National TB Programme; it's still a specialist program, and we're still telling the public what to do—that we know best. We need to show that the right belongs to the people [and the] provision of TB services has . . . to be seen as an obligation. Until we do this, [TB control] is not sustainable, and we won't reach the targets.

—Afsan Chowdhury, Public Health Watch researcher and director of advocacy, BRAC, Bangladesh⁶⁶

Civil society engagement in the design, implementation, and evaluation of TB policies at the national and international levels has been minimal. Though the importance of community involvement in addressing many of the issues raised in Public Health Watch reports is increasingly acknowledged at the rhetorical level, there are still far too few mechanisms and opportunities for meaningful participation. NGOs working in the field of health are still seen primarily as service providers; their role in promoting and demanding greater governmental accountability for delivering effective TB policies and services is not widely recognized.

At the national level, TB officials are not accustomed to receiving scrutiny from civil society actors. In **Nigeria** and **Tanzania**, Public Health Watch researchers found that TB officials were resistant to the idea that “nonexperts” could have a role to play in assessing quality of services or in helping to design and implement community-based and patient-centered programs. “The attitudes of some government health workers—maybe they have to change,” a health activist in **Thailand** said. “It seems like [TB experts] think they know everything. They are very knowledgeable, but they don't trust that NGOs can work on these issues . . . because we have not been formally trained.”⁶⁷ In other countries, there are initial signs of increasing support for civil society engagement in TB policymaking. For example, BRAC's impact on the development and implementation of TB policy in **Bangladesh** and beyond is widely acknowledged. And since 2003 the **Brazilian** NTP has indicated greater receptivity to community sector involvement in monitoring implementation of its policies; in 2004, the Ministry of Health announced its support for a new “Brazilian Partnership Against TB,” a visible sign of renewed support for a multisectoral TB control effort.

At the same time, civil society engagement at the international TB policymaking level has been minimal, though there are signs that this situation too may be changing with the increasing involvement of experienced HIV/AIDS activists and former TB patients in the Stop TB Partnership and other international bodies. To date, WHO officials have insisted that the primarily statistical and epidemiological nature of its annual *Global Tuberculosis Control* report must be preserved. As such, NGOs have not generally been invited to

participate in the preparation or review of government reports submitted to the WHO. There is currently no mechanism for civil society groups to provide independent assessments or recommendations during preparation of the *Global Tuberculosis Control* report on what could be done to improve the effectiveness of TB policies and services.

While the WHO's international case detection and treatment success targets are seen as helpful in motivating governments to demonstrate progress from year to year, without a transparent data collection and reporting system that allows for public review and feedback there is a strong incentive for governments to report greater progress than is actually being achieved. For example, a number of **Brazilian** officials and researchers have asserted that data gathered for WHO reports are not widely available at the national level;⁶⁸ that Brazilian experts are unaware of the methodology by which data are collected; and that there are significant discrepancies between the information reported to the WHO and national data with regard to DOTS coverage in particular, creating an inaccurate picture of the situation on the ground.⁶⁹ As long as governments see the Amsterdam Declaration and other regional and international commitments as a useful way of attracting international funding without incurring domestic responsibility, these commitments will not spur the desired broad public mobilization that is widely acknowledged to be a prerequisite for an effective, sustained TB control effort.

TB policymakers have noted the importance—and the absence—of a strong social mobilization component in TB control efforts to date.⁷⁰ There have been some incipient attempts to stimulate greater activity in this area. For example, in 2004 the Stop TB Partnership formed the Advocacy, Communications and Social Mobilization Working Group. The WHO Stop TB Department has begun to collect information on advocacy efforts in high-burden countries and has promised to establish a working group that includes community participation to develop indicators for more detailed reporting on communications and social mobilization activities as well. The Stop TB Partnership has also welcomed several community-led initiatives such as the creation of a community task force to ensure representation of people living with HIV/AIDS and/or TB in all of its decision-making structures.⁷¹ In Round Five, the Global Fund awarded substantial grants to support TB advocacy, communications, and social mobilization activities in a number of high-burden countries. Perhaps most significantly, the new *Global Plan to Stop TB* (2006–2015), published in March 2006, identifies the following as one of its six key elements: “Engage people with TB and affected communities to demand, and contribute to, effective care, [involving] scaling up community TB care, creating demand through context-specific advocacy, communication and social mobilization; and supporting development of a patient’s charter for the tuberculosis community.”⁷² However, the promise of these nascent structures and declarations of intent has yet to be fulfilled; the level of social mobilization around TB and community participation in TB policymaking processes is still inadequate.

Community mobilization and participation have proven essential in advocating for research, development of new tools, and the increased resources for the fight against HIV/AIDS. But many of those directly affected by TB lack resources and opportunities to engage in policy processes. Others may wish to distance themselves from the disease—and the stigma attached to it—once they have been cured. Ezio T. Santos Filho, a long-time HIV/AIDS activist in **Brazil**, asserts that waiting for the kind of “bottom-up” engagement and activism that was undertaken by the well-educated and politically connected constituencies first affected by AIDS in countries such as Brazil and the United States may not be realistic when so many of those affected by TB are from the poorest and most marginalized communities in their countries.⁷³ Greater social mobilization around TB and TB/HIV will be necessary to eradicate TB, but this will not occur without a concerted and sustained effort on the part of donors, policymakers, and community activists.

—Public Health Watch

Notes

1. For all five national reports please see www.publichealthwatch.info or contact Public Health Watch at: phwinfo@sorosny.org.
2. The DOTS strategy has five principal components: sustained political commitment; access to quality-assured TB sputum microscopy; standardized therapy under proper case management conditions; uninterrupted supply of quality-assured drugs; and systematic recording and reporting of TB cases. Available at www.who.int/tb/dots/whatisdots/en/index.html (accessed May 17, 2006).
3. See Amsterdam Declaration to Stop TB, adopted at the Ministerial Conference on Tuberculosis & Sustainable Development on March 24, 2000, Amsterdam, The Netherlands, available at www.stoptb.org/stop_tb_initiative/amsterdam_conference/documents/decla.pdf (accessed May 16, 2006).
4. Executive director of the National Primary Health Care Development Agency (NPHCDA), *The Guardian*, May 30, 2005.
5. BRAC staff confirm a pressing need for more quality microscopes at the field level. Interview with Faruque Ahmed, director of health programs, BRAC, Dhaka, March/April 2005.
6. Comment by Afsan Chowdhury, Public Health Watch researcher and director of advocacy, BRAC, December 12, 2005.
7. NTBLCP/NASCAP Power point presentation, Graph 5: Trend of HIV seroprevalence in TB patients—1991–2001, NASCAP, 2001 Sentinel Survey Report.
8. “Table 1: NTLF funding and expenditure for 2003,” in MoH, *NTLP Annual Report* (Dar es Salaam, 2003), p. 4.
9. Interview with health care provider, Ogun State, February 16, 2005.
10. Comment by Akramul Islam, Public Health Watch researcher and manager of the health and nutrition program, BRAC, December 14, 2005.
11. Comment by Afsan Chowdhury, director of advocacy, BRAC, Dhaka, December 11, 2005.
12. “TB Overview,” Global Health Reporting, available at www.globalhealthreporting.org/tb.asp (accessed May 25, 2006).
13. WHO, *Global Tuberculosis Control: Surveillance, Planning Financing*, (Geneva: WHO, 2006), p. 1.
14. Comment by Ezio T. Santos Filho, Public Health Watch researcher, Public Health Watch roundtable meeting, São Paolo, March 30, 2006.
15. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, “Gender barriers to TB Control: Fade-out or in?” BRAC Research and Evaluation Division, September 2003, p. 6.
16. Interview with C.O. Nwakonobi, Imo State TB and leprosy coordinating officer, Imo State, April 11, 2005.
17. Ezio T. Santos Filho, Public Health Watch researcher, observations from social mobilization workshops, Rio de Janeiro, 2003.
18. Study by Healthscope Tanzania and the NTLF, reported in MoH, *NTLP Annual Report* (Dar es Salaam, 2003), p. 5.
19. Comments by Rev. Sanan Wutti, The Church of Christ in Thailand, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
20. Comment by Zafrullah Chowdhury, project coordinator, Gono Shahsthya Nagar Hospital (GK), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
21. Presentation by Jamillah Mwanjisi, Public Health Watch researcher and director of Media Bank, Global Health Council panel discussion, Washington, D.C., March 2006.
22. Comment by Somsak Akksilp, director, Office of Disease Prevention and Control Region Seven, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.

23. Presentation by Olayide Akanni, Public Health watch researcher and senior programme officer, Journalists Against AIDS (JAAIDS), Global Health Council panel discussion, Washington D.C., March 2006.
24. JAAIDS, "TB/HIV, Confronting a Dual Epidemic," JAAIDS media roundtable meeting, Lagos, March 16, 2005.
25. Comment by Razu Ahmed, *Daily Amar Desh* (daily Bangla language newspaper), BRAC/Public Health Watch roundtable meeting, Dhaka, December 12, 2005.
26. Presentation by Olayide Akanni, Public Health watch researcher and senior programme officer, Journalists Against AIDS (JAAIDS), Global Health Council panel discussion, Washington D.C., March 2006.
27. Presentation by Jamillah Mwanjisi, Public Health Watch researcher and director of Media Bank, Global Health Council panel discussion, Washington D.C., March 2006.
28. Presentation by Jamillah Mwanjisi, Public Health Watch researcher and director of Media Bank, Global Health Council panel discussion, Washington D.C., March 2006.
29. Comment by Yinka Jegede-Ekpe, coordinator, Nigerian Community of Women Living with HIV (NCW+), JAAIDS media roundtable meeting, Lagos, March 16, 2005.
30. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "Gender barriers to TB Control: Fade-out or in?" BRAC Research and Evaluation Division, September 2003, p. 6.
31. Observations on basis of BRAC's experience at a DOTS treatment center in Chittagong. See also Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "Gender barriers to TB Control: Fade-out or in?," BRAC Research and Evaluation Division, September 2003, p. 5, noting reports of people losing their jobs after receiving a TB diagnosis.
32. Interview with TB patient, Broad Street Chest Clinic, Lagos, February 10, 2005.
33. Presentation by Jamillah Mwanjisi, Public Health Watch researcher and director of Media Bank, Global Health Council panel discussion, Washington, D.C., March 2006.
34. Soonthornhdhada et al., *Community Perceptions and Experiences of TB in Kanchanaburi, Thailand: A Gender Equity Analysis*. Institute for Population and Social Research. Mahidol University, 2003, Publication No. 287.
35. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "BRAC Research and Evaluation Division, September 2003, pp. 28–29.
36. Presentation by Jamillah Mwanjisi, Public Health Watch researcher and director of Media Bank, International Union Against Lung Disease and TB Annual Conference, Paris, France, October 21, 2005.
37. Statement by Lucia Maria Xavier de Castro, coordinator of *Grupo Crioula* (the Brazilian Association of Black Women), Brazilian CCM meeting, Brasilia, April 2005.
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43. Ministry of Health and Family Welfare, *Study on Tuberculosis and Poor* (Dhaka: Government of Bangladesh, June 2002).
44. Comment by Pruthi Israngkul Na Ayudya, director, BMA Health Center 21, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.

45. Comment by Salehuddin Ahmed, BRAC University, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
46. Comment by Rev. Sanan Wutti, The Church of Christ in Thailand, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
47. Interview with Attapon Cheepsattayakorn, director, 10th Zonal TB and Chest Disease Center, December 8, 2005.
48. Comment by Pruthi Israngkul Na Ayudya, director, Health Center 21, Bangkok, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
49. Interviews with TB patients and clinic staff in Rio de Janeiro, São Paulo, Porto Alegre, and Brasilia, November 2005–March 2006.
50. Comment by Rosemary Adu, National Reference Laboratory, Nigerian Institute of Medical Research (NIMR), JAAIDS media roundtable meeting, Lagos, March 19, 2005.
51. Available at www.who.int/hiv/pub/tb/tbhiv/en/ (accessed May 25, 2006).
52. “To enable them to adhere to treatment, TB patients need support and care that is sensitive to their needs. In practice it means providing a treatment partner or supporter acceptable to patients to reinforce their motivation to continue treatment and counter the tendency of some to interrupt treatment.” WHO, “The Five Elements of DOTS,” available at www.who.int/tb/dots/whatsdots/en/index2.html (accessed on May 17, 2006).
53. Abdul-Muyeed Chowdhury, executive director, BRAC, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
54. Presentation by Jamillah Mwanjisi, Public Health Watch researcher and director of Mediabank, Global Health Council panel discussion, Washington D.C., March 2006.
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59. Interview with assistant district TB and leprosy coordinator, Kilombero, February 2005.
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62. Interview with health workers, Ifakara, February 2005.
63. Interview with NTP consultant to the Bureau of AIDS, TB and STIs, October 3, 2005.
64. Group discussion with village health volunteers in Mae Sod District, Tak province, January 26, 2005.
65. Comment by Sumalee Amarinsangpen, Office of Disease Prevention and Control Region 10, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2006.
66. Comment by Afsan Chowdhury, Public Health Watch researcher and director of advocacy, BRAC/ Public Health Watch roundtable meeting, December 12, 2005.
67. Comment by Jutatip Chaisakul, Health Development Networks, roundtable meeting, Chiang Mai, December 9, 2005.

68. Comments by participants in Public Health Watch roundtable meetings, Rio de Janeiro, São Paulo, and Brasilia, March 28, 30, and 31, 2006.
69. According to the most recent statistics released by the WHO, 52 percent of the Brazilian population was covered by the DOTS strategy in 2004, a figure many Brazilian experts believe to be significantly overestimated. See WHO, *Global Tuberculosis Control: Surveillance, Planning Financing*, (Geneva: WHO, 2006), p. 79.
70. See, e.g. Stop TB Partnership, *Report on the Meeting of the second ad hoc Committee on the TB epidemic: Recommendations to Stop TB Partners*, WHO, 2004, p. 15.
71. See “Call To Action for TB and HIV Community Activists and Advocates To Stop Tuberculosis (TB),” at www.aidsinfonyc.org/tag/tbhiv/wtbd2005.html (accessed June 19, 2006).
72. Stop TB Partnership, *Global Plan to Stop TB 2006–2015*, Geneva: World Health Organization, 2006. See www.stoptb.org/globalplan/assets/documents/GlobalPlanFinal.pdf (accessed May 25, 2006).
73. Meeting on March 9, 2006 between representatives from USAID and Public Health Watch staff and researchers, Washington, D.C.

II.

**Report on TB Policy
in Bangladesh**

Executive Summary

Tuberculosis is a leading cause of adult mortality and preventable death in Bangladesh. An estimated 70,000 individuals die from TB each year: one death every 10 minutes. TB hits the poor and the most economically productive age group hardest, wreaking devastating economic and social impact. Yet many Bangladeshis are unaware of the fact that TB is curable and that treatment is available at public health facilities free of charge.

Given such high-risk behaviors as low condom use, rising HIV rates among high-risk groups (including drug users), and the fact that approximately half of the population is infected with the TB bacillus (raising the risk of progression to active infection), there is concern about the potential for a sharp rise in the rate of TB/HIV coinfection. Bangladeshi TB experts also express concern that official rates of multidrug-resistant TB (MDR-TB) underestimate the scale of the problem. The government has expressed its commitment to TB control by establishing the National Tuberculosis Control Programme (NTP), which has formally adopted the internationally recommended DOTS strategy and global TB control targets of 70 percent case detection rate and 85 percent treatment success rate. As of late 2005, the treatment success target had been achieved for the country overall, but some areas lagged behind. According to the NTP, case detection improved to 61 percent, still short of the global target. Detection is particularly problematic among urban poor women and the large numbers of TB patients who seek treatment from private providers. Most private sector doctors, traditional healers, village doctors, and other private providers do not follow NTP guidelines, with implications for the quality of TB services received by patients, the accuracy of NTP statistics on the TB situation, and increased potential for drug-resistant TB.

The levels of government spending on health in general and TB in particular are inadequate and have declined in recent years, which is reflected by inadequate accessibility and quality of public health services, including TB services. To compensate, the NTP has forged successful partnerships with nongovernmental organizations (NGOs) and international donors to expand its capacity to offer TB treatment services. With support from the Global Fund to Fight AIDS, Tuberculosis and Malaria in particular, NGOs are now offering TB services in two-thirds of the country, demonstrating a model of community-based DOTS that delivers high-quality TB services effectively and cheaply. The NTP's heavy reliance on NGO partnerships and external donor support has greatly enhanced access to TB treatment services, but also raises some concerns about sustainability.

Many Bangladeshi TB experts contend that effective implementation of a comprehensive and multifaceted advocacy and social mobilization strategy is a prerequisite for a successful government TB control policy. A comprehensive strategy would address the need for:

- High-level political advocacy and awareness-raising efforts among government and parliamentary officials to win broader political support for more attention and resources for TB;
- Continuous use of the mass media (not just on World TB Day) to disseminate information on TB symptoms, how TB is spread, the fact that TB is curable, the availability of free treatment, and the importance of completing treatment through peak-time public service programming on television and radio and accessible printed materials in Bangla as well as English;
- Outreach activities and materials to increase public awareness among communities that do not have consistent access to mass media outlets, including through targeted efforts to reach particularly vulnerable groups such as the urban poor and women;
- Enhanced partnerships with communities and community-led organizations to promote ownership of the response to TB, and to ensure that behavior, change, and communication materials are sensitive to contextual and cultural issues;
- Articulation of clear indicators for measuring the impact and success of behavior, change, and communication strategies over time.

Bangladeshi NGOs must take up the responsibility to form effective partnerships with affected communities for coordinated advocacy and social mobilization efforts that emphasize access to TB treatment services as a right, and delivery of those services as a government obligation.

International organizations and donors should take clear and visible steps to ensure that all funding support and technical assistance programming reinforces and expands national and local capacity to sustain TB control efforts in the long term.

Background

Most of us test positive for TB; we are a tuberculous nation.

—Medical doctor, Dhaka¹

The persistence and severity of the TB epidemic in Bangladesh must be understood within a broader socioeconomic context. The country has posted impressive development gains in recent decades in terms of decreasing poverty,² increased life expectancy,³ reduced maternal⁴ and infant mortality,⁵ and reduced rates of child malnutrition. Despite these gains, Bangladesh is still ranked 138 out of 157 countries on the United Nations Development Programme's Human Development Index,⁶ and low TB detection rates may be putting a brake on further progress in these and other areas.

At the same time, as TB hits the poor and the most economically productive age group (ages 15–54) hardest,⁷ the epidemic has a devastating economic as well as social impact.⁸ In addition to the human suffering it causes, TB-related illness and death impede the integration of a significant, marginalized section of the population into the labor force. In short, the social and economic costs of *not* developing effective and comprehensive TB policies are high.

Baseline statistics

With more than 300,000 new cases of TB annually among a total estimated population of 137 million, Bangladesh ranks fifth in the World Health Organization's (WHO) list of TB high-burden countries.⁹ TB was a leading cause of adult mortality and preventable death in 2005. The National Tuberculosis Control Programme (NTP) estimates that 70,000 individuals die of TB each year,¹⁰ and one study estimated that uninfected individuals have greater than a 2 percent chance of becoming infected with TB in any given one-year period.¹¹

The true incidence of TB in Bangladesh is uncertain. Current epidemiological estimates are based on the results of two national surveys conducted in 1964–66 and 1987–88. However, the government plans to use part of its 2005 grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria to conduct a national prevalence survey in 2006. The survey is expected to provide a more accurate basis for policy planning and implementation, and a solid baseline for monitoring Bangladesh's progress in meeting its TB control targets.

TB/HIV

Bangladesh's first case of HIV was recorded in 1989. HIV prevalence in the adult population is low, as is the proportion of HIV-positive patients among adult TB patients (0.1 percent).¹² Recent estimates put the total number of HIV-positive cases at approximately 13,000.¹³

HIV prevalence among high-risk groups is rising. Among injection drug users in central Bangladesh, for example, it was reported to be 4 percent in 2004 compared to 1.4 percent in 2000.¹⁴ Given the high incidence of latent TB infection in the country, there is serious concern about the potential for an increase in TB/HIV coinfection rates throughout the population. Behavioral surveillance has revealed low condom use, alarming rates of sexually transmitted infections (STIs), and low levels of risk perception.¹⁵ Additional risk factors include a large clientele for sex workers, low levels of knowledge about HIV/AIDS, extensive needle sharing among drug users, and high levels of illegal migration from neighboring India and Burma, countries with significantly higher HIV prevalence rates.

Multidrug-resistant tuberculosis (MDR-TB)

The level of resistance to first-line TB drugs has not been evaluated on a national scale.¹⁶ Official estimates indicate that 1.4 percent of previously untreated TB patients had MDR-TB in 2004¹⁷—an estimate that is widely considered credible in light of high treatment success rates. However, Bangladeshi experts express concern that if patients who did not complete treatment successfully in the first instance and the large number of patients who pursue TB treatment through private practitioners were to be counted the rate could rise to 10 percent or even higher.¹⁸

Health sector expenditure

Donor support is not here to stay, but TB will be our problem for at least another five decades. We're not going to get rid of poverty. We need to develop our human resources and capacity. . . . We need systems installation, improvement, and maintenance . . . and I feel that there is very little effort in that regard.

—Sadiah Dilshad Parveen, NGO Service Delivery Program¹⁹

To generate sustained political commitment, . . . [the] pressure has to come firstly from within, from internal partners. The sustainability of the TB service delivery program requires an increased feeling of ownership by the government.

—WHO representative²⁰

Despite the public health burden of TB and other diseases, as well as the potential threat of HIV/AIDS, the level of government spending on health is inadequate²¹ and has declined in recent years: health expenditure as a percentage of total public expenditure dropped from 7.1 percent in 2001 to 5.6 percent in 2003.²² Nearly two-thirds of health care spending is financed privately, mostly through out-of-pocket household spending, often on health care services of dubious quality provided by a range of private practitioners. Twenty-three percent of people approach pharmacists first for health care; 10 percent use traditional healers; and 35 percent see private doctors, an unknown percentage of whom are informally or poorly trained.²³

At the same time, the level of external assistance for HIV/AIDS and TB control activities has increased significantly. External assistance covered 10.5 percent of total health expenditures in 1996–97, and 13.3 percent in 2001–02.²⁴ Though increased external funding has undoubtedly enhanced the quality and scope of NTP activities, it has also raised some concerns about sustainability, donor dependence, and whether sufficient attention is being devoted to the long-term development of Bangladesh's health infrastructure.

Health sector reforms

Health sector reforms enacted in 1998 and 2003 ushered in the Health Nutrition and Population Sector Program (HNPSp). The HNPSp embodies a sector-wide approach (SWAp) to health care, which aims to serve broadly defined poverty reduction goals by minimizing duplication of services, improving efficiency in resource allocation and service delivery, decentralizing the administration of health services, and pooling multilateral, bilateral, and local resources. A range of international organizations and donors, led by the World Bank's International Development Association, have promoted this approach in Bangladesh.

The HNPSp defined an “essential services package” to maximize cost-effective treatment and services for those diseases (including TB) that place the greatest burden on the public health system; DOTS is included among the essential HNPSp services.²⁵ The HNPSp has overseen delivery of this essential package of services through community-level health facilities, primarily in rural areas and with an emphasis on reaching the poor.²⁶

The Ministry of Health and Family Welfare²⁷ has acknowledged the HNPSp is confronted with a number of difficulties, including the following:

- Continuing problems in the coordination of its strategies with other government sectors
- Inability to effectively monitor the practical impact of the HNPSp on poverty reduction and health inequalities due to the lack of clearly defined indicators

- Failure to sufficiently take into account barriers faced by the poor, including stigmatizing or otherwise inappropriate behavior by health care providers
- Insufficient allocation from the government budget to fully fund the HNPSP's ambitious agenda *and* inability of the HNPSP to spend even those funds at its disposal
- Ineffectively centralized procurement for all health programs, leading to delays in the provision of drugs and other medical supplies²⁸

As an HNPSP program, the NTP has also struggled to maintain its equilibrium through the course of health sector reform. Resources for TB control activities have been shifted from the central to the district level, resulting in enhanced accessibility of NTP services. At the same time, the Ministry of Health has devoted less attention to strengthening the NTP's administrative and managerial capacity. According to the NTP Review and Strategic Plan, more effort is needed in precisely this area, to ensure more effective NTP coordination, planning, and ultimately service delivery. "To provide DOTS," the review stated, "the NTP needs a sharp mind at the central level, and capable hands for TB diagnosis and treatment [on the ground]. All of this has been undermined during the initial transition [to a new health system]."²⁹

Political commitment

*If you measure political commitment in terms of resource mobilization
—if you see this as a measure of the extent to which TB is on the political
agenda—it's low, there's not much.*

—Afsan Chowdhury, director of advocacy, BRAC³⁰

The government has demonstrated a high level of rhetorical commitment to TB control through its support for the Millennium Development Goals (MDGs), the Amsterdam Declaration to Stop TB, and the Washington Commitment.³¹ By publicly adopting these commitments, the government has set specific TB control targets, acknowledged the linkage between TB and HIV/AIDS, and embraced the conclusion that reducing poverty and advancing development will require a concerted effort to control TB and other diseases. The NTP has articulated a clear TB control policy and guidelines for implementation, and

has expressed its determination to expand collaboration with both local and international nongovernmental organizations.

Many observers have pointed out that these expressions of political commitment have not been matched by sufficient budgetary allocations to ensure effective implementation of NTP policy.³² However, it is also clear that the level of government funding needed for a decisive step forward on TB control will require both the support of a coalition of political forces (including various departments and actors within the Ministry of Health, other ministries, and members of parliament) and increased internal pressure from civil society and the public. As one TB activist said, “We need a broad cross-section of actors involved to have an effective TB control policy. We need advocates *around* the Minister of Health. We need to make TB activists out of politicians. And TB needs to be pushed onto the political agenda, not only of the health ministry, but also the ministries of finance and planning.”³³

Public mobilization

Advocacy efforts need to target the many different levels and strata of our society. Different messages have to be developed for different groups. When we advocate, we must tell people where to go and whom to turn to. . . [and we] need to involve a broad range of actors in doing this, such as teachers, bus drivers, local political commissioners, religious leaders who work in poor areas. Different socioeconomic strata and cultural strata have to be “captured” through different strategies.

—Shakhawat Hossain, NATAB³⁴

There is a big shortage of advocacy at all levels. Government support and ownership is lacking. There should be support for advocacy from the government, and the government should feel ownership for its advocacy efforts.

—Khurshid Alam Hyder, national consultant to the WHO³⁵

There is broad agreement among TB policymakers, including NTP officials, that public mobilization is crucial for an effective TB control policy. Insufficient attention has been devoted to the design, implementation, and evaluation of this component of national TB policy, and the level of public awareness and social mobilization around TB in Bangladesh is unacceptably low.³⁶ Too many people, including people living with TB and their families,

are still uninformed about how TB is transmitted³⁷ and unaware that TB is curable and treatment is available free of charge.³⁸

In the absence of information, stigmatization of TB patients is common. BRAC has reported on these problems: “[C]ommon people would not like to associate with TB patients [for] fear of transmission. . . . None would like to develop marital relations with TB patients. . . . If [a positive TB diagnosis] become[s] known, people might hate TB patients and would [be] less likely to mix with them. [To avoid] such adverse consequences, TB patients would like to hide their problem.”³⁹

Some Bangladeshi experts contend that without social mobilization to fuel public demand for improved access to quality TB services, the government’s TB targets can not possibly be met.⁴⁰

The NTP identifies “behavior, change, and communication” activities as a key component of its overall strategy. The NTP has funded the development and dissemination of national TB control guidelines in English (and an abridged version in Bangla) to encourage awareness of NTP objectives and targets and stakeholder monitoring of NTP outcomes and policies. It has produced and distributed a TB-specific educational poster and flip-chart for use in health facilities. Where available, these materials facilitate the identification of TB cases and the provision of quality TB services;⁴¹ however, many health centers still do not have access to them,⁴² and even fewer health professionals have received follow-up training on why, when, and how to use them. Moreover, NTP guidelines are not generally accessible to the broader public. To increase their effectiveness, behavior, change, and communication materials should be designed in close collaboration with the people and communities most affected by TB (and the NGOs that work with them) to ensure that they are culturally appropriate and accessible, widely disseminated (including through community channels), and accompanied by training and other forms of guidance and encouragement.

“People have varying levels of knowledge,” one expert said. “A lot of [policymakers] do not even know how to pronounce *mycobacterium tuberculosis*, never mind people in the communities. How much do they understand? The message that goes down to them has to be much simpler than the messages we’re talking about now. It has to be done within the community, by people within the community.”⁴³ Another added, “We are producing documents in English for whom? For the donors! [We need materials] in Bangla, Bangla, and more Bangla. And we have to remember that only one in three people can even read Bangla.”⁴⁴

Scant resources at the central level have precluded the allocation of sufficient NTP staff, resources, and attention to the development and implementation of public mobilization and advocacy activities.⁴⁵ NTP-led advocacy has been limited largely to the organization of events on World TB Day, and since 2003 government support for even these activities has been suspended, apparently “due to other priorities by top level decision makers.”⁴⁶

From 2003 to 2005, NGOs such as the Chest and Heart Association filled this gap by organizing independent public information campaigns on World TB Day, but nevertheless the withdrawal of NTP funding and support has had a negative impact on the quality, scope, and media coverage of events.⁴⁷ “We can not heap every responsibility on the NGOs,” one doctor said. “The government can not forget its responsibility, but must implement a better program, with the people.”⁴⁸

NGOs also complement NTP activities by carrying out awareness-raising, education, and outreach programs of their own, often in close consultation with the NTP. For example, BRAC systematically promotes TB awareness through its extensive network of *shastho shebikas* (female community health workers), who routinely conduct TB case-finding and referrals, administer directly observed treatment (DOT), and encourage the involvement of cured TB patients in these activities.⁴⁹ BRAC has also developed TV and radio spots featuring popular personalities and produced supplementary TB information and education materials. The organization is also conducting a pilot project in three *upazilas* (subdistricts) with the aim of demonstrating how service delivery can be strengthened through direct community support.⁵⁰ Some individual health care providers also provide public information about the importance of early TB diagnosis and treatment, but these efforts are fragmented and limited in scope.

Many TB policy advocates insist that observance of World TB Day, distribution of behavior, change, and communication materials, and isolated activities by NGOs, though important, are not enough; they must be embedded within a broader NTP advocacy and outreach strategy, which recognizes and responds to the fact that TB is not merely a public health problem, but a broader socioeconomic issue. According to some observers, this broader strategy should also involve high-level political advocacy to “put TB on the table” of decision makers and policymakers, and to win cooperation, support, and involvement from other government sectors, including finance, education, planning, and youth, as well as with a range of NGOs, including civic organizations of the poor and the media.⁵¹

At the same time, TB advocates argue that both policymakers and NGOs must adopt a more effective partnership approach to social mobilization activities—an approach that takes public participation as a fundamental principle, frames access to TB treatment as a right and provision of treatment as an obligation, and reaches out more aggressively to the poor, who are at once most affected by TB and least able to access treatment.

Experts on TB expressed their concerns about the lack of public participation:

Partnership is still weak. Ordinary people are treated as the recipients of the services that are being delivered to them, rather than as equal partners in their treatment.

—Abdul-Muyeed Chowdhury, executive director of BRAC⁵²

Most of the benefits of communication and advocacy work are reaching the upper 50 percent of the population. In TB, we need to reach precisely the bottom 50 percent. This is a challenge. If we really mean business, we have to find ways and means and strategies for reaching the poor.

—Salehuddin Ahmed, BRAC University⁵³

We [TB policymakers] still see ourselves as gatekeepers, who somehow allow the public to participate. Public pressure is still not felt by the NTP; it's still a specialist program, and we're still telling the public what to do—that we know best. We need to show that the right belongs to the people. Provision of TB services has to come to be seen as an obligation. We have to serve the public; we have an obligation to them. Until we make this change, [our efforts are] not sustainable, and we won't reach the targets. We need to look into how we can actually involve the consumers of TB services.

—Afsan Chowdhury, director of advocacy and communications, BRAC⁵⁴

Bangladesh's Fifth Round application to the Global Fund has secured \$6.4 million (approximately Tk 456 million) for advocacy and social mobilization activities alone. Planned activities include workshops, meetings with high-level policymakers, media outreach, and development of partnerships.⁵⁵ NTP leadership should assign dedicated and well-trained NTP staff to ensure that implementation of this component of the grant draws upon and further develops local advocacy capacity and experience in planning and executing a broad-based, multifaceted, and sustained advocacy campaign. As one prominent and long-time TB policymaker observed, “advocacy has to be *continuous*; one short advocacy campaign will not do.”⁵⁶

Media coverage of TB

TB is not given much attention in the media. There is more attention to other diseases which are much less prevalent in Bangladesh. I do not see any patients suffering from SARS or bird flu, but these issues get a lot of coverage, [while] in our country every two minutes a person is infected [with TB], and every 10 minutes someone is dying.

—Mustafizur Rahman, director of National Institute of Diseases of Chest and Hospital⁵⁷

The NTP has not conducted any major media awareness campaigns within the last few years. World TB Day events have received some attention from the national print and elec-

tronic media, but coverage of TB and the government's TB control efforts has not been sustained throughout the year.⁵⁸ There are some signs that this situation has started to change with the increasing amount of domestic attention to and international funding for TB.

When media outlets have covered TB issues, the quality of coverage has been good, with presentation of accurate information on substantive issues such as national statistics, TB transmission and symptoms, availability of treatment, problematic issues such as the impact of gender inequalities on access to TB treatment for women⁵⁹ and the lack of capacity to diagnose TB in children, and the role of cured patients in TB control activities in their communities.⁶⁰ However, some journalists contend that TB experts and policymakers should be more active in consistently providing them with information for stories and articles. As one journalist put it, "Journalists are not able to write articles about [TB] because we lack information. We don't receive information from TB experts and programs in a way that we can use it."⁶¹

The Daily Star, an English-language daily newspaper widely read in the elite policymaking community, has provided perhaps the best and most consistent coverage on TB.⁶² However, these stories—and newspapers in general—reach a limited audience.⁶³ The NTP and NGO advocates should jointly explore creative ways of encouraging more continuous, high-quality media coverage of TB issues by organizing media information sessions and preparing accessible and compelling materials for print, radio, and television journalists. These materials should be available in English and Bangla and should include information on the location of clinics where patients can receive free TB treatment.

Government Program for TB and TB/HIV control

Program content

The NTP, established in 1993, created a strategic plan for 2006–2010 that includes the following activities:

- Implement all five elements of the WHO-recommended DOTS strategy (political commitment, directly observed therapy, laboratory testing, uninterrupted supply of quality medicines, and standard monitoring and reporting)
- Embrace the global TB control targets of 70 percent case detection and 85 percent treatment success
- Explicitly aim to improve health and family welfare among the most vulnerable women, children, and the poor

There has been significant progress toward achieving these goals. As of late 2005, the NTP reported that DOTS coverage had been extended throughout the country; the treatment success rate had reached the global target of 85 percent; and the case detection rate had risen to 61 percent by 2005—a marked improvement on previous years, though still well short of the global target of 70 percent.⁶⁴ (However, the latest WHO data, compiled for 2004, report a case detection rate of only 44 percent.)⁶⁵

NTP guidelines

The NTP has published and distributed regularly updated guidelines to support implementation of its TB control policy to strengthen DOTS implementation, and to develop “beyond DOTS” pilot initiatives.⁶⁶ According to a scientist at the International Center for Diarrhoeal Diseases and Research (ICDDR), the guidelines are one of the NTP’s strong points.⁶⁷

The NTP is also planning to produce additional sets of guidelines to encourage adherence to DOTS among private practitioners and in the workplace—two areas in which adherence with NTP guidelines has been poor. A great number of TB patients seek treatment from private providers, who often attempt to treat these cases themselves rather than referring them immediately to a DOTS center.⁶⁸ TB prevalence is reportedly quite high in factories (particularly among garment workers and in the “Export Processing Zones”

—special government-sponsored areas “where potential investors [can] find a congenial investment climate, free from cumbersome procedures”⁶⁹) and “tea gardens” (or tea plantations),⁷⁰ but many workers are reluctant to be tested for fear of losing their jobs if they test positive for TB.⁷¹

DOTS expansion

We have free diagnosis and treatment—but still we are lagging behind in case-finding. This is not only a medical problem; [it involves] social awareness, reaching the poorest of the poor—those people who have no access to media or to health education programs, [and who] don't know that TB treatment is available.

—Abdul Hamid Salim, Damien Foundation⁷²

The NTP 2001–2005 strategy aimed to expand the involvement of hospitals, private practitioners, and NGOs in DOTS expansion efforts, particularly through provision of community-based services.⁷³ Effective partnerships with NGOs in particular have been a key element of the NTP's successes in achieving 100 percent DOTS coverage and 85 percent treatment success. Bolstered by an infusion of resources from the Global Fund starting in 2004,⁷⁴ NGOs are now administering two-thirds of the DOTS program.⁷⁵ However, a number of challenges remain. Though DOTS administrative coverage is now reported to be close to 100 percent, in many areas practical access to TB services such as microscopy centers and high-quality smear testing is still problematic.

As noted above, the large number of Bangladeshis who go to private practitioners for primary health care services are neither assured of receiving DOT services, nor referred to official treatment centers within the NTP network. Family welfare centers and union-level subcenters, both of which offer primary health care services at the community level, often fail to refer TB patients to DOTS treatment centers as well.⁷⁶

Case detection is a bigger challenge. Though it has risen considerably, the case detection rate is still well short of the global target of 70 percent, and the rate varies considerably by region, from a high of more than 80 percent in the Habiganj region to a low of just under 15 percent in the Chittagong region. “Our main problem is to increase case detection,” a BRAC researcher said. “This is as important as the cure of the detected cases. If you don't detect the cases, then you still have scope for transmission.”⁷⁷

There is also growing concern that detection only of smear-positive cases is not sufficient,⁷⁸ as Bangladeshi experts agree that at least 30 percent of TB cases nationwide are smear-negative.⁷⁹ “We have to think about the total burden—not only about smear-positive

cases,” another activist said. “If we want to reduce the main burden, we have got to address the smear-negative cases.”⁸⁰

Finally, there are concerns about the NTP’s capacity to ensure access to TB services at the necessary level on a sustained basis. As noted above, the level of success achieved by the NTP to date owes much to the collaborative work of NGOs. The NTP itself has struggled to win sufficient funding to implement its strategic plan,⁸¹ and on occasion the NTP has been compelled to postpone planned DOTS expansion activities to cover basic expenses such as TB drugs. The NTP should spearhead efforts to expand the capacity of the public health infrastructure to support DOTS expansion, including through infrastructural improvements, such as additional microscopy and x-ray facilities and support for human resource development.

TB/HIV coinfection

We should take HIV seriously. There are concentrated epidemics in Bangladesh that give cause for serious concern.

—M. Amanullah, member of parliament and the Standing
Committee on Health⁸²

NTP officials acknowledge that the potential for an escalating HIV/AIDS epidemic presents an important challenge for TB control.⁸⁴ Despite this recognized concern, strong links between the National AIDS/STD Programme (NASP) and the NTP have not yet been established, and the budget for implementing such links has been minimal.⁸⁴ There is no system in place to encourage NGOs working in the field of HIV testing, counseling, and care to refer TB suspects to TB treatment centers or to ensure HIV treatment regimens are coordinated with TB treatment.

There is a clear need for dissemination of information to raise awareness about the threat of TB/HIV coinfection, to ensure that the NTP and NASP take effective and coordinated preventive action. Given the country context, it is crucial that the government as well as its NGO partners provide outreach to HIV/AIDS workers to ensure rapid referral of symptomatic patients to TB testing centers. In the longer term, the government and NGOs should work toward establishing one-stop service centers for patients who are living with both TB and HIV.

MDR-TB

If the result [of DOTS expansion] is that people follow DOTS treatment half-heartedly, we are just building a factory, producing MDR-TB. We have to explain to patients in clear language that if they don't follow treatment correctly they will get MDR, which will kill them. Until we do that, we are multiplying the MDR problem [with DOTS].

—Participant, Daily Star roundtable meeting, Dhaka⁸⁵

Many Bangladeshi experts express serious concern about the possibility that MDR-TB rates are higher than official statistics suggest,⁸⁶ particularly in light of low levels of public awareness about the importance of treatment adherence, financial obstacles to completing treatment for the poor, and widespread reliance on private practitioners who do not follow NTP treatment guidelines.⁸⁷ “Transportation is costly,” one expert said, “so instead of coming to official chest clinics, people just go to the pharmacists or local doctors. This leads to problems of treatment compliance. Treatment compliance may be lower among patients who seek care in the private sector because they can't afford to continue treatment. MDR-TB is three to four times higher in urban settings than in rural settings.”⁸⁸ As another expert pointed out, “The majority of people do not know about the need for strict compliance to the TB treatment regimen. The moment a patient starts to feel good, they stop treatment.”⁸⁹

Though the NTP is well aware of the need for careful surveillance of MDR-TB rates and comprehensive treatment for diagnosed cases, it has so far lacked the resources and capacity to develop and implement a policy to track and treat MDR-TB.⁹⁰

Most laboratories are not equipped to perform culture sensitivity testing and most treatment facilities are not able to offer the second-line drugs necessary to treat MDR-TB.⁹¹ Treatment for MDR-TB is much more expensive than treatment for standard cases.⁹² With limited resources at its disposal, until very recently NTP management has placed top priority on expanding and improving the quality of basic DOTS services. “MDR-TB is a burning issue,” an expert said. “It is there, but because of resource constraints the NTP hasn't been able to handle it.”⁹³ With support from the Global Fund, the NTP is expected to be able to improve its capacity to deal with MDR-TB in the near future.

The NTP has sought to address MDR-TB by building partnerships with nongovernmental institutions and organizations such as the Damien Foundation and the National Institute of Diseases of Chest and Hospital (NIDCH), both of which provide treatment for MDR-TB patients (though according to slightly different treatment regimens).⁹⁴ The NIDCH is able to provide MDR-TB services free of charge, using resources obtained through private fundraising efforts; the Damien Foundation has received some support for its MDR-TB activities from the NTP.⁹⁵ Both have reported relatively high failure rates, due to

the extremely complicated cases they take on with limited infrastructure and facilities. The NIDCH's TB culture and drug susceptibility testing services should be upgraded to improve national capacity to manage MDR-TB.⁹⁶

The recently approved Global Fund application included a proposal for development and implementation of a DOTS-Plus program,⁹⁷ which is also expected to greatly enhance NTP capacity to manage MDR-TB, including through access to reduced-price, quality-assured second-line TB drugs.

Case recording and reporting

NTP and NTP-affiliated TB facilities throughout Bangladesh follow the standardized system of recording and reporting recommended by the WHO and the International Union Against TB and Lung Disease (IUATLD).⁹⁸ However, the large number of private practitioners providing TB treatment services, as well as military facilities, rural hospitals, and traditional healers and others, do not keep records or report results through official NTP channels.

Though there have been a number of pilot projects to promote the integration of private practitioners into the official DOTS recording and reporting system, these are still operating on a very small scale compared to the estimated number of patients involved. To ensure accuracy of reporting on the TB situation in Bangladesh, it will be necessary to capture data on the patients being treated by private practitioners.

Further improvements to NTP recording and reporting could be achieved by improving training for district and national level staff, adopting improved computer software, and encouraging the organization of regular monitoring meetings at the district and subdistrict levels to assess national trends.

Targeting vulnerable populations

The NTP's strategic plan for 2001–2005 identified a need to develop targeted activities to reach populations particularly vulnerable to TB infection, including women, children, and the poor. However, it is clear that intensified NTP efforts (including through expanded partnerships with NGOs working in urban areas) will be necessary to reach the urban poor effectively, particularly people living in slums, factory and tea plantation workers, and prisoners. Sociocultural factors continue to hamper early diagnosis and treatment of TB among women, and lack of appropriate diagnostic tools is a barrier to positive identification of TB in children.

The DOTS divide

We're now looking at the "DOTS divide"—at who is included in TB treatment services, by economic status, social status, and gender. This is not well understood. Smears are coming in from the poor rural communities, but we're still missing the urban poor, and this population is growing.

—Akramul Islam, manager of the health and nutrition program, BRAC⁹⁹

Improvement of economic issues such as housing, sanitation, the environment, and working conditions is one of the best ways to improve the TB situation. I think our problem is here—poverty.

—M. Amanullah, member of parliament and the Standing Committee on Health¹⁰⁰

The linkage between poverty and TB is well established: malnutrition, overcrowding, poor air circulation, and unhygienic sanitation facilities commonly experienced by the poor all increase the probability of TB infection. One recent government study found that 70 percent of patients at DOTS centers were below the poverty line.¹⁰¹ Poor people are also relatively less likely to seek diagnosis and to complete treatment due to a variety of concerns, including lack of information about TB, the added expenses associated with lost work and travel, stigma, and passivity in the face of disease.

TB treatment and associated costs are relatively higher for poor people. Although diagnosis and treatment at most of the more than 600 NTP and NTP-affiliated DOTS centers are free, private practitioners charge for consultations, diagnostic tests, and drugs. Up to 70 percent of poor TB patients have consulted traditional healers, homeopathic providers, or allopathic doctors before seeking out DOTS services.¹⁰² There are also indirect costs associated with TB treatment, such as nutritional supplements since patients require an adequate diet. According to one estimate, the costs of TB treatment can be broken down as follows: 29 percent for diagnostic tests, 14 percent for travel, 11 percent for drugs, 6 percent for doctors' fees, 32 percent for food, and 8 percent for other miscellaneous costs.¹⁰³

Finally, there are costs related to lost productivity. TB decreases an individual's mental and physical capacity to work, further adding to the financial burden of treatment and multiplying the extent and impact of poverty. As 90 percent of TB patients are in the most economically productive age group (15 to 54 years), the economic and social burden to their families is massive. In fact, the economic impact associated with TB and TB-coping strategies is credited with pushing 30 percent of nonpoor patients below the poverty line.¹⁰⁴

The NTP's successful partnerships with NGOs have greatly expanded its capacity to provide home-based care in many areas of the country, minimizing direct and indirect costs for these patients. However, in urban areas the NTP lacks an operational structure and relies heavily on the Urban Primary Health Care Project (a government-sponsored program) for TB service delivery. Additional efforts are required to target slums and poor urban areas more effectively through, among other things, expanded partnerships with NGOs and reinvigorated advocacy, communication, and social mobilization activities.¹⁰⁵

“We have very little communication with the people who live in slums,” an expert said. “We see them, but they are not really present. We have launched some advocacy efforts. We are sending mobile advocacy teams into the slum areas to try to motivate shopkeepers in the slums to post signboards with information on TB and on where to go for treatment. But this kind of isolated advocacy from one project is not sufficient to address what is really a national issue for us.”¹⁰⁶

Women

In addition to the poor, women are especially vulnerable to TB. Due to a range of sociocultural factors, fewer women than men report TB symptoms at public health clinics, undergo sputum smear examinations, and are diagnosed as smear-positive,¹⁰⁷ with the result that official TB data may significantly underestimate both overall TB prevalence and prevalence among women.¹⁰⁸ To control TB among the population as a whole, the NTP should develop initiatives that take gender-specific barriers to TB treatment access into account. Improving TB services for women is also likely to have a positive impact on other health indicators such as maternal mortality.¹⁰⁹

A recent BRAC research initiative identified some of the specific factors that contribute both to greater vulnerability to TB and a marked reluctance to seek out public health services among women. Though in conditions of poverty both women and men suffer from malnutrition and insufficient food supplies, women are at an added disadvantage due to unequal distribution of food within the family; according to one respondent in the study, “most females eat less—whatever remains after serving all the family members.”¹¹⁰

Both men and women experience and fear social stigmatization around TB infection. However, women also face social disapproval for displaying physical symptoms such as coughing in public; more intense feelings of shame and loss of esteem; and greater prospect of rejection by their husbands (or by prospective husbands if they are unmarried). In many instances, wives who are diagnosed with TB are returned to their parents' homes.

One woman in a BRAC research survey described her experience this way:

My husband is scared of me. . . . He does not appreciate me as before. In fact, my pride, dignity, and honor have decreased to a large extent because of this disease. Nobody associates with me as before. . . . Whenever my nephews come close to me, my mother-in-law takes them away. She . . . keeps on saying that she will arrange another marriage for my husband. My husband also labels TB as a big disease, and he often [tells] me to commit suicide with poison. At this, I get shocked and ask him to buy poison for me. Thus, I am really in a state of mental torture.

—Respondent in BRAC research survey¹¹¹

In addition to these factors, in many communities women must be accompanied by male relatives to visit health centers, which can be difficult to arrange. With more limited financial resources, women also face added difficulties in covering the “hidden costs” of TB treatment, such as transportation. As a result, women are more likely to attempt to hide or deny TB infection, trying home and traditional remedies first, and seeking professional services only as a last resort.¹¹²

The NTP should take immediate measures to address gender inequalities in access to TB treatment and to increase case detection among women, including development of behavior, change, and communication materials targeting women and private providers consulted by women to increase familiarity with TB symptoms and referral to TB treatment centers; sensitivity training for DOT providers on barriers to treatment for women; introduction of “female-friendly” TB services that are attentive to the need for anonymity, confidentiality, and trust; arrangement of volunteer escort services for female patients; and programs to encourage inclusive family education and involvement in identification of TB symptoms, diagnosis, and treatment.¹¹³

Children

Given that TB in children often goes undiagnosed in Bangladesh, it is likely that national NTP statistics do not reflect the numbers of children infected with TB.¹¹⁴ There is a need for additional research on the prevalence of pediatric TB and for the development of systems, including expanded facilities with culture and drug susceptibility testing services, which would increase diagnostic capacity.

Prisoners

Prison conditions, including overcrowding and poor ventilation, contribute to higher rates of TB transmission and disease, and indeed the NTP reports that the incidence of TB in prisons is alarming: 400 cases per 100,000 people, compared to 98–99/100,000 in the general population.¹¹⁵ The NTP has a comprehensive plan to ensure access to effective TB diagnosis and treatment in prisons, but this plan has not yet been implemented.¹¹⁶

Program management

Administration

The NTP program manager oversees DOTS implementation through a network of offices and staff in all 64 districts and in 99 percent of the 464 subdistricts and metropolitan areas. Specialized diagnostic, treatment, and referral services are provided by chest disease clinics in 44 of the district capitals and metropolitan cities.¹¹⁷ All of these facilities are integrated within the general public health infrastructure. However, NTP services have not been integrated into the health systems of metropolitan areas. Within the limits of this structure, NTP administration generally appears to function smoothly.¹¹⁸

Yet, the scale of the TB epidemic clearly outmatches the NTP's administrative capacity, and NTP management has not proven successful in advocating for allocation of the necessary level of resources from the government budget. In 2003, the NTP identified a funding gap of approximately \$2.3 million (Tk 163 million) for provision of DOTS services,¹¹⁹ despite significant contributions from international organizations and domestic NGOs.

The NTP has also struggled to effectively coordinate the substantial TB control activities undertaken by NGO partners, particularly in urban areas. According to the WHO, overlapping areas of responsibility among public and NGO service providers, high staff turnover, insufficient training, poor systems for recording and reporting, and inadequate supervision have compromised the quality of TB services in cities.¹²⁰ Still, recent progress toward the achievement of global TB targets owes much to assistance from NGOs and external donors; as one prominent TB expert recently commented, “without BRAC's 283 *upazila* TB program, the case detection rate would be much lower.”¹²¹

The government should consider establishing an independent oversight mechanism to ensure periodic reviews of NTP administration, and to issue and follow up on clear recommendations for specific steps that could be taken to improve the NTP's capacity to effectively manage and guide the implementation of TB policy.

Staffing

We need more manpower, political commitment, and dynamic leadership in the TB program in terms of quality human resource allocation; this is very important.

—Faruque Ahmed, director of the health and nutrition program, BRAC¹²²

Human resource constraints represent a serious concern for the NTP. With an insufficient number of adequately skilled and trained staff at both the central and field levels, and few incentives on offer to attract new staff, the NTP's capacity to oversee the management and delivery of TB services is severely limited.¹²³ Stopgap measures such as the temporary use of WHO staff and reliance on NGOs for assistance have been effective in achieving rapid improvements to and expansion of TB control efforts. However, the NTP and donors should place a high priority on measures that would improve the capacity of NTP management, field staff, and laboratory technicians—measures such as enhanced incentive packages, a system for recognizing and rewarding outstanding performance, and regular in-service training and support.

Ensuring adequate training to and supervision of NTP staff has been complicated by the high rate of staff turnover,¹²⁴ which in turn is related to low pay, lack of performance-based incentives,¹²⁵ and the general absence of a strong program of continuing education and in-service training. The NTP does provide some training for district- and city-level TB managers, mid-level and field-level supervisors, medical assistants, laboratory personnel, medical students, and community activists such as religious leaders.¹²⁶ However, the number of courses the NTP is able to offer is insufficient; the WHO recently reported that at least one-half of medical technologists surveyed who were involved in TB control had not been trained by the NTP. The WHO recommends that district-level supervisors provide clinical support to health assistants at the subdistrict level on a weekly basis for training and verification of proper administration of drugs. In practice, however, many DOTS laboratories are poorly supervised.¹²⁷ Reportedly, district-level supervisors (and public sector workers in general) earn so little that many see private patients after working hours¹²⁸ and may be reluctant to carry out supervisory duties that would take time away from their private practices.

Trained lab technicians have been assigned to 200 rural TB centers in large subdistricts.¹²⁹ As there are 464 subdistrict-level public health complexes nationwide, this means that more than one-half still lack trained community workers to deliver DOT and trained personnel to ensure high-quality microscopy services. Few public health facilities have enough staff to carry out their own behavior, change, and communication activities, and must rely on volunteer, NGO, and other community resources to disseminate information on TB and TB services.¹³⁰

The shortage of well-trained NTP staff is exacerbated by the absence of a pool of graduating medical students with specialized TB training. Despite the prevalence of TB in Bangladesh, national medical schools offer very little instruction on TB. Student doctors receive less than 10 hours of lectures on TB, and nurses and paramedics none at all.¹³¹

Complementary NGO staffing for DOTS service delivery

NGOs have played an important role in the DOTS expansion effort by supplementing inadequate NTP staffing levels. NGO staff members receive regular and systematic training on TB and relevant aspects of TB control policy.

For example, BRAC is providing community-level TB care through *shastho shebikas* (female community health workers) in almost two-thirds of the country. BRAC provides its community health workers with initial training on a range of health issues, including TB, as well as monthly refresher courses to share information, discuss performance and problems, and distribute drugs. *Shastho shebikas* disseminate accurate information about TB and other health issues in their immediate communities, usually consisting of about 300 households. They are able to identify TB symptoms, refer suspects to diagnostic centers, administer DOT, and ensure follow-up with patients who do not come for their medications. Because they provide a wide array of health information and services, *shastho shebikas* are not seen exclusively as “TB workers,” which helps to reduce TB-related stigma. BRAC also provides a financial incentive to community health workers for each TB patient cured: TB patients sign a contract with BRAC and pay a bond of Tk 200 (approximately \$3); when they complete treatment, patients receive their money back, and the *shastho shebika* receives a small fee of Tk 125 (about \$1.90). Finally, some *shastho shebikas* report that they gain a great deal of personal satisfaction by providing these services. In a recent interview, a *shastho shebika* said, “I enjoy my work because it has gained me respect in my community.”¹³²

In the areas where it is working, the Damien Foundation has established “TB clubs,” which engage cured TB patients and patients under treatment in active TB case-finding efforts. The foundation also provides training to “village doctors” (community doctors lacking formal medical training), who are often the first point of contact for many poor TB patients, given their greater accessibility and relatively low fees. Trained village doctors are able to identify TB symptoms, refer patients to diagnostic centers, and deliver DOT. This work is not financially compensated, but reportedly brings participating village doctors regard and esteem within their communities.¹³³

The NTP’s TB Control Steering Committee established a Working Group on Training, which held its first meeting at the end of 2005. The working group should meet on a regular basis to support the NTP in developing and overseeing implementation of a

comprehensive plan and budget to strengthen NTP supervision in rural and urban areas; enhance the DOTS delivery skills of NTP staff at the union, subdistrict, and district levels; integrate behavior, change, and communication activities into the portfolios of NTP field staff, adding staff where necessary; and build the capacity of NTP laboratory personnel at peripheral and subdistrict levels.¹³⁴ The working group should also make and follow through on recommendations in areas in which consultants and health managers could be utilized to strengthen NTP management capacity at the central level.

Monitoring and evaluation

There is no mechanism to register the TB patients of private practitioners, and this is very essential. The stats that have been supplied are only related to patients coming to NTP clinics, but we all know that a considerable portion is being treated outside by private practitioners.

—AKM Shamsul Haq, former president of the Chest and Heart Association¹³⁵

A recent comprehensive review of the NTP's recording, reporting and monitoring, and evaluation procedures concluded that the monitoring and evaluation system appears to be functioning in a satisfactory manner. The NTP maintains a national TB reference laboratory and patient registry. DOTS units generally have well-functioning recording procedures, and the majority of units provide quarterly reports to district NTP offices as required.¹³⁶ An estimated 10 percent of DOTS facilities do not report, delay reporting, or send incomplete reports.

Some Bangladeshi experts maintain that greater efforts should be devoted to strengthening monitoring and evaluation capacity at the district and subdistrict level, including through more frequent interaction with central NTP staff and expert consultants.¹³⁷ The fact that the NTP monitoring and evaluation system does not capture data on the large number of TB patients treated by private practitioners is also a serious deficiency.

The NTP should redouble its efforts to provide training and supervision on monitoring and data analysis to public sector staff at the district and subdistrict levels, in particular to ensure quality-control, prompt follow-up, and corrective measures when reports are not submitted.¹³⁸ And the NTP needs to undertake a massive effort to persuade private practitioners of the importance and necessity of recording and reporting all TB cases to the NTP.

Infrastructure, drugs, and research

Primary health care system

There are general concerns about the condition of the public health infrastructure and thus about the quality of health services. Many public health facilities lack proper equipment and waste disposal systems and are unable to ensure adequate services and conditions for preventing transmission of infection, with obvious implications for the quality of DOTS services. Conditions are even worse in many private facilities.

There are an insufficient number of microscopy centers to support NTP policy implementation. The population of one subdistrict, with an average population of 270,000, is served by one microscopy center at the subdistrict health complex. The WHO recommends one center per 100,000 persons.¹³⁹ The lack of quality equipment in those laboratories is also of particular concern. While all laboratories have microscopes, only about two-thirds perform high-quality smear tests.¹⁴⁰ Laboratory rooms in some subdistricts are small and poorly ventilated, creating health risks for staff. Though noting recent improvement in external quality assurance measures for microscopy services,¹⁴¹ the WHO evaluation in 2004 observed that smear tests were often inadequate.¹⁴² Chest x-rays are available in some facilities (e.g., chest disease clinics and hospitals, district and medical college hospitals) for diagnosis of smear-negative and more complicated cases.¹⁴³

As the NTP does not maintain a central inventory of laboratory equipment, identifying a countrywide assessment of specific existing needs among DOTS laboratory facilities has proven challenging. The NTP should carry out a comprehensive needs assessment to identify which facilities still lack necessary equipment and infrastructure, and put a system in place to maintain records on when equipment has been purchased, repaired, maintained, and replaced.

Drug distribution systems

NTP partners have identified the provision of an uninterrupted supply of quality medicines as a priority for increasing access to DOTS;¹⁴⁴ recommendations included establishment of a community health workers' network to ensure "uninterrupted drug supply and to disseminate information."¹⁴⁵ A recent review of NTP implementation confirmed the need for an improved system to ensure organized drug procurement and drug management at the central level.¹⁴⁶

Since DOTS is part of the "essential services package" under the HNPS, the NTP works in coordination with the Ministry of Health to ensure an adequate supply of TB drugs.

Fifty percent of TB drugs are provided free of cost from the Global Drug Facility (GDF); 25 percent are purchased by the government; and 25 percent are purchased with funding provided by the Global Fund.¹⁴ The NTP maintains a one-year buffer stock of drugs, and reviews inventory annually, with support from the GDF and the WHO. As noted above, second-line drugs for MDR-TB treatment are not widely available.

Education and research

We need to think about research that can be done more easily—smaller-scale studies . . . [that] would tell us more about successful approaches that could be replicable.

—Ubaidur Rob, Population Council¹⁴⁸

The NTP supports a significant amount of operational research with a range of nongovernmental and international partners to inform and improve DOTS programs.¹⁴⁹ However, establishing a consensus on national research priorities for TB has proven to be a difficult task because of the different research agendas among the government, NGOs, and academic institutions.¹⁵⁰

In 2001, the NTP conducted a Health System and Services Research Review to build consensus around national TB research priorities. The review resulted in the endorsement of the Charter of Self-Regulation on TB Research, which provides ethical guidelines and calls for joint planning of TB research by the NTP and its partners. The priorities identified through the . . . research process included: 1) human resource development in the NTP at the national level, 2) impact assessment of behavior, change, and communication programs, 3) fee-based services and incentives for NTP providers, 4) health services in the corporate sector and involvement of private practitioners, 5) drug resistance surveillance, 6) DOTS-Plus projects, 7) TB in children, and 8) TB and poverty.

More thorough analysis of NTP case data would help to identify localized causes of the poor TB detection rates and treatment outcomes recorded in specific regions. Researchers should also give attention to the practical issues and problems identified by district-level health practitioners at their regular planning meetings as a basis for identifying future research priorities.¹⁵¹

Partnerships

Collaboration with NGOs

Without the involvement of community volunteers, DOTS would not be possible. The NTP has been working on DOTS implementation since 1993, and we've seen that it is not possible for patients to come to the health facility every day to swallow the drugs. We have to work through partners, who find the volunteers for providing DOT.

—Vikarunnessa Begum, program manager, NTP¹⁵²

The strong partnerships between the NTP and NGOs for the provision of TB services are virtually unique, and can be credited for the rapid expansion of DOTS services.¹⁵³ NGOs have initiated the integration of community-based services into the NTP policy, and have done much to ensure that the response to TB is framed as a comprehensive response to a complex social and economic phenomenon, rather than an initiative of the health sector alone.

The government began to develop partnerships with NGOs soon after the NTP was established in 1993. It sets the terms of these partnerships through regularly updated memoranda of understanding, which assign NGOs providing DOTS services to specific areas (districts, subdistricts, and metropolitan areas) and assure government support in the form of guidelines, drugs, diagnostic tools and laboratory equipment, stationary and office supplies, training, and behavior, change, and communication materials.¹⁵⁴ Thus, some NTP partner NGOs have now been involved in TB control for more than a decade; many are demonstrably stable and self-sustaining, independently generating funds from donors and from their own resources to expand and maintain high-quality activities. Some of the challenges faced by these NGOs include: finding sufficient funding to cover staffing costs; training and retaining trained staff; ensuring adequate supervision of staff; and fundraising in a context of constantly shifting priorities among donors.

Generally speaking, NGOs providing TB services possess a strong technical skills base and achieve highly satisfactory results both in terms of output achieved and cost effectiveness, particularly in rural areas.¹⁵⁵ For example, BRAC, which is the single largest NTP contractor for community-based DOTS services,¹⁵⁶ has consistently achieved a treatment success rate at or above the global treatment success target of 85 percent.¹⁵⁷ One recent study found that BRAC's TB programs cost less than the government's; the cost per patient cured was \$64 (or approximately Tk 4,212) in the BRAC area compared to \$96 (or approximately Tk 6,318) in the government area.¹⁵⁸ The Damien Foundation has been providing DOTS

services since 1994, relying on referrals from village doctors to detect about 10 percent of its cases, and to provide DOT to 45 percent of patients in the areas it covers.¹⁵⁹

According to Faruque Ahmed, director of health programs for BRAC, NGOs possess broader experience and closer contact with poor communities than is possible for the government, placing them in a better position to provide TB services as part of a broader set of poverty reduction activities. He went on to assert that the greater flexibility of NGOs enables them to respond more effectively to the requirements and demands of international donors, to receive and respond to input from consultants offering technical assistance, and to move more quickly in solving problems that arise in connection with DOTS expansion, such as the need for additional program personnel. At the government level, adjustment of programmatic priorities takes more time due to bureaucratic requirements.¹⁶⁰

Some civil society leaders argue that the extent of NGO partnership on NTP implementation has afforded them a high level of access and the ability to affect the development of government TB policy.¹⁶¹ For example, NGOs have seats on the mixed PR-NGO Steering Committee, which meets four times annually to review national progress around TB control and to make necessary revisions to the work plan.¹⁶² However, others contend that such close partnership has compromised these NGOs' ability to play the role of independent critic—that because they are so closely identified with the government policy, they are no longer able to view it critically.¹⁶³ A structured mechanism for independent civil society review of NTP implementation could play an important role in generating critical discussion and debate around ways in which the national TB policy could be further refined and improved.

Private sector involvement in TB control

It's very easy to say "public-private partnership," but it's very hard to implement. . . . We have no dearth of policies; the question is how to implement them—that is the real challenge.

—Salehuddin Ahmed, BRAC University¹⁶⁴

Private practitioners are not integrated within the NTP reporting system. In 2005, pilot projects to promote reporting from private practitioners pulled in only about 100 cases in all.

—Akramul Islam, manager of the health and nutrition program, BRAC¹⁶⁵

NTP officials acknowledge that integration of private practitioners will be essential to reach the 70 percent case detection target,¹⁶⁶ and they have articulated the need to develop a more effective strategy to do so.¹⁶⁷ Initial efforts to deal with this issue, including pilot projects and mapping exercises, have had limited impact to date.

As noted previously, a majority of TB patients seeking treatment turn first to some kind of private practitioner—from specialists (many of whom may hold public sector positions as well) to druggists, pharmacists, traditional healers, and unqualified doctors. Private practitioners are not bound by any law or by a set of regulations requiring them to comply with NTP guidelines, so all of these actors must be persuaded either to do so or to refer TB patients to NTP-affiliated clinics. However, many private practitioners may perceive a conflict of interest in taking the latter course of action, as this could mean a loss of business and income.

To assuage these concerns, it would be important for the NTP to offer some practical incentives for collaboration, such as specialized DOTS training, an effective system to guarantee provision of necessary equipment and supplies, assistance with required case recording and reporting, and mechanisms to facilitate referral of patients to NTP or NTP-affiliated TB treatment centers.

“In general, private practitioners are not directly involved in the TB control program,” one doctor said. “They do not follow the DOTS regimen. Record keeping is a big problem. Provision of incentives or support for record keeping and maintain[ing] linkages with local TB control centers [would] bring good results.”¹⁶⁸

Even professional private sector doctors still have reservations about the efficacy of NTP policy; for example, collaboration has not been established between the NTP and the Bangladesh Medical Association in many parts of the country. The NTP recently made some progress on this front: As of 2004, 18 medical colleges and teaching institutes accepted the DOTS strategy as the best way to combat TB.

Collaboration with multilateral organizations and bilateral donors

Before the Global Fund, NGOs always had to find all their [own] resources. Now more NGOs are working on TB control, thanks to the Global Fund, but not all of them have long-term missions. . . . Most international cooperation is project-based. But we're trying to do long-term thinking. Many international organizations think they will come here and transfer knowledge—but how can you just transfer knowledge and then wash your hands?

—Akramul Islam, manager of the health and nutrition program, BRAC¹⁶⁹

There is extensive collaboration between the NTP (and its NGO partners) and a range of international organizations and donors.¹⁷⁰ Recent increases in support from the Global Fund in particular have had a dramatic impact in terms of increased NTP capacity, NGO involvement, and improved rates of DOTS coverage, case detection, and treatment success.

Some Bangladeshi TB experts strike a cautionary note about the sudden influx of new funding, and emphasize the importance of long-term support for TB control efforts such as that provided by the WHO and the Japanese government.

The Global Fund

The NTP and a consortium of NGOs led by BRAC submitted a joint proposal to the Global Fund in 2003.¹⁷¹ The proposal was developed on the basis of a collaborative process that included a participatory planning meeting of all NTP partners in 2003. The following priority activities were identified as a result of this process: to strengthen NTP management; to intensify effective NTP partnership and collaboration; to expand diagnostic and treatment services; to plan and implement quality assessment; to adjust existing behavior, change, and communication strategies and implement them; and to strengthen monitoring and evaluation.¹⁷²

A five-year grant of \$42.5 million (approximately Tk 3.02 billion) was awarded in 2004. One-third went to the Ministry of Health for program coordination, management, and guidelines for human resource development; behavior, change, and communication strategies; procurement and distribution of drug and laboratory supplies; and monitoring and evaluation. Two-thirds went to the NGO consortium, with BRAC as the principal recipient, for responsibility for implementation of most grant activities.¹⁷³ Implementation began in August 2004.

A Global Fund interim progress review concluded that the partnerships between the NTP and NGOs are working well, though it also noted that NTP management capacity is still weak and that government bureaucracy has slowed implementation.¹⁷⁴ One independent observer noted that “[with regard to] money distributed through the government, as a way of promoting government ownership, . . . there is a definite problem of absorption capacity—there’s a lot of bureaucracy, corruption and waste.”¹⁷⁵ A comprehensive WHO review of NTP programs in 2004 recommended that Bangladesh should be included in the second round of the WHO’s new Intensified Support and Action Countries (ISAC) program. This would enable Bangladesh to qualify for increased WHO technical assistance to develop government capacity to effectively spend Global Fund and other major donor grants.

A second grant of approximately \$46 million (approximately Tk 3.27 billion) was awarded in 2005 to support, strengthen, and scale up activities initiated with help from the first grant, as well as to implement four broad sets of priority DOTS expansion activities for the period from 2006–2011: increasing access to laboratory services; strengthening DOTS in both urban and rural areas to sustain high cure rates; upgrading chest disease clinics and hospitals; and addressing human resource constraints, particularly in the field of ongoing training and retraining of health staff as well as managerial-level staff and community volunteers.¹⁷⁶ Grant implementation is scheduled to begin in 2006.

The Country Coordinating Mechanism

The Global Fund’s Country Coordinating Mechanism (CCM) brings together representatives of the government, NGOs and civil society organizations, religious groups, patient associations, and international organizations for periodic reviews of progress on TB control in general and Global Fund grant implementation in particular.¹⁷⁷ The CCM has three technical subcommittees on HIV/AIDS, TB, and Malaria. The CCM has provided the first national forum to address TB and HIV/AIDS in a coordinated manner.

Some independent observers assert that the CCM has not been very effective in practice, particularly with regard to performance of its oversight function.¹⁷⁸ The fact that senior government officials from different sectors are represented presents a positive opportunity for interaction between the NTP and other governmental departments such as the Ministry of Finance, the Ministry of Education, and the Ministry of Youth and Sports.¹⁷⁹ However, it also means that there are very different levels of knowledge and engagement on the part of CCM members. The Global Fund should either articulate guidelines that would allow the CCM to conduct more in-depth review and evaluation of grant implementation, or consider developing or supporting other mechanisms to ensure systematic, independent review of government and NGO performance on Global Fund grant implementation.

Recommendations

The government of Bangladesh and the NTP should:

- **Explicitly acknowledge the socioeconomic context of the TB epidemic by:**
 - adopting a “pro-poor bias” in all TB strategy and project documents;
 - integrating socioeconomic performance indicators into NTP policy;
 - ensuring effective linkages between the NTP and all government departments and ministries responsible for achieving overall health sector objectives;
 - supporting additional operational research on TB’s impact on the poor.

- **Demonstrate greater political commitment to TB control by:**
 - substantially increasing the annual budgetary allocations to the NTP in particular and the health sector in general;
 - recruiting adequate numbers of experienced and trained staff to ensure effective NTP supervision and management at the central level.

- **Expand NTP human resource capacity by developing and overseeing implementation of a comprehensive plan to:**
 - enhance DOTS delivery skills of NTP staff at the union, subdistrict, and district levels;
 - attract highly qualified NTP field staff by offering enhanced incentive packages, a system for recognition of outstanding performance, and regular in-service training and support;
 - strengthen NTP supervision of NTP staff performance in rural and urban areas;
 - integrate behavior, change, and communication activities into the portfolios of NTP field staff, adding staff where necessary;
 - build capacity of NTP laboratory personnel at peripheral and subdistrict levels.

- **Promote transparency and accountability** by making NTP reports more accessible to the public.
- **Articulate and implement a comprehensive behavior, change, and communication strategy**, which addresses the need for:
 - advocacy and awareness-raising among government and parliamentary officials to win broader political support for more attention and resources for TB;
 - continuous use of the mass media (not just on World TB Day) to disseminate public service messages with information on TB symptoms, how TB is spread, the fact that TB is curable, the availability of free treatment, and the importance of completing treatment, through peak-time programming on television and radio, and printed materials in Bangla as well as English;
 - outreach activities and materials to increase public awareness also among communities that do not have consistent access to mass media outlets;
 - differentiated strategies and materials for reaching vulnerable groups such as women;
 - development of effective partnerships with communities to promote ownership of the response to TB among affected communities;
 - indicators for measuring the success of behavior, change, and communication strategies over time.
- **Improve access to TB treatment among the poor**, including through:
 - targeted measures to minimize the “hidden” costs incurred by TB patients;
 - government support for the expansion of community-based DOTS services, particularly in urban areas.
- **Address barriers to TB treatment access for women and children**, including through:
 - gender-sensitivity training for DOTS providers;
 - introduction of “female-friendly” DOTS services;
 - arrangement of volunteer escort services for female patients;

- programs to encourage inclusive family education and involvement in identification of TB symptoms, diagnosis, and treatment;
 - support for operational research on childhood TB.
- **Encourage collaboration between the NTP and the National AIDS/STD Program,** including by:
 - providing guidelines for NGOs working in the field of HIV/AIDS testing, counseling, and care to increase awareness about TB diagnosis and management;
 - creating mechanisms to encourage referral of suspected TB cases from HIV/AIDS testing centers to NTP and NTP-affiliated TB treatment facilities;
 - drawing up plans for the eventual establishment of one-stop service centers for HIV-positive TB patients.
 - **Promote collaboration between the NTP and private health practitioners,** including through:
 - elaboration of a national strategy with guidelines, clear targets, and performance indicators to achieve better collaboration in all aspects of NTP policy implementation from private practitioners;
 - providing support and incentives to private providers, including specialized DOTS training, access to quality laboratory services, effective delivery of appropriate drugs, assistance with case recording and reporting, and mechanisms to facilitate referral of patients to NTP and NTP-affiliated TB treatment centers;
 - evaluation of pilot public-private mix projects and scaling-up of those that have proven successful.
 - **Encourage provision of TB diagnostic and treatment services in the corporate sector,** including by issuing workplace guidelines and considering establishment of a regulatory mechanism with compliance incentives as well as measures to discourage dismissal of employees upon diagnosis of TB.
 - **Progressively upgrade laboratory facilities and services,** including by
 - conducting a comprehensive needs assessment of conditions in laboratories to map immediate needs and to provide a baseline for future upgrades and repair as well as gradual improvements in ventilation, lighting, etc.;

- articulating minimum requirements for laboratories and a mechanism for ensuring regular maintenance;
- ensuring distribution of microscopy equipment necessary for acid-fast bacilli testing to laboratories throughout the country;
- expanding and enhancing facilities equipped to carry out the diagnosis and treatment of MDR-TB and TB among children.

Nongovernmental and community organizations should:

- **Step-up coordinated advocacy efforts** to articulate public demand for greater political commitment from the government, increased budgetary allocations to health and TB, and reinvigorated pro-poor policies.
- **Encourage, promote, and articulate independent civil society–led review, critique, and evaluation of NTP policies and services** as a way of promoting greater transparency and accountability.
- **Build upon the success of community-based DOTS** by expanding the geographical scope of these programs in partnership with the NTP while continuously improving and maintaining attention to quality of services.
- **Expand human resource capacity and a more participatory, rights-based approach to TB control**, including by:
 - forming partnerships with TB-affected communities;
 - establishing and supporting TB patients’ associations;
 - integrating people who have recovered from TB into TB control efforts, including case-finding, DOT provision, and behavior, change, and communication activities.
- **Reinforce behavior, change, and communication efforts** to ensure that vital messages for TB control are communicated in an effective and culturally sensitive manner.
- **Take active measures to confront and reduce stigmatization of TB patients.**

- **Regularly reexamine** strategies and services to ensure that activities and services are attentive to and effective in meeting the needs of the poor, women, and other vulnerable populations.
- **Advocate with medical schools** to encourage greater attention to TB and TB treatment in the curriculum.
- **Help ensure the dissemination of information** about the NTP policy, activities, and report.

The international community should:

- **Maintain or increase levels of support for TB control efforts** to ensure achievement of global TB targets and the development of sufficient government capacity so that TB control efforts can be sustained in the long-term.
- **Provide necessary technical assistance to the government of Bangladesh**, particularly to:
 - enhance NTP management capacity;
 - improve supervision and monitoring skills;
 - establish a system to ensure external quality assurance;
 - develop appropriate TB/HIV collaborative activities.
- **Provide technical assistance and funding to NGOs** for the development and implementation of more effective strategies to reach the poor and other vulnerable populations.
- **Provide resources and assistance for the development and implementation of a range of country-specific behavior, change, and communication tools and activities.**
- **Support civil society advocacy for greater political commitment to TB control and independent assessment and review of NTP performance.**
- **Encourage and provide models for enhanced public-private partnership efforts** between NGOs and other partners, including corporate actors, private providers, the government, and UN agencies.

- **Support operational research**, particularly on:
 - TB and poverty;
 - TB/HIV;
 - DOTS-Plus projects and services;
 - surveillance of drug resistance;
 - models for public-private partnership;
 - advocacy strategies and techniques.

Notes

1. Comment by medical doctor, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
2. See *Unlocking the Potential: National Strategy for Accelerated Poverty Reduction*, Dhaka Planning Commission, Government of Bangladesh, December 2004, p. 13.
3. Life expectancy rose from 58.7 years in 1995 to 61.1 in 2002. Bangladesh Bureau of Statistics (BBS), Government of Bangladesh, 1997, 2002.
4. Maternal mortality decreased from 4.4 to 3.15 per 1,000 live births from 1996 to 2001. Bangladesh Bureau of Statistics, 2002, pp. 38-39.
5. The infant mortality rate dropped from 153 deaths to 62 deaths per 1,000 live births from the mid-1970s to 2000. Economic Relations Division, *A National Strategy for Economic Growth, Poverty Reduction and Social Development*, Ministry of Finance, Government of Bangladesh, Dhaka, 2003, p. 12.
6. United Nations Development Programme, *Human Development Report 2004*, p. 141.
7. NTP, *Tuberculosis in Bangladesh Annual Report—2003*, Dhaka, 2003, p. 22.
8. NTP, *Annual Report 2003*, Government of Bangladesh (on file with BRAC).
9. Presentation by Vikarunnessa Begum, program manager, NTP, *Daily Star* roundtable meeting, December 13, 2005.
10. Presentation by Vikarunnessa Begum, program manager, NTP, *Daily Star* roundtable meeting, December 13, 2005.
11. K. Weyer, *Tuberculosis in Bangladesh*, 1996, WHO, October 1997.
12. The most recent World Health Organization (WHO) figures indicated HIV prevalence of 0.1 percent among adult TB patients. WHO, *Global Tuberculosis Control Surveillance, Planning, Financing*, WHO, Geneva 2006, p. 74. See also <http://www.unaids.org/en/geographical+area/by+country/bangladesh.asp> (accessed on January 22, 2006).
13. See UNAIDS figures at: web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/BANGLADESHEXTN/O,,menuPK:295769~pagePK:141132~piPK:141107~theSitePK:295760,00.html (accessed on January 22, 2006).
14. National AIDS/STD Program (NASP), Ministry of Health and Family Welfare (MOHFW), *National Strategic Plan for HIV/AIDS 2004–2010*, 2005 pp. 1–3.
15. National AIDS/STD Program (NASP), Ministry of Health and Family Welfare (MOHFW), *National Strategic Plan for HIV/AIDS 2004–2010*, 2005 pp. 1–3.
16. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 21, 75.
17. WHO/IUATLD Global Project on Anti-tuberculosis Drug Resistance Surveillance, cited in WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005 and Country Coordination Mechanism (CCM), *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, pp. 26–27.
18. Interview with AKM Mushfiqur Rahaman Faruque, officer in charge of the NTP at Shyamoly, Dhaka, 2005. One study conducted by the Damien Foundation reported a high rate of MDR-TB cases among previously treated TB cases.
19. Comment by Sadia Dilshad Parveen, NGO Service Delivery Program, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
20. Comment by WHO representative, BRAC roundtable meeting, Dhaka, December 12, 2005.
21. Government health sector spending is approximately 1 percent of Gross Domestic Product (GDP). *Unlocking the Potential: National Strategy for Accelerated Poverty Reduction*, Dhaka Planning Commission, Government of Bangladesh, December 2004, p. 129.

22. *Unlocking the Potential: National Strategy for Accelerated Poverty Reduction*, Dhaka Planning Commission, Government of Bangladesh, December 2004, p. 128.
23. Bangladesh Bureau of Statistics, 2002, and CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 26.
24. Bangladesh Bureau of Statistics, 2002.
25. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 33
26. Over 65 percent of public health spending is channeled through the essential services package, and over 55 percent of those using district and subdistrict-level health facilities are from the two poorest income quintiles. Economic Relations Division, *A National Strategy for Economic Growth, Poverty Reduction and Social Development*, Ministry of Finance, Government of Bangladesh, Dhaka, 2003, p. 100.
27. The Ministry of Health and Family Welfare is hereafter referred to as the Ministry of Health.
28. MOHFW, *Health, Nutrition and Population Program*, Government of Bangladesh, Dhaka, January 2005, p. 1.
29. *NTP Review and Strategic Plan 2001–2005*, MOHFW, Dhaka. 2001 (on file with BRAC).
30. Comment by Afsan Chowdhury, director of advocacy, BRAC, Dhaka, December 12, 2005.
31. Government support for the global targets on TB control has been expressed and reinforced in numerous policy documents. See, e.g., CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 30.
32. Comments by participants at BRAC and *Daily Star* roundtable meetings, Dhaka, December 12 and 13.
33. Comment by Afsan Chowdhury, director of advocacy, BRAC, Dhaka, December 11, 2005.
34. Comment by Shakhawat Hossain, NATAB, BRAC roundtable meeting, Dhaka, December 12, 2005.
35. Comment by Khurshid Alam Hyder, national consultant to the WHO, BRAC roundtable meeting, Dhaka, December 12, 2005.
36. Interviews with Vikarunessa Begum, NTP program manager; Jalaluddin Ahmed, former deputy director of communicable disease control, Directorate General of Health Services (DGHS); and AKM Mushfiqur Rahman Faruque, officer in charge of the NTP, Dhaka, March/April 2005.
37. See, e.g., Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, “Gender barriers to TB Control: Fade-out or in?” BRAC Research and Evaluation Division, September 2003, p. 6, noting that “some females expressed that TB also could occur from torn sandals (slippers).”
38. “Half of all Bangladeshi adults carry TB bacteria,” *The Daily Star*, February 1, 2006. Also, comment by Sadia Dilshad Parveen, Quality Assurance Project of University Research Corporation, BRAC roundtable meeting, Dhaka, December 12, 2005.
39. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, “Gender barriers to TB Control: Fade-out or in?” BRAC Research and Evaluation Division, September 2003, p. 6.
40. Comment by Afsan Chowdhury, director of advocacy, BRAC, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
41. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 63–66. This finding was also supported by research and observation conducted for this report by BRAC in 2005.
42. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 63–66.
43. Comment by representative of the “NGO Service Delivery Program” of USAID, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
44. Comment by Zafrullah Chowdhury, project coordinator, Gono Shahsthya Nagar Hospital (GK), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
45. According to the NTP program manager, a recent grant from the Canadian International Development Agency (CIDA) to support advocacy activities had to be reallocated to buy necessary TB drugs. *Daily Star* roundtable meeting, Dhaka, December 13, 2005. See also CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, pp. 44–45.

46. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 63–66.
47. Comment by Asif Mujtaba Mahmud, associate professor, National Institute of Diseases of Chest and Hospital (NIDCH), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
48. Comment by Zafrullah Chowhury, project coordinator, Gono Shahstha Nagar Hospital (GK), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
49. Interviews with *shastho shebikas* in two communities, Dhamrai region, December 14, 2005.
50. Social communication program document, BRAC Advocacy Unit, 2005 (on file with BRAC).
51. Comments by Akramul Islam, program manager of BRAC Health and Nutrition Program, BRAC roundtable meeting, Dhaka, December 12, 2005 and Asif Mujtaba Mahmud, associate professor, National Institute of Diseases of Chest and Hospital (NIDCH), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
52. Comment by Abdul-Muyeed Chowdhury, executive director of BRAC, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
53. Comment by Salehuddin Ahmed, BRAC University, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
54. Comment by Afsan Chowdhury, director of advocacy and communications, BRAC, Dhaka, December 12, 2005.
55. *Proposal to the Global Fund Against AIDS, Tuberculosis and Malaria*, Fifth Round, 2005 available at: www.theglobalfund.org/search/docs/5BANT_955_o_full.pdf.
56. Comment by Ahsan Ali, former NTP director, BRAC roundtable meeting, Dhaka, December 12, 2005.
57. Mustafizur Rahman, director of National Institute of Diseases of Chest and Hospital (NIDCH), BRAC roundtable meeting, Dhaka, December 12, 2005.
58. BRAC review of major press outlets (both Bangla and English), September 2003 to September 2004.
59. “Gender Barriers to TB Control in Bangladesh,” *Daily Star*, April 25, 2004.
60. See, e.g., “TB kills one, catches five every ten minutes,” *Daily Star*, March 25, 2004; “Fact Sheet on Tuberculosis,” *Daily Ittefaq*, March 21, 2004; and “Tuberculosis of the lungs,” *Daily Ittefaq*, June 13, 2005.
61. Comment by Razu Ahmed, *Daily Amar Desh* (daily Bangla language newspaper), comments by participants at BRAC roundtable meeting, Dhaka, December 12, 2005.
62. For a representative sample of recent *Daily Star* reporting on TB, see www.thedailystar.net/2006/02/01/d60201060172.htm; www.thedailystar.net/2005/12/14/d5121401097.htm; www.thedailystar.net/magazine/2003/10/04/coverstory.htm (accessed February 2, 2006).
63. Recent estimates indicate a literacy rate at 41.1 percent. UNESCO Institute for Statistics, July 2002, cited in *Human Development Reports Country Sheet on Bangladesh*, hdr.undp.org/statistics/data/ (accessed February 2, 2005).
64. Presentation by Vikarunnessa Begum, NTP program manager, at BRAC roundtable meeting, Dhaka, December 12, 2005.
65. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2006.
66. NTP, *National Guidelines and Operational Manual for Tuberculosis Control*, Third Edition, July 2004, and *Laboratory Manual on Smear Microscopy and Tuberculosis and its Quality Control*, Third Edition, 2003.
67. Interview with K. Zaman, scientist, International Center for Diarrhoeal Disease Research, Dhaka, March/April 2005.
68. Comments by Mirza Hiron, NIDCH, BRAC roundtable meeting, Dhaka, December 12, 2005 and A.K. Ahsan Ali, former director of NTP and IUATLD board member, *Daily Star* roundtable meeting, December 13, 2005. See also *Study on Tuberculosis and the Poor*, Government of Bangladesh, Dhaka, June 2002.
69. See www.epzbangladesh.org.bd/Prologue.php?eae1717e29de32b46a288afb60d6ac26 (accessed May 23, 2006).

70. Comments by Tahmina Aziz, line director, TB & Leprosy Control Program, *Daily Star* roundtable meeting, Dhaka, December 13, 2005, and interview with Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 14, 2005.
71. Observations on basis of BRAC's experience at a DOTS treatment center in Chittagong. See also Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "Gender barriers to TB Control: Fade-out or in?", BRAC Research and Evaluation Division, September 2003, p. 5, noting reports of people losing their jobs after receiving a TB diagnosis.
72. Comment by Abdul Hamid Salim, Damien Foundation, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
73. This recommendation was echoed in a NTP planning meeting with NTP partners (CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 9).
74. BRAC was awarded a grant of \$11,172,846 for TB activities aimed at "increasing access to DOTS and improving the quality of services" in the Global Fund's Third Round in 2003. Grant implementation began in August 2004. See [www.aidspace.org/grants/bangladesh_tuberculosis_\(ban-304-g02-t\).htm](http://www.aidspace.org/grants/bangladesh_tuberculosis_(ban-304-g02-t).htm) (accessed February 4, 2006).
75. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 23.
76. Comments by Hamid Selim, Damien Foundation, BRAC roundtable meeting, Dhaka, December 12, 2005.
77. Comment by Fazlul Karim, BRAC Research and Evaluation Division, BRAC roundtable meeting, Dhaka, December 12, 2005.
78. Comments by representatives of the Chest and Heart Association and the Office of the Directorate General of Health Services, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
79. Comments at BRAC roundtable and *Daily Star* roundtable meetings, Dhaka, December 12 and 13, 2005.
80. Comment by representative of the Bangladeshi Chest and Heart Association, BRAC roundtable meeting, Dhaka, December 13, 2005.
81. The WHO estimated a budget shortfall of \$1 million (or approximately Tk 65.8 million) in FY 2003 for DOTS expansion initiatives, and estimated an even greater shortfall of \$1.25 million (or approximately Tk 82.3 million) in 2005. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 25–26.
82. Comment by M. Amanullah, member of parliament and the Standing Committee on Health, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
83. For example, the NTP's annual report for 2003 devoted significant space to TB/HIV coinfection issues, and made recommendations for increased collaboration between the NTP and NASP. NTP, *Tuberculosis in Bangladesh Annual Report—2003*, Dhaka, 2003, pp. 23–24.
84. The NTP budgets for 2003 and 2004 did not include any allocation for TB/HIV activities and the estimated budget for 2005 was \$80,000 (approximately Tk 5,266,400). *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 25.
85. Comment by participant, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
86. Comments by participants, *Daily Star* roundtable meeting, Dhaka, December 13, 2005. Comment by Afsan Chowdhury, director of advocacy, BRAC, Dhaka, December 11, 2005.
87. According to the WHO representative in Bangladesh, a substantial number of MDR cases show resistance to medications commonly prescribed by private practitioners. Comments at BRAC roundtable meeting, Dhaka, December 12, 2005.
88. Comment by Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 14, 2005.
89. Comment by Sadia Dilshad Parveen, Quality Assurance Project of University Research Corporation, BRAC roundtable meeting, Dhaka, December 12, 2005.

90. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 63–66. Confirmed in interview with AKM Mushfiqur Rahaman Faruque, NTP, Dhaka, March/April 2005.
91. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 75.
92. The government reports spending Tk 900 (or approximately \$13.67) to cure each TB patient, but would have to spend many times this amount to re-treat patients who have been ineffectively or incompletely treated previously. *NTP Annual Report 2004*, p. 6
93. Comment by Asif Mujtaba Mahmud, associate professor, the National Institute of Diseases of Chest and Hospital, BRAC roundtable meeting, Dhaka, December 12, 2005.
94. The Damien Foundation follows a 15-month regimen, and only hospitalizes patients during the intensive phase of treatment. The NIDCH follows a slightly longer 18- to 24-month treatment regimen, with hospitalization for longer periods.
95. The 2004 NTP budget allocated \$75,000 for purchase of the second-line TB drugs used to treat MDR-TB. However, only \$5,000 was spent by BRAC and the Damien Foundation, leaving a funding gap of \$70,000 (approximately Tk 4,608,100). WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 25–27.
96. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, on file with BRAC.
97. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 82.
98. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 21, 54. Confirmed by Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 11, 2005.
99. Comment by Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 14, 2005.
100. Comment by M. Amanullah, member of parliament and the Standing Committee on Health, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
101. MOHFW, *Study on Tuberculosis and Poor*, government of Bangladesh, Dhaka, June 2002.
102. MOHFW, *Study on Tuberculosis and Poor*, Government of Bangladesh, Dhaka, June 2002.
103. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 112.
104. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 112.
105. For example, the *Fidelis* program is supporting BRAC to develop innovative approaches to improving case detection in areas that are not currently being reached. Comment by Shaila Rodrigues, secondary secretary for development, Canadian High Commission, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
106. Comment by Muhammed Iqbal, project director, Urban Primary Health Care Project (UPHCP), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
107. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, “Gender barriers to TB Control: Fade-out or in?” BRAC Research and Evaluation Division, September 2003, pp. 28–29. See also CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 27.
108. The male-to-female ratio of new smear-positive patients was 1: 0.44 in 2001, *Millennium Development Goals: Bangladesh Progress Report*, Government of Bangladesh and the UN Country Team in Bangladesh, February 2005, p. 43.
109. “Increased detection and cure of females will have a considerable impact on maternal mortality as TB has been found to be the major cause of maternal death in high TB burden, low income countries.” *Millennium Development Goals: Bangladesh Progress Report*, Government of Bangladesh and the UN Country Team in Bangladesh, February 2005, p. 43.
110. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, “Gender barriers to TB Control: Fade-out or in?” BRAC Research and Evaluation Division, September 2003, p. 7.

111. Respondent in BRAC research survey, cited in Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "Gender barriers to TB control: Fade-out or in?" BRAC Research and Evaluation Division, September 2003, pp. 24–25.
112. Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "Gender barriers to TB Control: Fade-out or in?" BRAC Research and Evaluation Division, September 2003, pp. 28–29.
113. For expanded set of recommendations, see Fazlul Karim, Insana Begum, Akramul Islam, and AMR Chowdhury, "Gender barriers to TB control: Fade-out or in?" BRAC Research and Evaluation Division, September 2003.
114. Tahmeed Ahmed, ICDDRDB, cited in *The Daily Star*, March 24, 2004.
115. Presentation by Vikarunnessa Begum, NTP program manager, roundtable meeting, Dhaka, December 12, 2005.
116. *NTP Annual Report 2003*, p. 23.
117. For example, more complicated cases in need of hospitalization are referred to the National Institute of Diseases of Chest and Hospital and other tertiary care hospitals. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 22.
118. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, confirmed by public officials and NGO representatives interviewed by BRAC for this report in 2005.
119. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 44.
120. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 31.
121. Comment by Zafrullah Chowhury, project coordinator, Gono Shahsthya Nagar Hospital (GK), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
122. Comment by Faruque Ahmed, director of health and nutrition program, BRAC, Dhaka, December 2005.
123. Interview with Mahbubur Rahman, line director for Primary Health Care (PHC), 2005, noting that the skill level of DOTS service providers, including laboratory technicians, is "not sufficient," and that "more training should be arranged for skill development."
124. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 33.
125. Confirmed in BRAC interviews with Vikarunnessa Begum, NTP program manager, and Fazlul Kabir Rumi, medical officer for TB control in the Dhaka Civil Surgeon's Office, Dhaka, 2005.
126. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 58.
127. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 37.
128. Comments by Afsan Chowdhury, director of advocacy and communications, BRAC, Dhaka, December 11, 2005.
129. Interview with Vikarunnessa Begum, program manager, NTP, Dhaka, 2005.
130. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 44.
131. Comment by Zafrullah Chowhury, project coordinator, Gono Shahsthya Nagar Hospital (GK), *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
132. Interview with *shastho shebika* in Dhamrai region, December 14, 2005.
133. Response from Damien Foundation to a survey sent out in 2001 by RPM Plus, Stop TB, WHO, and the World Bank, available at: www.msh.org/projects/rpmpplus/pdf/tb/CountryPage/F40_BangladeshDamienFoundation.pdf (accessed February 5, 2005).
134. The development of this plan should be facilitated by receipt of Global Fund Grant resources in 2004, including funding for human resources development. See CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 113.

135. Comments by AKM Shamsul Haq, former president of the Chest and Heart Association, professor of chest diseases, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
136. A comprehensive review of NTP programs was conducted by a joint WHO/NTP team in September 2004. The review team visited four different regions, assessing TB control services in selected chest disease clinics, chest disease hospitals, subdistrict health complexes, medical college hospitals, and NGO facilities. The review was published in 2005. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 8–10; pp. 55–58.
137. Comments by Akramul Islam, manager of the health and nutrition program, BRAC, and AKM Shamsul Haq, former president of the Chest and Heart Association, professor of chest diseases, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
138. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, pp. 123–124.
139. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 32.
140. BRAC staff confirm a pressing need for more quality microscopes at the field level. Interview with Faruque Ahmed, director of health programs for BRAC, Dhaka, March/April 2005.
141. “The progress of the microscopy network and EQA has been impressive. Essential equipment is present in more centers, stain preparation has been centralized and is better controlled and EQA by rechecking is now covering most of the microscopy centers.” WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 33. See also CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 9.
142. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 33.
143. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, pp. 30, 34.
144. Participatory planning meeting among NTP partners, March 2003.
145. NTP partners’ meeting, March 2003, cited in CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 9.
146. WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 51–53.
147. Information provided by Vikarunnessa Begum, NTP program manager, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
148. Comment by Ubaidur Rob, Population Council, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
149. The NTP’s partners on operational research projects have included local and international research institutions, including the International Institute for Health, the University of Leeds, BRAC, the Damien Foundation, the ICDDR, and the Research Institute for Tuberculosis. WHO, *Global Tuberculosis Control Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 64–66.
150. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 64–66.
151. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, WHO, Geneva 2005, pp. 64–66.
152. Comment by Vikarunnessa Begum, program manager, NTP, *Daily Star* roundtable meeting, Dhaka, December 13, 2005.
153. MOHFW, Directorate General of Health Services, assisted by the WHO, August 9, 2001, pp. 1–2.
154. As of 2004/2005, the government held memoranda of understanding with: The Leprosy and TB Coordination Committee (a coalition of nine NGOs including the Damien Foundation), BRAC, NATAB, The Urban Primary Health Care Project (implemented in partnership with various local NGOs), the NGO Service Delivery Programme (implemented in partnership with various local NGOs), ICDDR, HIV/AIDS Network (a coalition of NGOs), Bangladesh Buddhists Association, and Sandhani (the medical students’ organization), WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, p. 29. The Global Fund proposal also listed memoranda of understanding

- with the U.S.-based University Research Corporation and the UK-based University of Leeds. *Proposal to the Global Fund Against AIDS, Tuberculosis and Malaria*, Fifth Round, 2005, p. 119, available at: www.theglobalfund.org/search/docs/5BANT_955_o_full.pdf.
155. NGOs “have shown high cure rates and a positive trend in case detection across most sites where they are implementing DOTS. Quality-assured sputum microscopy services are available in most NGO areas, drug interruptions have hardly occurred in the last twelve months, recording and reporting have been strengthened and referral systems are being developed.” WHO, *Report of the Third Review of the NTP in Bangladesh—September 2004*, WHO, February 2005, pp. 30–31.
 156. As of 2004, BRAC reported that its TB program reaches a population of approximately 82 million (two-thirds of the entire country’s population). *BRAC Annual Health Report 2004*, p. 19.
 157. A. Mustaque, R. Chowdhury, Sadia Chowdhury, Akramul Islam, et al., “Control of tuberculosis by community health workers in Bangladesh,” *The Lancet*, Vol. 350, July 19, 1997, pp.169–72. BRAC’s 2004 annual report notes a treatment success rate for new patients of 89 percent. *BRAC Annual Report, 2004*, p. 49.
 158. Akramul Islam, AMR Chowdhury, J. Patrick Vaughan, et al., “Cost-effectiveness of community health workers in tuberculosis control in Bangladesh,” *Bulletin of WHO* 2002, 80 (6) pp. 445–450.
 159. From website of the World Lung Foundation, http://www.worldlungfoundation.org/map_bangladesh.html.
 160. Comments by Faruque Ahmed, director of health programs, BRAC, Dhaka, 2005.
 161. Comment by Faruque Ahmed, director of health programs, BRAC, Dhaka, December 14, 2005.
 162. The Steering Committee’s working members include two representatives from the Lung and Tuberculosis Coordination Committee (LTCC), two BRAC representatives, a UPHCP representative, a NATAB representative, a ICDDRB representative, a WHO representative, the NTP Program Manager, the MBDC Director, the TB-Leprosy Program line director, and the Directorate General of Health Services (DGHS). The Global Fund management coordinator is a nonvoting member.
 163. Comment by Afsan Chowdhury, director of advocacy, BRAC, Dhaka, December 14, 2005.
 164. Comment by Salehuddin Ahmed, BRAC University, *Daily Star* roundtable meeting, December 13, 2005.
 165. Comment by Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 14, 2005.
 166. Presentation by Vikarunnessa Begum, program manager, NTP, BRAC roundtable meeting, Dhaka, December 12, 2005.
 167. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, p. 9.
 168. Interview with Jalaluddin Ahmed, deputy director of the National Institute of Ophthalmology, 2005.
 169. Comment by Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 14, 2005.
 170. Japan Resource Institute, Leeds University (UK), WHO, Stop TB, IUATLD, KNCV, CDC, World Bank.
 171. The BRAC-led consortium includes ten NGO partners: ICDDRB, National Anti-Tuberculosis Association of Bangladesh, Damien Foundation, Urban Primary Health Care Project, RDRS, Lepira Bangladesh, Danish Bangladesh Leprosy Mission, HEED Bangladesh, Lamb Hospital, and Salvation Army. *Annual Health Report 2004*, BRAC, p. 21. According to BRAC, NGO partners were selected on the basis of several criteria, including demonstration of previous commitment (years of experience working on TB); record of strong performance; and previous inclusion among the list of NGO signatories to the NTP’s Memorandum of Understanding. Comment by Akramul Islam, manager of the health and nutrition program, BRAC, Dhaka, December 14, 2005.
 172. See *Grant Performance Report*, September 6, 2005, available at: www.theglobalfund.org/search/docs/3BANT_594_263_gpr.pdf (accessed February 6, 2006).
 173. Executive Summary, *Bangladesh HIV/AIDS, TB and Malaria Proposal to the Global Fund*, available at: www.theglobalfund.org/search/docs/3BANT_594_o_summary.pdf (accessed February 6, 2006).

174. *Grant Performance Report*, September 6, 2005, available at: www.theglobalfund.org/search/docs/3BANT_594_263_gpr.pdf (accessed February 6, 2006).
175. Comments by NGO representative (anonymity requested), Dhaka, December 2005.
176. *Proposal to the Global Fund Against AIDS, Tuberculosis and Malaria*, Fifth Round, 2005, p. 66, available at: www.theglobalfund.org/search/docs/5BANT_955_o_full.pdf.
177. The CCM is chaired by the secretary of the MOHFW. Members include several other MOHFW representatives, as well as representatives from the Directorate of Health Services, the Ministry of Finance, and other relevant ministries, and the WHO and the World Bank. The CCM also includes representatives from the LTCC, the Nari Unnayan Shakti, NATAB, BRAC, the Bangladesh Private Medical Practitioner Association, the Bangladesh Association of Pharmaceutical Industries, a former TB patient, a person living with HIV/AIDS, Sandhani, the Scouts and Girl Guides, and faith-based groups.
178. Comment by Afsan Chowdhury, director of advocacy and communications, BRAC, Dhaka, December 14, 2005.
179. CCM, *Application form for Proposals to the Global Fund*, MOHFW, Dhaka, 2003, pp. 15–16.

WE RECOGNIZE THAT: THE GLOBAL tuberculosis emergency . . . cannot be defeated by the health sector acting alone; CONFRONTING tuberculosis requires collaboration across government sectors & action across society.

—Amsterdam Declaration to Stop TB

Public Health Watch promotes informed civil society engagement in policymaking on tuberculosis and HIV/AIDS. The project's monitoring reports offer a civil society perspective on the extent to which government policies comply with international commitments such as the Amsterdam Declaration to Stop TB and the Declaration of Commitment on HIV/AIDS—and on the extent to which those policies have been implemented.

TB monitoring reports include assessments of policies in Bangladesh, Brazil, Nigeria, Tanzania, and Thailand.



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