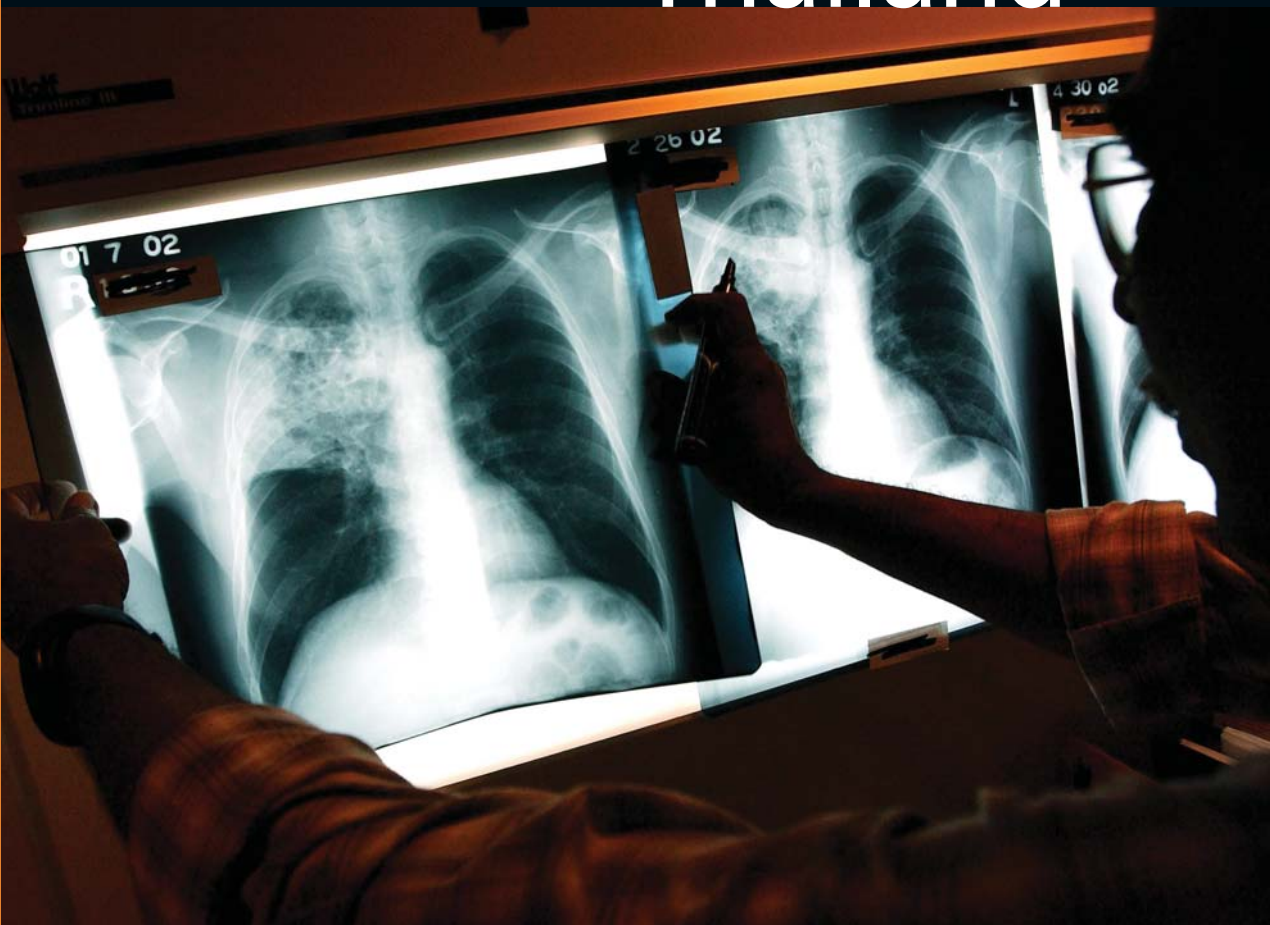


# TB POLICY IN

# Thailand



## 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](http://www.publichealthwatch.info).

## Acknowledgments

*TB Policy in Thailand: A Civil Society Perspective* was researched and drafted by Amara Soonthornhdhada, associate professor and deputy director of the Institute for Population and Social Research at Mahidol University. The staff of Public Health Watch prepared the overview and provided editing and administrative assistance. Additional editing and production assistance was provided by the Communications Office of the Open Society Institute.

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Public Health Watch supported the organization of two roundtable meetings to solicit feedback on earlier drafts of this report in Bangkok and Chiang Mai in December 2005. We would like to thank all of the participants at these events for their valuable comments and suggestions, many of which have been incorporated into the final 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](http://www.soros.org)

## Abbreviations

ARV	Antiretroviral drug
BMA	Bangkok Metropolitan Authority
CCM	Country Coordinating Mechanism
CDC	U.S. Centers for Disease Control and Prevention
DDC	Department of Disease Control
DOT	Directly observed treatment
DOTS	The internationally recommended strategy for TB control
DTC	District TB and leprosy coordinator
EQA	External Quality Assurance
GLC	Green Light Committee
GPO	Government Pharmaceutical Organization
IPT	Isoniazid preventive therapy
IUATLD	International Union Against Tuberculosis and Lung Disease
MDR-TB	Multidrug-resistant TB
MoPH	Ministry of Public Health
MSF	Médecins Sans Frontières
NGO	Nongovernmental organization
NRL	National Central Reference Laboratory
NTP	National Tuberculosis Programme
PTC	Provincial TB coordinator
ODPC	Regional Office of Disease Prevention and Control
PPM	Public-private mix
RIT	Research Institute of Tuberculosis
RTC	Regional TB coordinator
STI	Sexually transmitted infection
TB	Tuberculosis
TUC	U.S. Centers for Disease Control Collaboration
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing for HIV infection
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.<sup>1</sup>

## 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;<sup>2</sup> 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.<sup>3</sup>

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.”<sup>4</sup> 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,<sup>5</sup> 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.”<sup>6</sup> 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.<sup>7</sup> 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.<sup>8</sup> As one Nigerian health care provider noted, “remove the donor, and everything would crash.”<sup>9</sup> 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?”<sup>10</sup>

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.”<sup>11</sup>

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.<sup>12</sup> TB kills approximately 2 million people a year<sup>13</sup> 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, Brazil<sup>14</sup>

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.<sup>15</sup> 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.”<sup>16</sup> 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.<sup>17</sup>

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.<sup>18</sup>

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.”<sup>19</sup>

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.”<sup>20</sup> 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.”<sup>21</sup>

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, Thailand<sup>22</sup>

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.”<sup>23</sup> 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.<sup>24</sup> “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.”<sup>25</sup> 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.”<sup>26</sup> 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.”<sup>27</sup>

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.”<sup>28</sup>

## 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 HIV<sup>29</sup>

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.<sup>30</sup> 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.<sup>31</sup> 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.<sup>32</sup>

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.”<sup>33</sup> 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.<sup>34</sup> 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.<sup>35</sup>

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”<sup>36</sup>—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.<sup>37</sup> 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.<sup>38</sup> 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.<sup>39</sup>

## 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, Tanzania<sup>40</sup>

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.<sup>41</sup> 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 Nigeria<sup>42</sup>*

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;<sup>43</sup> 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.<sup>44</sup> 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.”<sup>45</sup> 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*<sup>46</sup>

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.<sup>47</sup> 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.”<sup>48</sup> 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.<sup>49</sup>

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].”<sup>50</sup>

Though the WHO has issued an Interim Policy on Collaborative TB/HIV Activities<sup>51</sup> 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.<sup>52</sup> 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.”<sup>53</sup> 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, Tanzania<sup>54</sup>

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.”<sup>55</sup>

The BRAC model of community-based care has achieved impressive results: treatment success rates at or above the global target of 85 percent,<sup>56</sup> at a cost of 50 percent less than the equivalent services in areas covered by the NTP.<sup>57</sup> 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.<sup>58</sup> 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.<sup>59</sup> 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.<sup>60</sup> In Temeke, too, the program both maintained quality of services and improved cost effectiveness by 37 percent.<sup>61</sup> 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,<sup>62</sup> 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,<sup>63</sup> and others report that the responsibility of providing community and patient education is too great to be left to volunteers.<sup>64</sup> 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.”<sup>65</sup>

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, Bangladesh<sup>66</sup>

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.”<sup>67</sup> 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;<sup>68</sup> 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.<sup>69</sup> 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.<sup>70</sup> 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.<sup>71</sup> 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.”<sup>72</sup> 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.<sup>73</sup> 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](http://www.publichealthwatch.info) or contact Public Health Watch at: [phwinfo@sorosny.org](mailto: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](http://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](http://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.
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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 Paulo, 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.
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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.
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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.
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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.
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51. Available at [www.who.int/hiv/pub/tb/tbhiv/en/](http://www.who.int/hiv/pub/tb/tbhiv/en/) (accessed May 25, 2006).
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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](http://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](http://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 Thailand**

# Executive Summary

Tuberculosis incidence in Thailand, which fell by 50 percent from 1985 to 1991, rose again in the 1990s with the emergence of the HIV/AIDS epidemic. Today Thailand has an incidence rate of 142 cases per 100,000 people, and is 18th on the World Health Organization's list of high-burden countries.

Thailand, through the National Tuberculosis Programme (NTP), has committed itself to implementing the internationally recommended DOTS strategy, which emphasizes directly observed treatment, and achieving the international TB control targets of 70 percent detection rate and 85 percent treatment success rate. The government reports considerable progress in meeting these goals: 100 percent DOTS coverage by 2002; and, more recently, a 71 percent detection rate and 73 percent treatment success rate.

Some Thai experts, however, question the reliability of these statistics. DOTS coverage, detection, and treatment vary widely from place to place in Thailand. The 73 percent treatment success rate masks rates as low as 25 percent among some vulnerable groups such as migrant workers and injection drug users. In addition, since detection and treatment rely only on one form of diagnosis (active, sputum smear-positive cases), the overall treatment success rate for those with active TB may be considerably lower.

Budget reductions resulting from health care reforms have had a dramatic impact on the NTP's capacity to fight TB, particularly with regard to monitoring and evaluation, staffing, training, and public awareness-raising efforts. The integration of TB and HIV/AIDS departments at the central level appears to have resulted in TB being overshadowed by the more powerful AIDS program, rather than becoming its equal partner.

Civil society actors, such as recovered TB patients and community health activists, do not play an active role in TB policy development. The NTP's media outreach efforts have been minimal, and few nongovernmental organizations (NGOs) have initiated TB advocacy and treatment education efforts.

In the absence of easily accessible, accurate information about TB and TB/HIV, public awareness of the basic facts about TB—and the serious threat TB poses to public health—is low. TB is widely viewed as a curable but rare disease. Stigmatization of people living with TB and TB/HIV, and of women in particular, is an issue of concern.

Increased NTP funding and support for advocacy, communication, and social mobilization activities could play a crucial role in addressing many of these concerns. Key activities could include the following:

- Establish and staff a specialized department within the NTP to oversee the development and implementation, in partnership with community representatives, of a plan to increase public awareness about TB and TB/HIV.

- Develop and disseminate media and patient-friendly informational materials, including targeted materials and strategies for reaching vulnerable groups.
- Compile and publish the performance records of regional and district TB control activities to allow for public scrutiny of the quality of services available.
- Improve support and training for village health volunteers and family members who deliver important services such as assisting health workers with the distribution of TB drugs and follow-up with patients.
- Develop programs and procedures to invite and encourage greater participation in TB control activities by affected communities, particularly by persons who have recovered from TB.
- Provide direct support to NGOs that have proven effective in HIV/AIDS service delivery and advocacy to integrate TB into their activities and programming.

The current national context of budget reductions and austerity measures makes additional government funding unlikely for advocacy, communication, and social mobilization programming—activities that are often considered nonessential. International funding to the Ministry of Public Health, NGOs, and research institutions for collaborative activities in this area could provide a critical source of support, and also spur greater civil society involvement and public attention to TB without raising the risk of replacing the allocation of government funding for core TB control services.

# Background

## Baseline statistics

Thailand has experienced rapid economic growth in the past few decades. Its average economic growth rate was 5.4 percent a year from 1975 to 2001.<sup>1</sup> By 2002, its GDP per capita had reached \$2,060 (78,286 baht). By 2004, Thailand was widely considered a “middle income country.”<sup>2</sup>

Increasing prosperity has been matched by increased government expenditure on health. Health expenditures rose from 3.5 percent of GDP in 1979 to 6.1 percent in 2000,<sup>3</sup> and the country has experienced significant improvements in health and other social indicators. For example, in the period from 1960 to 2005, the infant mortality rate decreased from 84.3 to 17.3 per 1,000 live births;<sup>4</sup> by 2002, the adult literacy rate was 92.6 percent.

In this broader context of socioeconomic development and increased investment in health, the National Tuberculosis Programme (NTP) succeeded in reducing TB incidence by 50 percent in six years, from 150 cases per 100,000 people in 1985—a record for the country—to 76 per 100,000 in 1991.<sup>5</sup> However, TB incidence rose again in the 1990s with the emergence of the HIV/AIDS epidemic,<sup>6</sup> and the deadly interaction of TB and HIV brought new challenges to TB control efforts. With an estimated annual TB incidence of 142 per 100,000, Thailand is 18th on the World Health Organization’s (WHO’s) list of TB high-burden countries.<sup>7</sup> Experts have noted, however, that national estimates may be compromised by the fact that a comprehensive survey to estimate incidence has not been conducted in over 15 years.<sup>8</sup>

## TB/HIV and multidrug-resistant TB

The estimated prevalence of HIV in Thailand is among the highest in Southeast Asia, with an infection rate of 1.5 percent among adults aged 15–49.<sup>9</sup> Sentinel surveys, which are based on data gathered at selected clinics and hospitals, indicate that HIV prevalence among TB patients ranges from 10 to 15 percent countrywide, but may reach 40 percent in the north.<sup>10</sup> According to a statement by Deputy Minister of Public Health Anutin Charnvirakul, about one-third of people living with HIV also have TB—approximately 12 times higher than the rate among people who do not have HIV.<sup>11</sup>

Such high rates of TB/HIV coinfection are alarming, especially since the diagnosis and treatment of TB in people who are also HIV-positive is a challenge. Many HIV-positive patients either have sputum smear-negative or extrapulmonary TB, which are not detected



through standard microscopy. The lack of reliable diagnostic tools results in missed cases and higher mortality as well as mistreatment of non-TB cases in some instances.<sup>12</sup>

A two-year survey conducted in collaboration with the WHO from 1996 to 1998 recorded primary MDR-TB prevalence at 2.57 percent nationally.<sup>13</sup> However, according to the WHO, primary MDR-TB prevalence was estimated to be just 0.9 percent as of 2004.<sup>14</sup> Some Thai experts express concern that MDR rates could be higher among vulnerable groups, including the urban poor, prisoners, seasonal contract workers, and migrants.<sup>15</sup>

## Health system infrastructure

Thailand has a strong public health infrastructure. Basic medical services and facilities are relatively easy to access through government-financed hospitals and over 9,000 primary health care centers.<sup>16</sup> The public sector finances approximately 57 percent of total annual health expenditures.

NTP implementation is overseen by the “TB Cluster,” which is located within the Bureau of HIV/AIDS, TB and Sexually Transmitted Infections (STIs). The TB Cluster is responsible for developing and planning TB policies, training health workers, and monitoring TB control activities throughout the country. TB diagnostic and treatment services are provided through a network of provincial and district level hospitals and clinics.

Thailand also has an extensive network of private health facilities. According to one recent study, an estimated 20–40 percent of TB cases are treated in the private sector.<sup>17</sup> Private practitioners generally do not observe NTP guidelines, and treatment for their TB patients is most often self-administered, rather than administered and observed by a clinician. Most private facilities do not offer services available in public clinics, such as HIV testing, standardized TB and HIV treatment regimens, and routine monitoring of patients.<sup>18</sup> Few private facilities perform cultures and drug sensitivity testing.<sup>19</sup>

## Health reform

*There used to be a TB center here, and we could refer people there.  
Now we have to refer people to the hospital, using the 30 baht scheme.  
Some people living with HIV/AIDS are scared and reluctant to go to  
general hospitals. I try to talk to government officers about this problem.  
They say that TB work is [now] part of the municipality's work, but it  
doesn't work very well.*

—Samran Takan, director of New Life Friend Center<sup>20</sup>

In May 2000, the Office of Health System Reform initiated a consultative process for the development of a new national health bill to set the terms for a reform of the national health system. This process has resulted in a major effort to decentralize health programs and services. According to present plans, by 2010 the Ministry of Public Health (MoPH) will have shifted approximately 80 percent of its annual budget and 90 percent of its staff to the subdistrict and municipal levels.<sup>21</sup>

Decentralization has had a significant impact on the NTP, with a major reduction in dedicated funding and staff size. Thai TB experts give mixed reviews on the effects of decentralization so far, but agree that roles and responsibilities within the new system have not been communicated clearly, and that the emphasis on cost-cutting measures has compromised the effectiveness of the health system in general and TB control efforts in particular. As one regional director noted, “many directors of public hospitals are new [and] they don't understand what is required—they only think about saving money.”<sup>22</sup>

Another outcome of the health reform was the introduction in 2003 of a countrywide health insurance system known as the universal coverage scheme or the 30 baht scheme (since patients pay only 30 baht or \$0.79 for each hospital or clinic visit). The budget for universal coverage covers those drugs and other services identified as part of an “essential package of care,” which is delivered at MoPH and MoPH-affiliated facilities. TB drugs (including the “second-line drugs” that are used to treat MDR-TB) are considered a component of “essential care,” and as such are financed through the universal coverage scheme. As of 2004, 75 percent of the population, or 47 million people, had their health insurance financed under the universal coverage scheme. Of the remaining 25 percent, or 16 million people, 5 million civil servants receive health coverage through the Civil Servant Medical Benefit Scheme, 8 million receive coverage through the Social Security Scheme, and approximately 3 million are uninsured.<sup>23</sup>

However, there is no budget within the universal coverage system for training, supervision, and monitoring. The TB Cluster must negotiate with the Department of Disease Control (DDC) to receive nonuniversal coverage funding for these activities or rely

on resources from the Global Fund to Fight AIDS, Tuberculosis and Malaria. The reliance on outside funding raises concerns about the sustainability of these aspects of the TB program.<sup>24</sup> Due to budget shortfalls, many planned NTP training activities could not be implemented at the provincial and district levels in 2004. The emphasis on primary care has also had a detrimental effect on such core NTP activities as program monitoring and evaluation, as well as case recording and reporting.<sup>25</sup>

While some patients like the new universal coverage scheme, others have expressed frustration. For instance, one representative from a network of people living with HIV/AIDS asserted that referring patients to the hospital rather than to a local TB center has reduced accessibility to TB services.

## Political commitment

*I don't think the government views TB as a threat. [T]here's an inherent faith that a rising tide of better healthcare in general will lift all boats — [that] TB will progressively be eliminated along with other developing country diseases . . . [while] HIV garners such high-profile activism that it's hard to shut the door on it. . . .*

—Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC)<sup>26</sup>

The Thai government has demonstrated a high level of political commitment to TB control activities and implementation of the WHO-recommended DOTS strategy. By joining other high-burden country governments in adopting the Amsterdam Declaration to Stop TB in 2000, the government embraced the global TB control targets of 70 percent case detection and 85 percent treatment success. In 2003, the MoPH declared TB to be one of five “priority diseases.” (The other priority diseases are HIV/AIDS, malaria, heart diseases, and diarrhea.)<sup>27</sup>

However, some observers assert that there is still insufficient political recognition of the persistence and severity of TB as a public health threat. According to the leader of one faith-based group, the general perception among political leaders as well as in Thai society is that TB has been completely eradicated.<sup>28</sup>

Political commitment to TB control is particularly weak at the regional, provincial, and district levels, where officials often place higher priority on other health issues such as dengue fever, avian flu, and diarrhea. Budget reallocation has exacerbated this trend. Resources formerly devoted to specialized TB control activities and staffing are now part of

the general budget for primary health care and subject to reallocation.<sup>29</sup> According to one regional TB official, “We need someone to show the flag. . . . If we have political commitment at the highest levels, then district-level officials and provincial-level examiners will be more cooperative; but if TB isn’t on the ‘priority list’ of health inspectors, district and provincial officials will not make a commitment to TB work.”<sup>30</sup>

The NTP should develop innovative ways of encouraging a greater level of accountability for performance on TB control efforts among health officials. For example, one national TB official suggested that publicizing regional and district case detection and treatment success rates on the NTP website might be “one way to stir things up.”<sup>31</sup> Providing feedback to health officials at these levels would increase their awareness of how the statistics they compile contribute to TB control efforts and enhance their sense of engagement in a common, national cause. Another regional TB official suggested developing a “traffic signal” system, which would award districts red, yellow, and green lights based on performance as a way of creating competition among them to achieve better results.<sup>32</sup>

There are few nontraditional actors involved in the development of TB control policy. This contributes to a sense that TB control is best left to the specialists, limits the level of “political buy-in” from other government ministries, and reduces the likelihood that public pressure will play a role in prompting more effective government action. As one activist puts it: “Designing plans for TB control should involve all stakeholders, but this is something I haven’t seen yet. . . . If we compare TB policy to a tree, and the managers are on top, we might have to find stakeholders to shake the tree—to shake the whole tree, but not too hard; otherwise it will fall down.”<sup>33</sup>

The NTP should expand its efforts to involve a broader range of stakeholders, including recovered patients and community health activists, in TB policy development and implementation. This could help generate a greater shared sense of commitment to TB control efforts, and greater public pressure for more effective TB and TB/HIV services.

## Public mobilization

Public awareness of the threat posed by TB is generally low. TB is widely viewed as a curable but rare disease, while HIV/AIDS is seen as a fatal disease deserving more attention.<sup>34</sup> NTP media outreach efforts have been minimal, particularly when compared to the scope of national campaigns around HIV/AIDS. In the absence of easily accessible, accurate information about TB and TB/HIV, local organizations lack the resources and knowledge to educate their communities,<sup>35</sup> and stigmatization of people living with TB and TB/HIV continues to be an issue of concern.

## World TB Day

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

—Somsak Akksilp, director, Office of Disease Prevention and Control<sup>36</sup>

Most government-sponsored TB awareness-raising activities are centered on World TB Day. Past World TB Day activities have included public statements by high-ranking MoPH officials,<sup>37</sup> MoPH-sponsored television programs about TB, road shows, and exhibitions. On occasion public hospitals have offered services such as free testing, counseling, and basic medical check-ups for a full week around World TB Day. However, Thai TB experts generally agree that more sustained attention to TB awareness-raising activities is needed.<sup>38</sup>

## Media coverage

In comparison to the breadth and effectiveness of AIDS-awareness media campaigns, NTP-sponsored activities to promote awareness of TB and TB/HIV have been limited in scope. One national-level TB Cluster official commented that the lack of media outreach is a “serious limitation” of the NTP,<sup>39</sup> while regional health officials point to reductions in the budget for public awareness-raising activities in the wake of the health sector reforms.<sup>40</sup>

Many journalists, unconvinced that TB is an important health issue, decline to cover TB-related stories and events. In addition, media personnel often lack the information and skills to report on TB news and policies,<sup>41</sup> particularly given that TB-related issues and research are often presented in highly technical terms. The NTP should produce regular updated, media-friendly materials on the TB situation to encourage and facilitate quality reporting. The NTP should also cultivate relationships with health journalists, including by offering training seminars and organizing regular press events to present current issues such as progress on achieving TB control targets, results of latest TB research efforts, and global TB developments.

To facilitate these activities, the TB Cluster should consider establishing a specialized media department and hiring trained communications staff to promote NTP policies and activities as well as disseminate accurate information about TB and TB/HIV—how TB is spread, prevented, and treated; the risks of TB and other opportunistic infections for people living with HIV/AIDS; and where people can go for diagnosis and treatment.<sup>42</sup> To reach some of the communities most affected by TB, the activities of this department will need to extend to television, radio, and the Internet as well,<sup>43</sup> and to develop effective partnerships with regional and local community organizations and media outlets.<sup>44</sup>

## Stigmatization of TB patients

*Even people who . . . are educated still have fears and stigmatizing attitudes. So we need to think about how to conduct prevention efficiently—how to provide information without scaring people. It is important to emphasize that TB is curable.*

—Rev. Sanan Wutti, *The Church of Christ in Thailand*<sup>45</sup>

Nongovernmental organizations report that community activists “lack academic skills” and knowledge about TB themselves, and therefore “don’t feel confident” in conducting awareness-raising efforts in their communities.<sup>46</sup> And where communities lack a clear understanding of how TB is spread and treated, stigmatization of persons who have TB and TB/HIV is common. Some TB patients report satisfaction both with services received in community hospitals and with levels of support from family members and neighbors.<sup>47</sup> But fear of stigmatization presents a significant barrier to treatment. Enhanced support for community education and stigma reduction activities could create a more enabling environment for people to access rather than avoid diagnostic and treatment services.<sup>48</sup>

Both women and men report experiencing stigmatization upon being diagnosed with TB. However, there are some indications that women are affected more severely. For example, one recent assessment carried out in Kanchaburi found that TB is perceived as a “male” disease, associated with high-risk lifestyle and behaviors such as working in an unsanitary environment, drinking, smoking, and overindulging in nightlife activities. Thus, women infected with TB are seen as being at odds with social norms and expectations of “female” behavior, intensifying the level of stigmatization they experience.<sup>49</sup>

Some community activists have warned that lack of information about the interaction between TB and HIV/AIDS is particularly severe, and noted that providing effective communication about TB/HIV without adding to stigmatization is a particular challenge.<sup>50</sup> This makes it extremely important for the NTP and the National AIDS Control Programme to develop and disseminate materials that provide accurate and accessible information about TB as well as about the interaction between TB and HIV, including through close partnership with civil society organizations based in the most affected and high-risk communities.

NGOs and community-based groups generally can and should play a more active role in mobilizing and educating the public and those at high risk of TB infection, as the experience with HIV/AIDS demonstrates. Since the 1990s, HIV/AIDS NGOs and community-based groups have played a vital role in advocating for drug and clinical trials, training health care workers, and providing outreach to marginalized populations such as injection drug users, sex workers, migrant workers, and men who have sex with men.<sup>51</sup> Given their record of success in communications and advocacy work in particular, HIV/AIDS NGOs

could contribute a great deal to TB control efforts by sharing their experiences and providing people living with HIV/AIDS with vital information in the process.<sup>52</sup>

# Government Program for TB and TB/HIV Control

## Program content

The NTP was established in 1966. DOTS was adopted as the NTP's core policy in 1996, and identified as a priority of the national health policy in 1997. By 2002, the NTP reported that 100 percent of the population had access to DOTS services. According to the most recent government figures, the NTP detected 71 percent of the estimated total number of TB cases, surpassing the 70 percent global case detection target. Of these, 73 percent were treated successfully, still short of the 85 percent global treatment target.<sup>53</sup>

In 2001, the NTP issued a revised set of operating principles, articulating a transformation in the role and function of regional, provincial, and district personnel, and a new process for assessment of outcomes at each level. The revised policy prioritizes the following elements:

- **Decentralization of treatment service:** Local health centers have responsibility for distribution of TB drugs in rural areas.
- **Community involvement:** Village health volunteers or family members can provide directly observed treatment (DOT), with training and support from local authorities.
- **Quality assurance:** District TB coordinators (DTCs) ensure appropriate training for health center staff, village health volunteers, and family members.
- **Diagnostics:** Prioritization of the need for improved diagnostic services (reflecting growing concern about MDR-TB).
- **Drug administration:** Ensuring free TB diagnostic services (sputum examinations and x-rays) to those who can not afford to pay (others pay a minimum charge for these services) and free TB drugs for all.

## TB and poverty reduction

The government has taken a number of steps to bolster its poverty reduction policies and activities,<sup>54</sup> including the designation of poverty alleviation as a priority area by the National Economic and Social Development Board. However, while maternal and child health, infant



mortality, and HIV/AIDS are highlighted in current poverty reduction schemes, TB is not mentioned. The government should explicitly acknowledge the linkage between TB and poverty and the significance of TB control efforts in all of its policies and programs to prevent and ameliorate poverty.

## DOTS expansion

*These are policies that we receive from the government, and from the international community. . . . [T]hey say that people must receive DOT in every single case . . . [b]ut . . . we can't do this 100 percent. . . . We have a nurse to do home visits. [But n]urses 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 if the TUC [U.S. Centers for Disease Control Collaboration] doesn't provide us with financial support, this won't necessarily be sustainable.*

—Pruthi Israngkul Na Ayudya, director, Health Center 21, Bangkok<sup>55</sup>

Prior to national implementation of the DOTS strategy, supervised TB treatment was not available throughout the country. Though the NTP reported 100 percent DOTS coverage by 2002, the accessibility and quality of services available varies significantly in practice, as reflected in variable case detection and treatment success rates among different communities and regions.

There are indications that the administration of directly observed therapy (DOT)—an essential component of the DOTS strategy—is not observed strictly in practice. For example, statistics from the 10th Zonal TB and Chest Disease Center in Chiang Mai indicate that 42.1 percent of patients self-administer treatment.<sup>56</sup> Moreover, though DOTS may be available in all districts, access appears to be difficult for marginalized groups such as migrant workers and injection drug users.<sup>57</sup>

Some Thai experts also indicate doubts about the comprehensiveness and reliability of reported data on case detection and treatment success. For instance, the reported 71 percent case detection rate may include non-TB cases such as bacterial pulmonary infection, and the national treatment success rate of 73 percent masks rates as low as 25 percent among some vulnerable groups.<sup>58</sup> Perhaps more importantly, the current targets relate to detection and treatment of active, sputum smear-positive cases only. The WHO, however, states that the smear-positive test captures only about 44 percent of all those with active TB. For Thailand, this means that despite fairly positive national progress toward meeting the detection and treatment success targets, in fact only about 23 percent of those with active TB are being cured.<sup>59</sup>

According to one AIDS activist, many people living with HIV/AIDS—who are often smear-negative—die from TB without ever being diagnosed with TB or treated for it.<sup>60</sup> Others assert that an overriding focus on achieving targets may result in insufficient attention to country-specific issues such as the need to strengthen health systems and improve the service delivery infrastructure.<sup>61</sup> However, many Thai TB experts consider the global TB targets critical in motivating government progress, and express confidence in the national capacity to achieve or exceed them.<sup>62</sup>

## DOTS implementation

*We think of ARV [antiretroviral drug] distribution among people living with HIV/AIDS as a model. 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*<sup>63</sup>

DOTS implementation is decentralized to the district and the subdistrict levels, the lowest units of management for TB control. District and provincial hospitals offer diagnostic services, and house TB clinics that register and track the treatment of all patients. The 19 Zonal TB centers coordinate the activities of the provincial and district hospitals and the subdistrict health centers and provide technical supervision and drug supplies.

According to NTP guidelines, all TB patients can choose to receive DOT from a government health care worker, a village health volunteer, or a family member. One major study found that DOT was most effective when administered by professional health care workers, but that high turnover rates limited the efficacy and accessibility of this option. On the other hand, DOT administered by family members frequently deviated from NTP guidelines, which is reflected in higher levels of noncompliance with treatment.<sup>64</sup> This may be due to family members' lack of understanding of the treatment protocol and the complexities of interpersonal dynamics.<sup>65</sup> However, according to some observers, since district hospital staff are overburdened, "it's simply not practical to expect public health officials to look after patients who have to take drugs for six months."<sup>66</sup> Moreover, many patients seem to prefer the family-administered DOT option.

In order to improve treatment success rates, there is an urgent need for more effective strategies to retain and train professional health care workers and to build capacity

through appropriate, ongoing support and training for family member observers and village health volunteers. Some community groups assert that the NTP and TB experts should study the involvement of people living with HIV/AIDS and support groups in the distribution of antiretroviral drugs as a model for encouraging and involving TB patients (and former patients) in taking responsibility for their own treatment.

## **TB/HIV**

After initiating efforts to develop a national TB/HIV policy in 1999, the MoPH established a national TB/HIV coordinating body in 2001, which began implementing a strategy to increase TB/HIV collaborative services in 2004. Critics contend that the strategy is still incomplete; that health workers have not been trained or resourced to implement it; that “integrating” TB and HIV has often meant that the NTP is subsumed within the more powerful and better resourced National AIDS Control Programme; and that there is an urgent and unfulfilled need for better coordination between TB and HIV/AIDS services at the field level.

The 2004 strategy stipulates that HIV/AIDS programs should include TB counseling and screening services; TB treatment should be provided to all HIV patients with active TB; and efforts should be made to identify latent TB cases, particularly among people living with HIV/AIDS, and to provide prophylactic treatment.<sup>67</sup> The content of the strategy, with its emphasis on provision of TB services to people living with HIV/AIDS, perhaps reflects the effectiveness of advocacy efforts by HIV/AIDS NGOs. There are almost 900 groups for people living with HIV/AIDS nationwide, and the network has been vocal, active, and successful in obtaining nearly universal access to ARVs for people with HIV.<sup>68</sup> This strategy should be developed further to facilitate early detection of HIV, free HIV testing, and routine CD4-count testing among TB patients as well. Recent population-based surveillance indicates that 90 percent of TB patients have compromised CD4 counts (below 200). The death rate for HIV-infected TB patients is 20–30 percent, and ARV therapy provided during TB treatment can reduce the relative risk of death by 90 percent.<sup>69</sup>

As implementation of the national TB/HIV strategy began relatively recently, reliable data on its results and impact are not yet available. However, a number of challenges have become immediately apparent. Health workers are not well informed about or trained on how to put the policy into operation. According to one TB doctor, TB clinical workers have not been trained on how to conduct HIV counseling and testing, while HIV clinical workers have little experience with TB.<sup>70</sup> Particularly in the northern region, health officials contend that the lack of integrated services and the difficulties in diagnosing TB among people living with HIV/AIDS have led to a drop in treatment success rates and rising mortality rates

among people living with HIV/AIDS.<sup>71</sup> The interaction between TB drugs and ARVs is not well understood among health practitioners, and the National AIDS Control Programme is not always well equipped to cope with the needs of people living with HIV/AIDS who become ill with TB.<sup>72</sup> Finally, people with HIV may be more likely to delay seeking TB treatment,<sup>73</sup> underscoring the importance of outreach and active TB case-finding services at HIV/AIDS treatment centers.

Some TB experts have asserted that the integration of TB and HIV/AIDS programs happened too quickly, resulting in the dominance of the National AIDS Control Programme over the NTP and the downgrading of TB services. For example, the director of one zonal TB center has insisted that both programs must be independently effective for integration to be mutually beneficial. In his view, an effective TB policy requires the employment of specialized TB staff, and a “second health reform” is needed to reinstate an independent TB division to prepare for more effective integration of services at the field level.<sup>74</sup>

For community-based groups and NGOs that work at the field level, the integration of services may seem logical because patients with both diseases have a clear continuum of needs.<sup>75</sup> The NTP and National AIDS Control Programme should reexamine the infrastructure of integration to ensure that proper support is provided to public health clinics and HIV/AIDS community organizations for addition of TB care to their existing line of services and to TB clinics for HIV counseling, testing, and referral services.

### ***Isoniazid preventive therapy***

One recent research study conducted in the northern provinces confirmed that isoniazid preventive therapy (IPT) provides significant protection against TB infection among people living with HIV/AIDS. Of the 412 people living with HIV/AIDS enrolled in the study, 50.5 percent persisted with IPT for nine months and showed no signs or symptoms of active TB based on physical examination, chest radiography, and sputum examination; 12.9 percent died; 33 percent defaulted; 2.2 percent developed active TB and dropped out; 0.5 percent developed hepatitis; and 1 percent migrated to other provinces.<sup>76</sup>

Health care providers, however, are still debating the efficacy of IPT. Some point out that the effectiveness of IPT may wear off in about two years,<sup>77</sup> and express concerns about drug toxicity and resistance developing as a result of prolonged IPT treatment. Because of these concerns, and in the absence of clear national policy guidelines, many Thai physicians do not recommend IPT, and Thai health clinics do not offer it systematically.<sup>78</sup> The NTP and National AIDS Control Programme should consider developing national guidelines and training on when and how to use IPT treatment.

## MDR-TB

*National figures obscure local differences. . . . There are subepidemics by regions and populations. Many groups are not included in the national figures. For migrant workers, we don't do cultures. We just treat them.*

—Comment at Public Health Watch roundtable meeting<sup>79</sup>

Most TB experts believe that MDR-TB is not a severe problem since the estimated national prevalence is only 0.9 percent.<sup>80</sup> However, there is considerable concern that significantly higher rates of drug resistance among vulnerable groups such as prisoners and migrants could quickly lead to higher rates among the general population as well.

Though the national MDR-TB rate may be low, figures are significantly higher among certain groups. For example, official MoPH data in 2003 revealed an average MDR rate of 6 percent in prisons,<sup>81</sup> and one recent study of 154 TB patients in prisons revealed resistance to any one drug at over 50 percent, and 19.5 percent multidrug resistance.<sup>82</sup> Comparable rates have been recorded among migrants. For example, one study carried out along the Thai-Burmese border in 2001–2002 estimated an MDR-TB rate of 6.5 percent among cross-border migrants.<sup>83</sup> Regular surveillance of MDR-TB rates among vulnerable groups such as prisoners and migrants is critical to identifying areas for which the NTP should design and implement targeted case-finding and treatment services.

There is no conclusive scientific evidence that MDR-TB and HIV/AIDS are linked. However, several studies in Thailand based on small samples indicate higher rates of primary drug resistance among people living with HIV/AIDS.<sup>84</sup> In northern Thailand MDR-TB prevalence rates as high as 2.7 percent have been recorded among people living with HIV/AIDS. Another study found a primary MDR-TB rate of 5 to 7 percent among people living with HIV/AIDS compared to 0.9 percent for the general population. And a national survey in 1997–1998 found a correlation between the high proportion of drug resistance to TB treatment among people below age 34 and a high HIV burden for this group.<sup>85</sup> Though more research may be justified to investigate whether or not a linkage exists, AIDS activists in particular caution against reliance on these preliminary studies, which could have the effect of further stigmatizing people living with HIV/AIDS.<sup>86</sup>

To help track and treat MDR-TB, the government has recently established the MDR-TB Network, which has completed a first set of guidelines for treatment.<sup>87</sup> The network, which also helps with drug susceptibility testing, has a special budget for purchasing laboratory supplies and second-line drugs to treat MDR-TB, and for training staff to support implementation of MDR-TB guidelines.<sup>88</sup> However, according to a report by Médecins Sans Frontières (MSF), the quality of second-line TB drugs produced in Thailand is less than optimal, and indeed the WHO has not yet judged the drugs to be reliable.<sup>89</sup> The NTP should

take an active role in monitoring drug quality, and should consider making an application to the Green Light Committee for internationally approved second-line drugs to better manage MDR-TB.

## Case recording and reporting

The NTP has a comprehensive, standardized system in place for recording and reporting TB cases. In the context of staff shortages and the lack of regular refresher training courses, however, considerable delays in filing reports are not uncommon. Very few private providers comply with NTP recording and reporting guidelines.

There are three TB surveillance systems. First, the MoPH collects TB case information as part of its standard communicable disease reporting system, which is sent to the Bureau of Epidemiology. Second, disease surveillance and cohort reports are submitted to the Bureau of AIDS, TB and STIs.<sup>90</sup> Third, cohort reports are collected quarterly, and include case-finding reports for newly registered cases, a last trimester sputum conversion rate report, and a treatment outcomes report.

All health facilities use standardized recording and reporting forms for both cohort and surveillance reports, which include data on TB and TB/HIV. Provincial TB coordinators (PTCs) are responsible for consolidating district-level reports into provincial reports and submitting the information to the regional TB coordinators (RTCs), who in turn compile regional and provincial figures for the central TB Cluster.

Although the surveillance and cohort reports provide useful information, recording and reporting procedures are time-consuming for clinical staff. Due to staff shortages, time constraints, and heavy workloads, clinical workers report that it is often difficult to complete their recording and reporting responsibilities on time.<sup>91</sup> The delay in reporting is up to one year in some areas. Due to the complexity of the forms, repeated training is also necessary, as clinical staff forget how to fill out the forms by the time the next reporting period comes around.<sup>92</sup>

Since private facilities do not rely on government funding, their patients are not required to disclose medical information to government authorities, and private providers are reluctant to spend time filling in complicated forms. Some private hospitals sign on to collaborate, but soon drop out because the reporting system is too cumbersome and time-consuming.<sup>93</sup> Lack of participation from the private sector makes comprehensive national record keeping and follow-up difficult.

Many health workers believe a computerized system is needed to facilitate case recording and reporting, and to encourage reporting from the private sector. In 2004, the government introduced a computerized data management system and training in select provinces under the supervision of a team from the TB Cluster. According to the head of the

TB Cluster, expansion of this system would improve the efficiency and accuracy of reports, reduce reporting delays, and facilitate reporting from the private sector as well. Though manuals and workbooks are reportedly ready for distribution to clinical staff at all levels,<sup>94</sup> the expansion of the system itself was not assured as of December 2005.

## **Targeting vulnerable populations**

Though the NTP has developed some targeted programming for vulnerable groups, including migrants, prison populations, the urban poor, ethnic minorities, and mobile workers, TB experts and NGO workers alike express serious concern about the resurgence of TB among these groups, the lack of official data and information about what many experts consider to be subepidemics,<sup>95</sup> and the significant barriers such groups face in accessing diagnostic and treatment services.<sup>96</sup>

### ***Migrants***

There are strong indications that TB is a serious issue among migrant populations from neighboring Burma, Laos, and Cambodia. Mandatory health testing among migrants detected 1,766 active TB cases in 2003, and a single clinic in the Mae Sot district detected 700 new cases in 2004, 250 of which needed immediate treatment.<sup>97</sup> As the total number of migrants is unknown, it is difficult to estimate the total TB burden among the migrant population.

Most recent migrants, particularly those from Burma, seek temporary employment opportunities in Thailand, often as undocumented workers.<sup>98</sup> Thus, even if they are diagnosed with TB, many do not complete treatment, and health workers find it difficult to ensure proper follow-up.<sup>99</sup> In fact, in one analysis, the cure rate for migrants from Burma is only about 25.8 percent.<sup>100</sup> In the same analysis, the authors note that the DOTS coverage rate for migrants from Burma was only 22.9 percent, and Burmese migrants had a 66.5 percent default rate.<sup>101</sup> The level of treatment interruption suggested by these figures has raised growing concern about the rise in primary drug resistance.<sup>102</sup>

Many migrants lack official documentation, such as residence and work permits, and fear deportation if they come into contact with public authorities. Many cannot read or speak Thai, hampering outreach activities by health workers. Most are poor and lack the resources to seek out health care.<sup>103</sup> Ethnic minority groups from within Thailand face similar linguistic and financial barriers. To effectively reach these communities, the NTP must partner closely with community-based organizations and researchers who have the contacts and linguistic skills to overcome these barriers.

## ***Prison populations***

TB prevalence is markedly higher in prisons than in the general population. In one Bangkok prison, the prevalence of new smear-positive cases was 1,226 per 100,000.<sup>104</sup>

In October 1998, the NTP, MoPH, and the Ministry of Justice initiated a collaborative effort to ensure implementation of the DOTS strategy in 11 prisons in Bangkok and nearby provinces.<sup>105</sup> This effort, which involved working with prison TB clinical staff to ensure close adherence to the DOTS strategy,<sup>106</sup> has posted a high treatment success rate (68.7 percent from June 1999 to May 2002), and has been cited by the WHO as a model for other countries.<sup>107</sup> The NTP's successful prison outreach project should be expanded to improve the system for follow-up with people after they have been released from prison.

According to one official, the biggest challenge to the success of the prison program is the follow-up with people after they are released from prison.<sup>108</sup> The system for transferring cases from prison clinics to public clinics is inefficient. Treatment for people newly released is more likely to be interrupted or even discontinued, especially as many former prisoners reportedly fail to show up at the hospitals to which they are directed, provide false contact names and addresses, or just disappear.<sup>109</sup> NTP research on the reasons people released from prison discontinue treatment should be used to develop a more streamlined policy to ensure proper referral and follow-up.<sup>110</sup>

## ***TB and poverty***

There is abundant evidence that poverty increases vulnerability to TB, and that having TB can in turn make patients more vulnerable to poverty. According to a recent study, for those with incomes at or below the poverty line, out-of-pocket expenditure for diagnosis and treatment amounted to more than 15 percent of annual household income while incomes were reduced by an average of 5 percent.<sup>111</sup> While TB treatment is free, travel to medical facilities, lack of compensation for time off from work, purchase of food during hospital visits, and diagnostic services such as x-rays and sputum examinations (for which patients are often charged, despite official NTP policy) add up to expenses that may limit access to treatment for the poor. (According to official NTP policy, patients have to pay for diagnostic and examination services only if they can afford it.)

Some regional clinics reportedly provide subsidies to TB patients living in poverty, but the funds available for these efforts have been gradually decreasing since the health care reforms were enacted.<sup>112</sup> To increase treatment access for the poor, the government should consider providing subsidized support on the basis of need to cover incidental expenses such as transportation costs and meals.



# Program management

## Administration

Following the reorganization of the Department of Disease Control (DDC), the TB Cluster was incorporated into the Bureau of AIDS, TB and STIs. The TB Cluster is responsible for developing and planning TB policies, training health workers, and monitoring TB control activities countrywide. Reportedly, the reorganization has resulted in blurred lines of authority and lack of clarity on roles and responsibilities within the new system.

National TB coordinators monitor NTP implementation in Thailand's four geographical regions (north, northeast, central, and south) and provincial TB coordinators (PTCs) operate in each of the country's 76 provinces. TB staffing levels vary considerably among provinces. Regional TB centers are integrated into the Regional Office of Disease Prevention and Control (ODPC) as part of the Bureau of AIDS, TB and STIs and are responsible for monitoring, training, and supervising TB health workers at the provincial and district levels.

PTCs work closely with district TB coordinators (DTCs). DTCs coordinate TB control activities, often in collaboration with TB clinics in hospitals. The PTCs, DTCs, and local health center staff are responsible for implementing the District TB Control Programme, which provides for quality-controlled TB case detection and treatment services and coordination of the network of DOTS providers at the subdistrict level. DTCs also evaluate and report treatment outcomes to the PTC every four months.

TB clinics are based in district, provincial, and regional hospitals. TB diagnosis is largely conducted by doctors in district and provincial hospitals, which have laboratory testing and x-ray facilities. TB treatment is provided in district and provincial hospitals as well as in health centers at the subdistrict level, where village health volunteers coordinate with local health workers to ensure access to treatment and to monitor treatment adherence.

Many TB experts report that roles and responsibilities within the reformed health system are not clear and that "everything is up to interpretation." As a result, all offices of the ODPC at the regional level oversee TB work according to their own perspectives and priorities. Under these circumstances, some regional offices decide that TB is not as urgent as other diseases and consider scaling back TB services an acceptable cost-saving measure.<sup>113</sup>

In this environment, TB control officials worry that some districts also appear to be cutting back their budgets for essential TB services, particularly for monitoring and evaluation.<sup>114</sup> To ensure that quality services are maintained during this period of transition, the NTP should ensure sufficient allocation of resources to guarantee coordinated monitoring and evaluation of TB control services at all levels.

## Staffing

Health care reforms resulted in a reduced budget for the NTP and in lower levels of health staffing. As a result, remaining health workers are required to shoulder a heavier burden of responsibilities without a corresponding increase in salary. Budget reductions have also meant a reduction in training opportunities and other incentives. To address these problems, the NTP has developed a comprehensive human resource development plan, but the identification of funding to ensure implementation has been a challenge.

Staff reductions have had a dramatic impact on the capacity of many regional TB offices, and on the workloads of those who kept their jobs. As one regional TB director commented, “Individuals have too many different jobs to handle. No one is dedicated to TB, and with other acute diseases to deal with, such as avian flu, people tend to think that TB can wait.”<sup>115</sup> Training courses and supervision and monitoring meetings are now held only once a year, often in conjunction with training for other health programs to minimize costs.<sup>116</sup> Moreover, many health care workers believe that working with TB patients is a “high risk, unattractive job,”<sup>117</sup> which leaves them more vulnerable to TB infection.<sup>118</sup> (In fact, one research study in a Chiangrai hospital detected an increased risk of TB infection for health care workers.<sup>119</sup>) This combination of perceived (and real) risk, heavy workload, and inadequate compensation has resulted in low morale and high turnover rates among TB clinical staff. In particular, the NTP’s inability to offer a higher salary or other incentives has led to an increasing number of health workers who transfer to other health departments.<sup>120</sup>

The initiative to offer DOT through village health volunteers and family members was one attempt to respond to the staffing shortage. In addition to administering DOT, village health volunteers are expected to 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,<sup>121</sup> and others think that the level of responsibility and the heavy workload attached to providing community and patient education is too demanding to be undertaken by volunteers.<sup>122</sup> Many health administrators agree that village health volunteers “need to be supported and salaried. We can’t make them work for free all the time.”<sup>123</sup>

According to one recent study, the practice of DOT is quite different from the theory. Health personnel were more likely to observe DOT according to guidelines than other types of observers, but less likely to remain in their positions long-term. To improve accessibility to DOT services, the NTP needs to develop better strategies for motivating health personnel to remain dedicated to TB work and to devise additional measures to provide training and support to village health volunteers and family members.<sup>124</sup>

Human resource capacity could also be improved by encouraging medical and nursing schools to include or expand coverage of TB care and treatment issues in their

curricula,<sup>125</sup> and by doing more to ensure in-service training and continuing education for doctors and nurses on the latest developments in TB care. In a recent example of policy-oriented research, researchers from the TB Cluster assessed curricula from 71 nursing schools and found that an average of just 15 minutes was devoted to TB.<sup>126</sup> Spurred by these findings, a new curriculum and teaching guidelines were developed and are being disseminated. TB Cluster staff believe that this research has sparked greater interest in the importance of increasing the level of training and teaching on TB at other institutions as well; for example, a TB component has been added to Mahidol University's annual HIV/AIDS training for nurses.<sup>127</sup>

The government should consider urgent measures to improve the incentive package for TB workers to attract new staff, ensure high-quality TB services through appropriate and ongoing training, decrease high levels of staff turnover, and enhance the prestige of TB work.

## **Budgeting and expenditures**

Health reforms have made it more difficult to obtain an accurate and comprehensive picture of annual government spending on TB care.

The universal coverage system places a priority on preventive care rather than treatment of illnesses. As a result, TB treatment is now included in the “essential package of care.” Provincial and district hospitals receive funding from the MoPH to cover the costs of providing the essential package of care, but without any specification as to how much funding is required to ensure TB control. According to some officials, this situation has resulted in a lack of transparency and consistency in decision making on health budgets and in the underfunding of TB in some areas since “it’s a struggle to get TB prioritized.”<sup>128</sup> This has had a particularly serious impact on budgets for training, monitoring, and supervision since these activities are funded at the discretion of provincial medical officers, who are under pressure to cut costs.

Funding for the NTP is provided from the MoPH budget. Between 1991 and 1998, despite a severe financial crisis in 1997,<sup>129</sup> per capita NTP expenditure on TB control remained roughly constant in absolute dollar terms.<sup>130</sup> More recently, the NTP budget has been reduced significantly, from \$6.1 million (231 million baht) in 2002 to \$4.7 million (178 million baht) in 2005, compared to the total estimated cost of \$10 million per year (378 million baht).<sup>131</sup>

However, the NTP budget figure reported to the WHO for 2005 only reflects the budget managed by the TB Cluster, and not total spending on TB control. The apparent reduction in NTP funding does not reflect the amounts allocated to TB control at the

regional level, and does not give an accurate picture of overall funding for TB control activities. Furthermore, a significant portion of the NTP's budget is now being covered with resources provided by the Global Fund;<sup>132</sup> 45 percent of the NTP's 2005 budget came from this source. This increasing reliance on outside funding raises some concerns about long-term sustainability of important NTP programs.

At present, comprehensive NTP budgetary data is not available for the period from 2003 to 2005, and there is no system in place to ensure budgetary transparency moving forward. In order to obtain a more comprehensive estimate of TB spending, the NTP should implement a financial monitoring system to track budgets and available funding for all provinces and districts.

## **Monitoring and evaluation**

The NTP publishes official quarterly and annual reports detailing its TB control activities, as required by the DOTS strategy. These reports are reviewed by the provincial chief medical officers, the TB Cluster, and the DDC, and are available publicly on the Internet and in brochures and reports.

# **Infrastructure, drugs, and research**

## **Primary health care system**

The NTP provides TB control services through the primary health care system. TB treatment is provided through local health centers to maximize the accessibility of services to patients. Decentralization of the health care system has created opportunities to enhance pro-poor, equity-oriented approaches to communicable disease prevention and treatment.

Most notably, village health volunteers are intended to act as a two-way link between communities and the health care system. In addition to providing health education and services (such as DOT), they are well positioned to provide feedback to health authorities on community health issues and priorities. Village health volunteers constitute a central pillar of the decentralization process, and the success of the pro-poor strategy is largely dependent on their skills, capacity, commitment, and confidence to reach out and to work positively with poor and excluded groups. As noted above, village health volunteers need additional support, training, and motivation to fill this extremely critical role.

### ***Laboratory network***

Thailand has relatively well-equipped laboratories with few supply and maintenance problems. In addition to the National Central Reference Laboratory (NRL), there are 167 provincial and 678 district laboratories, all of which are equipped to perform smear microscopy, while approximately 85 percent are capable of performing mycobacterial cultures.<sup>133</sup>

The NTP is planning to improve the availability of TB diagnostic services by increasing capacity to conduct cultures in provincial hospitals and by strengthening culture facilities in regional TB reference laboratories. External Quality Assurance (EQA) activities cover all TB laboratories in MoPH facilities, and efforts are being made to include the private sector in the quality assurance scheme. In addition to developing laboratory capacity, the NTP is expanding its training activities to enhance the performance of TB control and laboratory staff in technical areas.

### **Drug distribution systems**

Responsibility for procurement and distribution of TB drugs has been decentralized to the provincial and district levels,<sup>134</sup> raising some concerns about capacity to ensure proper quality control and effective management of drug stocks.

### ***Procurement and quality control***

Anti-TB drugs are manufactured in Thailand, but at higher cost than the drugs available on international markets.<sup>135</sup> The WHO has recommended that the government should renegotiate drug prices with the Government Pharmaceutical Organization (GPO) or explore alternate procurement channels to make local funding for drugs more viable, and to free up more NTP funding for other activities such as training and supervision.<sup>136</sup> NGOs may have a role to play in building public support for this message through media outreach efforts.

Second-line drugs produced in Thailand are available free of charge to patients diagnosed with MDR-TB at provincial hospitals; cases diagnosed at the district level are referred to the provincial level for treatment services. However, international agencies have not formally assessed and approved these drugs, which raises concerns about quality control and requires donors to continue purchasing more expensive second-line drugs from quality-assured sources outside of Thailand.

## **Distribution**

In addition to manufacturing drugs, the GPO also oversees drug distribution. The Regional Office of Disease Prevention and Control directly distributes TB drugs to 19 zonal TB control centers, which in turn supply the provincial and district hospitals. District health workers then collect TB drugs from district hospitals, and supervise distribution by local health workers to patients.

A case study in southern Thailand revealed drug shortages and overstocking at the local level, beyond the provincial and district hospitals' control. According to the study, rifampicin was overstocked most frequently (five times the recommended amount) and shortages of ethambutol were most common.<sup>137</sup> Local solutions to these problems include extra purchasing, requesting additional drug supplies to cover shortages, and sending surplus drugs to other institutes. In 1999, approximately 555,000 baht (\$14,681) worth of TB drugs expired due to overstocking.<sup>138</sup> A more centralized system of drug management and distribution would help eliminate or decrease such inefficiencies.

## **Education and research**

The MoPH has supported a range of operational research projects on issues related to TB control. Thai TB experts emphasize the importance of prioritizing research that can be translated into policy, and of relating research priorities to the most pressing issues in the field, such as TB/HIV, the impact of health reforms on TB control, and the existence of subepidemics and inadequate access to services among vulnerable groups.

To date, the NTP has prioritized operational research on DOTS, with a focus on evaluating DOTS implementation, the behavioral factors associated with adherence to TB treatment, and the cost effectiveness of the TB control strategy. In addition, funding agencies such as the Thailand Research Fund and the Health System Research Institute have hosted meetings to brainstorm on TB research priorities. Regional and district-level research has reflected regional priorities such as TB/HIV (in the northern region) and the impact of decentralization on TB control activities (in Yala province, southern Thailand).

The government should commit financial resources to conduct research on the following:

- further standardization of TB diagnostic and treatment services to minimize the risk of MDR-TB
- the effects of sociocultural factors on TB adherence
- techniques for diagnosing TB among HIV patients
- the effect of health system reform on NTP implementation

- the effectiveness of IPT
- effective methods for encouraging compliance with DOTS among private TB service providers
- the model of advocacy and social mobilization developed by HIV/AIDS NGOs and its applicability to TB work
- factors influencing the accessibility of TB services for vulnerable groups<sup>139</sup>

# Partnerships

## Collaboration with private sector

The NTP considers strengthening coordination among public and private TB service providers to be a priority. A donor-supported Public-Private Mix for DOTS (PPM DOTS) expansion program has achieved promising initial results, but NTP leadership and financial support will be necessary to ensure expansion of the program throughout the country. There are still too few opportunities for public and private practitioners to identify common goals and shared strategies for reaching them. Further study of pilot PPM DOTS projects could provide a basis for more effective and systematic integration of private practitioners as partners into the NTP's DOTS expansion efforts.

The NTP faces significant barriers in its attempts to promote public-private partnerships. Since private providers are not dependent on government funding, they have little incentive to comply with DOTS. Public facilities are sometimes reluctant to share knowledge, staff or equipment without the promise of receiving patient data in exchange. In turn, private providers are frustrated by the complicated and time-consuming case recording and reporting standards required by the NTP, especially since they see few if any benefits to their own clinics and institutions. The deputy director of one private hospital in Bangkok remarked that “people come to us for information and then they leave—they don't tell us what to do or what they're doing.”<sup>140</sup>

One pilot project has demonstrated that streamlining data collection systems made private providers both more willing to comply with DOTS and more willing to provide their patient data to the MoPH. When the MoPH, the U.S. Centers for Disease Control Collaboration (TUC), and Bangkok Metropolitan Authority (BMA) jointly launched a user-friendly, computerized case recording and reporting system, reporting from private hospitals improved significantly. For example, one BMA TB center identified up to 600–700 new TB cases, compared to 200 cases detected before the introduction of the computerized system.<sup>141</sup> According to the TB clinical staff, the computerized TUC forms are “relatively easy to complete.”<sup>142</sup> The BMA has also provided additional incentives to encourage private practitioners' participation, including free x-ray and sputum testing services, training, and TB education materials. After a successful pilot phase, the project was expanded to seven BMA districts, and aims to reach all BMA districts eventually.

University hospitals also play an important role in facilitating public-private partnerships and in delivering technical services. For example, the Faculty of Medicine at Mahidol University, in collaboration with a private hospital in Bangkok, established the



Drug Resistant Tuberculosis Research Centre in 2001 under the royal patronage of Princess Kulyanivatana. The center plays a significant role in enhancing national capacity to deal with MDR-TB by providing smear microscopy laboratory services free of charge to both private and public facilities.<sup>143</sup>

Workplace programs on HIV/AIDS could provide an interesting model for TB control activities. The Thailand Business Coalition on AIDS established the Business and AIDS Network in 1999 to provide a forum for business managers to exchange ideas about successes and challenges in effectively managing HIV/AIDS workplace programs. The network, which now has over 150 members, meets on a quarterly basis in two provinces to evaluate and provide accreditation for such programs, with the aim of promoting more workplaces that are sensitive to the needs of people living with HIV/AIDS. The difficulty of obtaining time off from work is a significant barrier to accessing TB treatment, particularly for laborers and migrant workers, so increasing workplace flexibility for TB patients could improve treatment adherence and outcome.

## Collaboration with NGOs and community organizations

*We . . . don't feel confident [about TB]. We lack academic skill. I talk with doctors to gain knowledge for myself, but my network members might not have that knowledge.*

—Samran Takan, director of New Life Friend Center, Chiang Mai<sup>144</sup>

Participation by NGOs in TB policy development and implementation has been minimal, particularly when contrasted with the level of mobilization and engagement in policymaking by HIV/AIDS NGOs and networks of people living with HIV/AIDS. There are a number of barriers to greater NGO participation in TB policymaking, most notably the low level of public awareness on TB and the lack of communication and exchange between TB experts and community-based organizations.

The NGO contribution to government HIV/AIDS policy is widely acknowledged. A National Coordinating Committee for AIDS NGOs has been in operation since 1989, and a similar committee focuses on joint TB/HIV activities in the northern provinces. A network of almost 900 groups of people living with HIV/AIDS provides an array of services ranging from prevention campaigns to community support for AIDS patients,<sup>145</sup> and advocates for specific aims such as obtaining access to cotrimoxazole prophylaxis therapy for people living

with HIV/AIDS.<sup>146</sup> In recognition of their key role in both advocacy and service delivery, the MoPH provides around \$2 million (75.6 million baht) annually for the activities and services provided by HIV/AIDS NGOs, including on TB/HIV.<sup>147</sup>

By contrast, the involvement of NGOs (including HIV/AIDS NGOs) around TB has been minimal, and has tended to focus on service delivery. For example, the Thai TB Foundation provides grants to TB patients (to defray transportation and food costs), research organizations (to support academic work and lab equipment), and even the TB Cluster itself (to help nurses cover incidental costs related to patient follow-up).<sup>148</sup> Neither government nor NGOs have made enough of an effort to engage former TB patients in TB control programs, though engagement of people living with HIV/AIDS has proven crucial to AIDS advocacy. Engaging TB patients in policy development or advocacy efforts may be more challenging since TB is not a life-long disease. Nevertheless, some TB experts urge the NTP to consider developing a strategy to promote the greater involvement of recovered TB patients in TB control efforts.<sup>149</sup>

Some NGOs consider the low level of general awareness and knowledge about TB (even among HIV/AIDS NGOs) to be one of the principal barriers to greater community involvement. TB is often considered a highly “academic” subject, and community activists often feel they lack the necessary expertise to engage with health workers and policymakers. This suggests a need for stepped-up NTP and international support for TB treatment literacy activities, involving former TB patients whenever possible. Ensuring that accurate, nonacademic, Thai-language information about TB is readily available at the community level is the first step to increasing demand for high-quality TB services.

Other community leaders and activists claim that they have experienced resistance from public health experts when they have tried to learn more about TB and to become involved in TB policymaking processes. One NGO activist claimed that public health workers often consider TB too “academically complicated” for community activists to grasp, and that TB experts “are very knowledgeable, but don’t trust that NGOs can also work on these issues . . . just because they have not been formally trained.”<sup>150</sup> Another decried the government’s failure to enact a “participatory approach” with regard to TB.<sup>151</sup>

Again, HIV/AIDS NGOs could play a leadership role in sparking greater community activism around TB, as they have demonstrated the effectiveness of treatment literacy activities in enhancing the accessibility of scientific knowledge; increasing the demand for services; and positioning community activists as key participants in the design, implementation, and evaluation of policies and programming. NTP or donor-sponsored research of the techniques adopted by Thai HIV/AIDS NGOs and networks could be critical in encouraging better understanding of their applicability with regard to NGO activism around TB. Finally, according to some TB experts, enhanced NGO partnerships could be a particularly critical

tool for the NTP to improve its access to marginalized groups such as migrant workers, ethnic minorities, and former prisoners.<sup>152</sup>

## **Collaboration with multilateral organizations and bilateral donors**

Over 90 percent of the national response to TB and TB/HIV is funded from the government budget and out-of-pocket spending.<sup>153</sup> Thai TB experts insist that assistance from bilateral and multilateral donors should reinforce national health systems and contribute to health policies and programming that are sustainable in the long term.

Participants at one roundtable meeting unanimously emphasized the importance of balancing donor interests and requirements with the need for funded projects to complement existing structures and programs. For example, one prominent regional health administrator insisted that donor-supported TB projects must support the NTP, take steps to ensure support from the communities in which they are to be implemented, and avoid replacing essential TB control activities and functions that should be managed by the Thai government. In the administrator's view, the NTP must always be able to "do without donor-supported supplemental activities if it has to."<sup>154</sup> For this reason, some health officials express concern about the fact that Global Fund resources have supported such core activities as training programs for health workers, which have not received sufficient funding from the NTP since the health reforms. They emphasize that these resources should be seen by the NTP only as a short-term opportunity to build a stronger base for programs that will have to be continued without donor funding in the future.<sup>155</sup>

There are positive examples of donor projects that fulfill these requirements in the eyes of their Thai partners. For example, the director of one Bangkok-based health center identified a collaborative project with the U.S. Centers for Disease Control and Prevention in which the donor organization arrived with one idea of what to fund, but proved willing to change the parameters of the project in response to local feedback and suggestions on what was needed. The result was a PPM DOTS program that has posted significant successes, enjoys strong local support, and provides a strong basis for scaling-up. It demonstrates the benefits of international donor/public sector partnerships that are firmly rooted in the communities they serve and that can provide a long-term return on a short-term investment.<sup>156</sup>

Another donor organization that has adapted the assistance it provides to locally identified needs is the Research Institute of Tuberculosis (RIT) in Japan. The RIT has provided long-term support for the improvement of laboratory capacity, provincial-level

meetings, and health worker training in northern Thailand. RIT-supported TB research in Chiangrai has generated important data on TB, TB/HIV, MDR-TB, and behavioral challenges to TB control since 1995.

Finally, the Global Fund has provided an important source of funding for TB control activities, particularly as many Thai experts believe that TB has often been neglected by international donors operating in Asia compared to the attention received by other diseases such as avian flu.<sup>157</sup> The first phase of the \$6.9 million (261 million baht) TB grant has so far been used to support training for health care workers; DOTS expansion in prisons, poor urban areas, and HIV/TB integrated service centers; and establishment of surveillance and monitoring systems to track the spread of MDR-TB among vulnerable populations. As noted above, Thai TB experts express concern that the NTP could grow dependent on Global Fund resources to cover the cost of core activities rather than for short-term, supplemental purposes; Global Fund support for TB control activities is assured through 2008, but there is no guarantee of funding beyond this date.<sup>158</sup>

Some Thai experts voice regret that the Country Coordinating Mechanism (CCM), which includes both public and private institutions and organizations among its members,<sup>159</sup> appears to act mainly as a “secretary to the Global Fund” once a grant is approved. These commentators feel that a more prominent role for Thai experts in overseeing implementation and evaluation of grant effectiveness would be warranted.<sup>160</sup>

# Recommendations

## The Thai government and NTP should:

- **Restructure and strengthen the NTP**, including by
  - Ensuring sufficient central authority and staffing for effective management;
  - Clarifying lines of responsibility and accountability;
  - Guaranteeing consistent funding levels for core NTP activities at all levels;
  - Ensuring proper monitoring and evaluation of TB control services at all levels;
  - Assuring more centralized drug management and distribution;
  - Allowing for the development of a financial monitoring system that will allow for greater transparency in tracking budget allocations and spending on TB at the national, provincial, and district level;
  - Including TB in the monitoring checklist utilized by health inspectors and district and regional officials.
- **Develop innovative approaches to encourage greater accountability for performance on TB control at the regional and district levels.** The government should consider the establishment of measurable and comparable TB control performance indicators, regular publication of regional and district “report cards” on performance, and encouragement and support for public-private partnerships.
- **Redouble efforts to improve TB detection, treatment, and referral services for vulnerable groups**, including migrants, members of ethnic minority groups, contract and seasonal workers, prisoners, and the urban poor.
- **Explicitly acknowledge the linkage between TB and poverty.** TB control efforts are needed in all poverty-reduction policies and programs. Food and transportation subsidies should be allocated for low-income TB patients.
- **Reassess the integration of the TB and HIV/AIDS programs.** The government should ensure that comprehensive integrated TB/HIV services are provided to patients and that TB control is not simply subsumed and minimized within the national HIV/AIDS program.

- **Maintain attention to reducing the risk of MDR-TB**, including by
  - Ensuring capacity to conduct culture and susceptibility testing countrywide;
  - Conducting targeted surveillance among high-risk groups such as migrants and prisoners;
  - Monitoring drug quality and applying to the Green Light Committee for quality-assured second-line drugs.
- **Expand efforts to involve a broader range of stakeholders in TB policy.** Recovered TB patients, HIV/AIDS NGOs, and community health activists should have a greater voice in TB policy development and implementation.
- **Develop and implement a media outreach plan to raise public awareness about TB**, including by
  - Establishing and staffing a specialized media and public relations department to promote NTP policies and activities;
  - Producing regular updates in media-friendly language on the TB situation in Thailand to encourage and facilitate quality television, radio, and newspaper reporting at the national, regional, and community levels;
  - Cultivating relationships with health journalists by offering training seminars and organizing regular press events to present current issues such as progress on achieving TB control targets, results of latest TB research efforts, and global TB developments.
- **Support community-led awareness-raising activities**, including by
  - Developing and disseminating accurate, context-sensitive, and nontechnical educational materials about TB and TB/HIV;
  - Implementing targeted awareness-raising and stigma-reduction activities for vulnerable groups and communities, including women, migrants and ethnic minorities;
  - Researching and identifying “lessons learned” from the treatment literacy activities undertaken by NGOs working on HIV/AIDS;
  - Supporting HIV/AIDS NGOs to take on TB awareness raising and treatment literacy activities;

- Encouraging and supporting the involvement of recovered TB patients in awareness-raising activities.
- **Improve the incentive package for TB health workers**, including by
  - Improving salaries and developing performance-based incentives to enhance the prestige of TB work;
  - Increasing attention to TB within nursing and medical curricula;
  - Ensuring adequate in-service training;
  - Acknowledging and taking steps to alleviate concerns about health risks to TB workers.
- **Ensure improved support and training for village health volunteers** and family members administering DOT.
- **Develop incentives for private practitioners to participate in implementing DOTS**, including by
  - Implementing a nationwide computerized case recording and reporting system;
  - Providing private practitioners who agree to participate in DOTS with joint training, laboratory services, and access to integrated systems for patient referral and VCT;
  - Enhancing support to university hospitals and research institutions to encourage programming, research, and other activities explicitly complementary to NTP implementation;
  - Developing workplace programs to increase flexibility on working hours for TB patients who need time off to participate in TB treatment.
- **Prioritize support for research areas that can inform more effective TB control policy.** Thai TB experts have identified the following topics in need of research:
  - Standardization of TB diagnostic and treatment services to minimize the risk of MDR-TB
  - Effects of sociocultural factors on TB treatment adherence
  - Techniques for preventing, diagnosing, and treating TB among HIV patients

- Impact of health system reform on NTP implementation
- Effective methods for encouraging compliance with DOTS among private TB service providers
- Advocacy and social mobilization techniques developed by HIV/AIDS NGOs and their applicability to TB work
- Factors affecting the accessibility of TB services for vulnerable groups

### **Nongovernmental and community organizations should:**

- **Investigate opportunities to integrate TB and TB/HIV activities into existing HIV/AIDS-related programming and activities**, including by
  - Examining lessons learned from effective NGO advocacy on HIV/AIDS to gauge applicability to greater advocacy on TB;
  - Promoting TB awareness-raising and treatment-literacy activities among networks of people living with HIV/AIDS;
  - Integrating enhanced support services for people living with HIV/AIDS with TB;
  - Developing and implementing TB/HIV-specific stigma-reduction activities;
  - Identifying people living with HIV/AIDS who have been cured of TB to act as spokespeople and leaders in targeted stigma-reduction and TB awareness-raising activities among people living with HIV/AIDS.
- **Articulate specific needs for additional (and more context-specific and culturally sensitive) information on TB and TB/HIV.**
- **Assist in the development of patient-friendly information and communications materials on TB and TB/HIV.**
- **Assist in development and implementation of targeted outreach services for vulnerable groups.**
- **Seek out opportunities for participating in TB policymaking processes at the national, regional, and local levels.**



## The international community should:

- **Ensure that funding for TB control in Asia is sustained.** TB should not be pushed aside by increased attention to other priority diseases such as HIV/AIDS and avian flu.
- **Ensure that funding strengthens and reinforces national health systems.** Support should contribute to health policies and programming that are sustainable in the long term. Whenever possible, international funding should be used to support supplemental activities rather than for essential TB control activities and functions.
- **Develop international programming and projects in close consultation with national TB experts.** Such consultations ensure that donor interests and requirements complement existing structures and locally identified needs.
- **Encourage and support greater community and NGO involvement in TB social mobilization, advocacy, and service delivery.**
- **Support the development of structured mechanisms by which the NTP and international donors such as the Global Fund can receive community input and feedback on the accessibility of information and services on TB and TB/HIV,** in the interest of developing more effectively targeted programming that is responsive to the needs of TB and TB/HIV patients and affected communities.

# Notes

1. United Nations Development Programme (UNDP), *Human Development Report 2004*, (New York: UNDP, 2004), pp. 140, 185.
2. See, e.g. *Achieving the Millennium Development Goals: the Middle Income Countries*, British Department for International Development (DFID), August 2004, p. 19, available at: [www.dfid.gov.uk/pubs/files/achievingmdgmidincome.pdf](http://www.dfid.gov.uk/pubs/files/achievingmdgmidincome.pdf) (accessed February 5, 2006).
3. Bureau of Policy and Strategy, Ministry of Public Health (MoPH), *Health Policy in Thailand*, 2003, p. 7.
4. *Mahidol Population Gazette*, January 2005; Vol. 14.
5. Department of Communicable Disease Control, MoPH, Thailand and World Health Organization (WHO), *Second Review of the National Tuberculosis Programme in Thailand*, (Geneva: WHO, 1999), p. 9.
6. TB Division, MoPH, *Battle Against TB* (National Tuberculosis Programme, 1999).
7. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, (Geneva: WHO, 2006), p. 122.
8. Written comments on a draft of this report by Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005.
9. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, (Geneva: WHO, 2006), p. 131.
10. Department of Communicable Disease Control, MoPH and WHO, *Second Review of the National Tuberculosis Programme in Thailand*, 1999, p. 3.
11. Kaiser Family Foundation, “Thailand to Offer TB Treatment as Part of HIV/AIDS Treatment Program,” (Washington, D.C.: August 4, 2005) available at [www.kaisernetwork.org](http://www.kaisernetwork.org) (accessed August 4, 2005).
12. M. Perkins and P. Small, “Admitting Defeat,” *International Journal of Tuberculosis and Lung Disease*, 2006; 10 (1): 1.
13. The same study showed that resistance to individual drugs ranged from 5.96 percent for isoniazid (INH) to 2.2 percent for rifampicin. WHO, 1996–1998.
14. WHO, *Global Tuberculosis Control: Surveillance, Planning Financing*, (Geneva: WHO, 2006), p. 122.
15. Comments by Thai experts at roundtable meetings supported by Public Health Watch in Bangkok and Chiang Mai, December 9 and 12, 2005.
16. MoPH, Bureau of Policy and Strategy, 2003, *Health Policy in Thailand 2003*, p. 7.
17. Written comments on a draft of this report by Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005. The study was carried out in four regions of Thailand: Bangkok, Chiangrai (in the north), Phuket (in the south), and Ubol Ratchatani (in the northeast).
18. Written comments on a draft of this report by Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005.
19. Interview with Attapon Cheepsattayakorn, director of the 10th TB Zonal Tuberculosis and Chest Disease Center, December 2005.
20. Comment by Samran Takan, director of New Life Friend Center, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
21. MoPH, *Thailand Health Profile, 1999-2000*, Thailand, MoPH, 2002.
22. Somsak Akksilp, director, Office of Disease Prevention and Control Region 7.
23. National Health Security Office, *Annual Report 2004, Progress and Achievement*, 2004, p. 10.
24. Interview with Sirinapha Jittimane, public health officer, TB Cluster, Bureau of AIDS, TB and STIs December 7, 2005.

25. Written comments on a draft of this report by Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005.
26. Written comments on a draft of this report by Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005.
27. WHO, *Third Review of the National Tuberculosis Programme in Thailand*, 2004, p. 7.
28. Comments by Rev. Sanan Wutti, The Church of Christ in Thailand, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
29. Comment from Attapon Cheepsattayakorn, director of 10th TB Zonal Tuberculosis and Chest Disease Center, December 2005.
30. Comment by Petchawan Punggrassami, Office of Disease Prevention and Control Region 12, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
31. Comment by Suksont Jittimane, Bureau of AIDS, TB and STIs, Ministry of Public Health, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
32. Comment by Somsak Akksilp, Office of Disease Prevention and Control Region 7, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
33. Comment by Suksont Jittimane, Bureau of AIDS, TB and STIs, Ministry of Public Health, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
34. Comment at Public Health Watch Local Advisory Group Meeting, Bangkok, December 29, 2004.
35. Comment by Samran Takan, director, New Life Friend Center, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
36. Comment by Somsak Akksilp, director, Office of Disease Prevention and Control Region 7, at Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
37. For example, in 2005 the deputy minister of public health stated that “the more tuberculosis patients who are cured, the less chance there is that the disease will spread to the rest of the population.” See “Thailand To Offer TB Treatment As Part of HIV/AIDS Treatment Program,” August 4, 2005, available at [www.kaisernet.org/daily\\_reports/rep\\_index.cfm?DR\\_ID=31827](http://www.kaisernet.org/daily_reports/rep_index.cfm?DR_ID=31827) (accessed February 8, 2005).
38. Comments from the Local Advisory Board Meeting, Bangkok, December 29, 2004, Public Health Watch roundtable meetings in Bangkok, December 6, 2005, and Chiang Mai, December 9, 2005.
39. Comment by Suksont Jittimane, Bureau of AIDS, TB and STIs, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
40. Comment by Sumalee Amarinsangpen, Office of Disease Prevention and Control Region 10, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
41. Interview with NTP consultant to the Bureau of AIDS, TB and STIs, October 3, 2005.
42. Interview with Sirinapha Jittimane, public health officer, TB Cluster, Bureau of AIDS, TB and STIs, December 7, 2005.
43. The websites for the Institute of AIDS Research, Thai Red Cross, Ministry of Public Health, and the National Tuberculosis Programme already provide detailed information on where and how to access counseling and treatment services. For example, see [www.tbcthailand.org](http://www.tbcthailand.org) (accessed February 8, 2005).
44. Comment by Prasert Dechaboon, president, Northern PLWHA Network, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
45. Comment by Rev. Sanan Wutti, The Church of Christ in Thailand, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
46. Comment by Samran Takan, director of New Life Friend Center, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
47. Interview with a male TB/HIV coinfecting patient and a male TB patient, Chiang Mai province, January 18, 2005; and a male TB patient in Tak province (anonymity requested), January 26, 2005.

48. See, e.g., J. Ngamvithayapong, et al. "Health seeking behaviour and diagnosis for pulmonary tuberculosis in an HIV epidemic mountainous area of Thailand," *International Journal of Tuberculosis and Lung Diseases*, 2001; 5 (11): 1–8.
49. A. 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.
50. Comments by Rev. Sanan Wutti, The Church of Christ in Thailand, and Prasert Dechabon, President, Northern PWA Network, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
51. UNDP, "Thailand at a Glance," You And AIDS: The HIV/AIDS Portal for the Asia Pacific, available at <http://www.youandaids.org/Asia%20Pacific%20at%20a%20Glance/Thailand/index.asp> (accessed May 11, 2006).
52. Comments by multiple participants, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
53. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, (Geneva: WHO, 2006), p. 122.
54. The *Thailand Millennium Development Goals Report 2004* cited the success of the Thai government's poverty reduction efforts in a number of areas. Available at [www.undg.org/documents/4581-Thailand\\_MDG\\_report\\_-\\_English-pdf](http://www.undg.org/documents/4581-Thailand_MDG_report_-_English-pdf) (accessed March 24, 2005).
55. Comment by Pruthi Israngkul Na Ayudya, director, Health Center 21, Bangkok, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
56. Comment from Attapon Cheepsattayakorn, director, 10th Zonal TB and Chest Disease Center, December 8, 2005.
57. Comment by Voravit Suwanvanichkij, Johns Hopkins Bloomberg School of Public Health, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
58. Comment by Voravit Suwanvanichkij, Johns Hopkins Bloomberg School of Public Health, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005. P. Wandee, et al., *Dual TB/HIV epidemic in the northern Thailand and Myanmar border: The vital need for bridging cross-country cooperation*. Paper presented at the International AIDS Conference, Bangkok 2004.
59. According to the WHO, about 44 percent of all those with active TB of some kind test smear-positive. Of these smear-positive cases, 72 percent are detected, and 74 percent of those detected are cured. This means that 23 percent of those with active, smear-positive, pulmonary TB in Thailand are being cured. Comment by Tim France, Health and Development Networks, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
60. Comment from Karyn Kaplan, Thai AIDS Treatment Action Group (TTAG), Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
61. Comment by Tim France, Health and Development Networks, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
62. Written comments on draft of this report by Jamie Uhrig, independent TB and HIV consultant, December 9, 2005. Local Advisory Board Meeting, Bangkok, December 29, 2004.
63. Comment by Rev. Sanan Wutti, The Church of Christ in Thailand, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
64. Compared to patients treated under direct observation of health personnel or nonfamily members in the community, patients observed by family members had noncompliance rates of 32 to 38 percent, far higher than the other two study groups. See Pungrassami et al., "Has directly observed treatment improved outcomes for patients with tuberculosis in South Thailand?" *Tropical Medicine and International Health*, March 2002; 7(3): 271–279.
65. Interviews with TB staff in Chiang Mai province, January 2005, and TB staff of Mae Sod Hospital, Tak province, January 2005.
66. Comment by Dantawan Pinitswon, AHRN, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.

67. An earlier pilot program in the northern provinces enjoyed considerable political commitment from high-level policymakers. This integrated strategy, which included early TB screening and care for people living with HIV/AIDS, provided a visible example of how the NTP and National AIDS Program could work closely together at all levels. See Ministry of Public Health, "National recommendations Guideline: the Integrated HIV-TB Care Strategies for the Control and Prevention of Tuberculosis in Thailand," 2001.
68. Comment by Karyn Kaplan, Thai AIDS Treatment Action Group (TTAG), Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
69. Written comments on a draft of this report, Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005.
70. Comment from Attapon Cheepsattayakorn, director, 10th Zonal TB and Chest Disease Center, December 8, 2005.
71. Comment by Sumalee Amarinsangpen, Office of Prevention and Disease Control Region 10, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
72. Comment by Karyn Kaplan, Thai AIDS Treatment Action Group (TTAG), Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
73. J. Ngamvithayapong, et al., "Health seeking behaviour and diagnosis for pulmonary tuberculosis in an HIV-epidemic mountainous area of Thailand" *International Journal Tuberculosis Lung Disease*, 2001; 5(11): 1–8.
74. Interview with Attapon Cheepsattayakorn, director, 10th Zonal TB and Chest Disease Center, Chiang Mai, December 8, 2005.
75. Comment at Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
76. S. Piyaworavong, et al., "Tuberculosis preventive therapy as part of a care package for people living with HIV in a district of Thailand." *Journal of the International AIDS Society*, September 2001; 15(3): 1739–1741.
77. Comments by Somsak Akksilp, Office of Disease Prevention and Control Region 7, and Petchawan Pungrassami, Office of Disease Prevention and Control Region 12, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
78. Comments by Sumalee Amarinsangpen, Office of Disease Prevention and Control Region 10, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005, and by Pruthi Israngkul Na Ayudya, director, Health Center 21, Bangkok, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
79. Comment at Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
80. Comments by various participants, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
81. Comment by Suksont Jittimane, Bureau of AIDS, TB and STIs, Ministry of Public Health, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
82. W. Pleumpanupat, et al., "Resistance to anti-tuberculosis drugs among smear-positive cases in Thai prisons 2 years after the implementation of the DOTS strategy," *International Journal of Tuberculosis and Lung Disease*, 2003, 7(5): 472–477.
83. Comment from Attapon Cheepsattayakorn, director, 10th Zonal Tuberculosis and Chest Disease Center, Chiang Mai, December 8, 2005.
84. Deputy director general of the Department of Disease Control, Ministry of Public Health, "Ministry to target TB during HIV treatment," *The Nation*, Thailand, August 2, 2005.
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87. Comment at Public Health Watch roundtable meeting, Bangkok, December 6, 2005.

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89. Médecins Sans Frontières (MSF), "Running out of breath? TB care in the 21st century," Geneva, 2004.
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91. Interview with groups of health personnel at Chiang Mai and Tak Provincial Medical Offices, February 2005, and the Local Advisory Board, Bangkok, December, 29, 2004.
92. Interview with Sirinapha Jittimane, public health officer, TB Cluster, Bureau of AIDS, TB and STIs, December 7, 2005.
93. Interview with Sirinapha Jittimane, public health officer, TB Cluster, Bureau of AIDS, TB and STIs, December 7, 2005.
94. Interview with TB Cluster head, Bangkok, February 2005.
95. Comment by Voravit Suwanvanichkij, Johns Hopkins Bloomberg School of Public Health, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2006.
96. Comments by Karyn Kaplan Thai AIDS Treatment Action Group (TTAG), Public Health Watch roundtable meeting, Bangkok, December 6, 2005; Rev. Sanan Wutti, The Church of Christ in Thailand, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2006.
97. M. Macan-Markar, "Millennium Goals: Burma must tackle TB and HIV," *Inter Press Service*, Bangkok, September 5, 2005, available at [www.aegis.com/news/ips/2005/IP050901.html](http://www.aegis.com/news/ips/2005/IP050901.html) (accessed on April 27, 2006).
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104. S. Nateniyom, et al., "Implementation of the DOTS strategy in prisons at provincial level, Thailand," *International Journal of Tuberculosis and Lung Disease*, 2004, 8(7): 848–854.
105. S. Nateniyom, et al., "Implementation of the DOTS strategy in prisons at provincial level, Thailand," *International Journal of Tuberculosis and Lung Disease*, 2004, 8(7): 848–854.
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107. The treatment success rate of 68.7 percent involved 1,158 registered patients. See S. Nateniyom et al, pp. 848–854.
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109. Comment by Sumalee Amarinsangpen, Office of Disease Prevention and Control Region 10, at Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.

110. Interview with Sirinapha Jittimane, Bureau of AIDS, TB and STIs, December 7, 2005.
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114. Comment by Somsak Akksilp, director, Office of Disease Prevention and Control Region 7, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
115. Interview with Attapon Cheepsattayakorn, director, 10th Zonal TB and Chest Disease Center, Chiang Mai, December 8, 2005.
116. Interview with a provincial chief medical officer, Chiang Mai Provincial Health Office, and the director, 10th Zonal TB and Chest Disease Center, and his staff, Office of Disease Prevention and Control Region 10, Chiang Mai, January 17, 2004.
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121. Interview with NTP consultant to the Bureau of AIDS, TB and STIs, October 3, 2005.
122. Group discussion with village health volunteers in Mae Sod District, Tak province, January 26, 2005.
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127. Interview with Sirinapha Jittimane, public health officer, TB Cluster, Bureau of AIDS, TB and Bangkok, December 7, 2005.
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131. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, (Geneva: WHO, 2005), p. 132.
132. WHO, *Global Tuberculosis Control: Surveillance, Planning, Financing*, (Geneva: WHO, 2005), p. 132.
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139. Participants in Public Health Watch roundtable meetings, Bangkok and Chiang Mai, December 2005.
140. Comment at Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
141. Comment by Pruthi Israngkul Na Ayudya, director, BMA Health Center 21, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
142. Interview with TB clinic staff, Health Center 21, Bangkok, December 13, 2005.
143. Interview with Ankana Chairasert, Faculty of Medicine, Mahidol University, March 24, 2005.
144. Interview with Samran Takan, director of New Life Friend Center, Chiang Mai, December 13, 2005.
145. For example, the Thai NGO Coalition on AIDS (TNCA) and the Thai Network of People with HIV (TNP+) each represent over 300 organizations, and both are represented on the National Committee.
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147. Bureau of Policy and Strategy, Ministry of Public Health (MoPH), *Health Policy in Thailand*, 2003, p. 7.
148. Interview with Sirinapha Jittimanee, public health officer, TB Cluster, Bangkok, December 7, 2005.
149. Comments by Suksont Jittimanee, Bureau of AIDS, TB, and STIs, MoPH, Public Health Watch roundtable meeting, Bangkok, December 6, 2005, and participants at Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
150. Comment by Jutatip Chaisakul, Health Development Networks, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
151. Comment by Prasert Dechabon, president, Northern PWA Network, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
152. Comment by Voravit Suwanvanichkij, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
153. Comment by UNAIDS representative, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
154. Comment by Somsak Akksilp, director, Office of Disease Prevention and Control Region 7, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.
155. Comment by Sumalee Amarinangpen, Office of Disease Prevention and Control Region 10, Public Health Watch roundtable meeting, Chiang Mai, December 9, 2005.
156. Comment by Pruthi Israngkul Na Ayudya, director, Health Center 21, Public Health Watch roundtable meeting, Bangkok, December 6, 2005. The CDC is also supporting a range of other TB control activities, including: TB prevention activities targeting vulnerable groups such as injection drug users, high-risk youth, and people living with HIV/AIDS; improving TB laboratory and diagnostic services; and TB surveillance. Written comments by Jay Varma, section chief for TB Prevention and Control of the Thailand–U.S. Collaboration (TUC) and internist and epidemiologist, U.S. Centers for Disease Control and Prevention, Bangkok, December 2005.
157. Comment by Ankana Chairasert, Faculty of Medicine, Mahidol University, Public Health Watch roundtable meeting, Bangkok, December 6, 2005, and a university researcher, Public Health Watch roundtable meeting, Bangkok, December 6, 2005.



158. See [www.theglobalfund.org/search/docs/iTHAT\\_391\\_100\\_ga.pdf](http://www.theglobalfund.org/search/docs/iTHAT_391_100_ga.pdf) (accessed February 21, 2006).
159. For a list of CCM members in Thailand, see [www.theglobalfund.org/search/memberlist.aspx?countryID=THA](http://www.theglobalfund.org/search/memberlist.aspx?countryID=THA) (accessed February 21, 2006).
160. Comments at Public Health Watch roundtable meeting, Bangkok, December 6, 2005.





**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**

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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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