
The Thai AIDS Epidemic Now

The Epidemiology of HIV in the Thai Population

Although every country's AIDS epidemic is unique, Thailand's epidemic stands out both for the complexity of its epidemiological history and for the vigor of the government's response.

Trends and Transmission of the Epidemic over Time

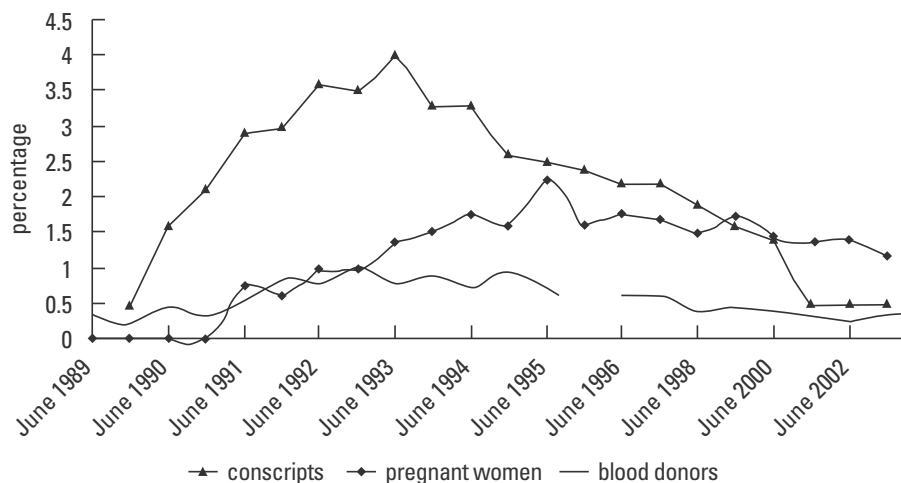
The dynamics of the Thai epidemic have been well documented in numerous studies, including those by Brown and others (1994); Phoolcharoen and others (1998); Weniger and others (1991) and the World Bank (1997, 1999, 2000). Nevertheless, it is useful to revisit briefly some of its main features.

The first cases of AIDS in Thailand were reported in 1984. Progressive numbers of AIDS cases and HIV infections were reported throughout the following years as the epidemic spread in a series of waves in subgroups of the population identified by all the major transmission routes: homosexuals, injecting drug users (IDUs), heterosexuals, and mothers of newborns (World Bank 2000). Between 1984 and 1987, cases were largely confined to homosexual male Thais. This period was followed by an explosive spread of HIV infection among IDUs in 1987 and 1988, when prevalence rates among IDUs in Bangkok jumped from virtually 0 to 40 percent (MOPH 2002b). The virus then spread to sex workers and their clients in 1989 and 1990, with the result that heterosexual transmission became an increasingly

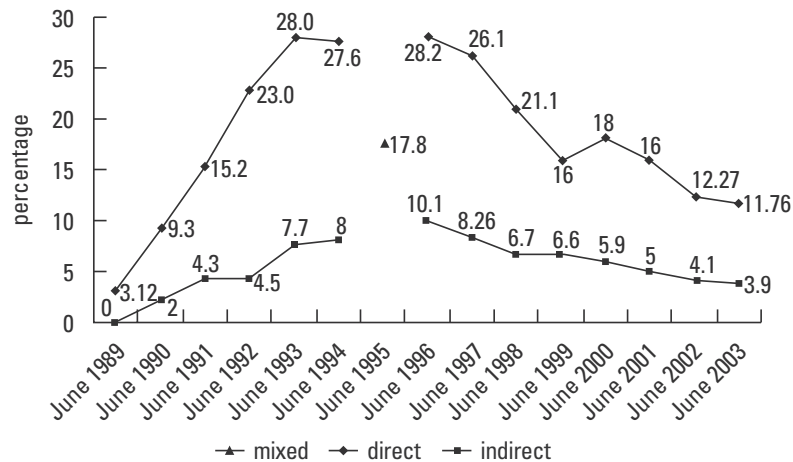
important route. By 1994, HIV prevalence¹—the percentage of the population currently infected—had reached 31 percent nationally among brothel-based sex workers and 38 percent in the northern region of Thailand (MOPH 2002b). Use of commercial sex was widespread: a national behavioral survey in 1990 found that 22 percent of men ages 15 to 49, and 37 percent of men ages 20 to 24 had visited a sex worker in the past year (Sittitrai 1992). Condom use in commercial sex was quite low—only 38 percent of men who frequently used sex workers in the 1990 study used condoms all the time. Accordingly, HIV spread rapidly between sex workers and their clients. By 1994, 1 in 10 clients was infected with the virus. Those clients then infected their wives, who in turn became pregnant and transmitted HIV to their children. In 1991, the first perinatal cases were reported, and the numbers of infected newborns increased in the following years.

The trend of the epidemic is charted in figure 2.1, which presents prevalence rates for pregnant women and 21-year-old male conscripts for the 1989–2003 period. HIV prevalence among young male conscripts peaked in 1993 at 4 percent nationally (and at nearly 13 percent in the north), but it has since come down sharply (World Bank 2000). The same pattern is observed for prevalence rates among sex workers (figure 2.2). HIV prevalence rates among women attending prenatal clinics (a low-risk group) follow the same pattern, but with a lag, rising from about 0.89 percent in 1989 to 2.3 percent in 1995,

Figure 2.1 HIV Prevalence among Pregnant Women, Blood Donors, and 21-Year-Old Male Conscripts



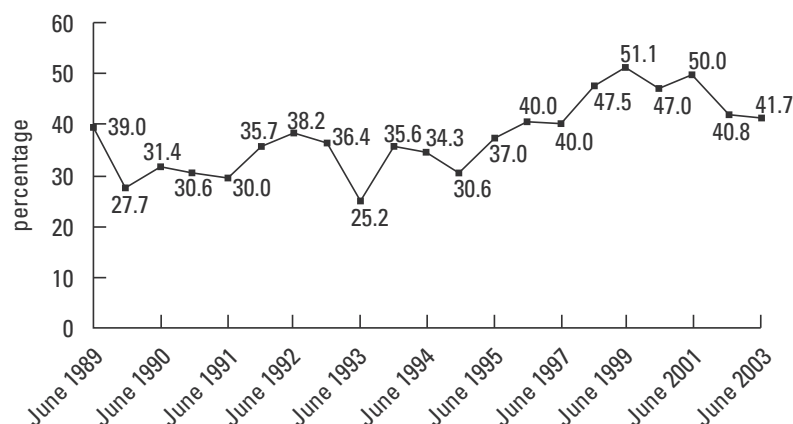
Source: MOPH 2004; Thanprasertsuk 2004.

Figure 2.2 HIV Prevalence among Direct and Indirect Sex Workers

Source: MOPH 2004; Thanprasertsuk 2004.

before starting to come down. A comparison of figures 2.1 and 2.2 reveals that the prevalence rate among the high-risk groups of sex workers and their clients (as proxied by young male conscripts) was an accurate leading indicator of the prevalence rate among low-risk groups and the general population. This finding suggests that sentinel surveillance of high-risk groups can help policy makers anticipate changes in the general epidemic.

Although HIV prevalence rates have come down dramatically since the mid-1990s, the HIV/AIDS crisis in Thailand is far from over. The last waves of new infections among women and their children have only recently started to decline, and prevalence rates among certain at-risk groups remain very high. Prevalence rates among IDUs—the group with the highest prevalence—are still close to 50 percent and have not declined since the late 1990s (figure 2.3). Prevalence rates among commercial sex workers declined considerably in response to Thailand's strong national response and the 100 percent condom program. Nevertheless, sex workers remain a major risk group. In 2003, the prevalence rate was 11.7 percent among female direct sex workers and 3.9 percent among indirect sex workers. Other high-prevalence groups include male sex workers (7.9 percent), fishermen (6.9 percent), and males presenting at clinics with sexually transmitted infections (STIs) (4.6 percent) (Thanprasertsuk 2004). With a large number of people infected with HIV, the potential for the epidemic to spread if prevention efforts are relaxed is considerable.

Figure 2.3 HIV Prevalence among IDUs

Source: MOPH 2004; Thanprasertsuk 2004.

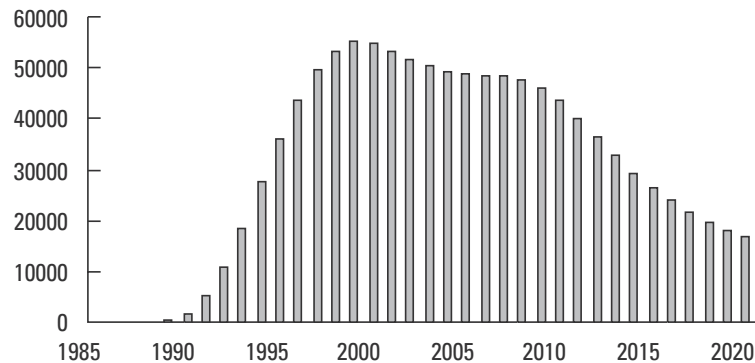
In 2001, the Thai Working Group on HIV/AIDS projected that by 2004 about 572,500 Thais would be living with HIV/AIDS (table 2.1). Among them, approximately 49,500 would develop serious AIDS-related illnesses in 2004, and about the same number would die of AIDS-related complications. The group also estimated that 19,500 new HIV infections would occur in 2004 (compared with 143,000 new infections in 1990 and 23,676 new infections in 2002).

Almost 80 percent of all AIDS cases will occur among people ages 20 to 39. Heterosexual transmission remains the main mode of transmission, accounting for the bulk of all AIDS cases. But the composition of infections has changed dramatically. A decade ago, most of the infections were in adults, and 80 percent were in sex workers and their clients. Now about one-half of all new infections are in women infected by their husbands or sex partners. IDUs account for about 5 percent of reported infections. Approximately 4 percent of AIDS cases in Thailand occur in children, and in 2000, one-seventh of new infections were in children.

Table 2.1 Estimated Cumulative Numbers for HIV/AIDS, 2004

<i>Statistic</i>	<i>Number</i>
Total HIV infections (adults and children) up to 2004	1,074,155
Total cumulative deaths (adults and children) up to 2004	501,600
People living with HIV in 2004	572,484
Projected new HIV infections in 2004	19,471
Projected new AIDS cases in 2004	49,542

Source: Thai Working Group on HIV/AIDS Projection 2001.

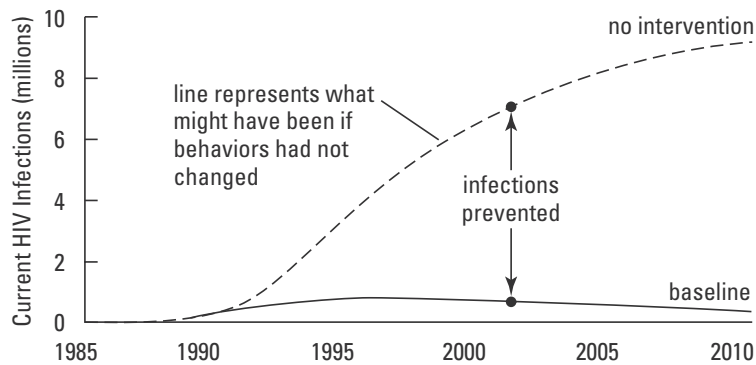
Figure 2.4 Projected Annual New AIDS Cases

Source: Thai Working Group Projection 2001.

The demand for HIV/AIDS treatment and care is rising as Thailand's epidemic enters a new phase, with many of those infected during the early years of the epidemic becoming ill with symptomatic disease.² The current number of new annual AIDS cases—just under 50,000—is projected to remain constant until 2006, when it should start to decline because of the sharp reduction in new infections in the late 1990s (figure 2.4). Meeting this demand for care poses a huge challenge to the Royal Thai government and Thai society. In a few years, as AIDS patients live longer with antiretroviral therapy (ART), the health system will need to provide care not only to 10,000 to 20,000 new cases per year but also to many of those whose lives have been significantly prolonged by ART.

The National Access to Antiretrovirals Program for People Living with HIV/AIDS (NAPHA) is a comprehensive and ambitious attempt to provide such care, with ART as the standard. By all measures, given the commitment across all segments of Thai society, the country's significant health system capacity, and the availability of internal and external financing, Thailand has a strong chance of meeting this challenge. But its ability to even contemplate providing care to all those who need it rests on the success of its past national prevention efforts.

Without those efforts, HIV infections—and hence AIDS cases—would be as much as 14 times higher than they are today (figure 2.5) (Thai Working Group on HIV/AIDS Projection 2001). We estimate that, without such efforts, Thailand would have had 7.7 million HIV cases and 850,000 AIDS cases in 2005, roughly 14 times more of each than was the case. If Thailand were to try to offer ART to this much larger number of AIDS patients, its budget requirements would also be 14 times greater—and they would continue to grow over the next

Figure 2.5 Projected HIV Infections in the Absence of Successful Prevention Effort

Source: Thai Working Group on HIV/AIDS Projection 2001.

decade. Thanks to its substantial prevention efforts from 1991 to 2002, Thailand has avoided the need to spend an additional US\$18.6 billion (B 745 billion) on treatment over the decade through 2012.

During the 1990s, Thailand spent more than most countries on its HIV/AIDS program. Its total budget expenditure on prevention and treatment combined over this period was a substantial US\$434 million in 2002 dollars (B 17.3 billion). However, by averting the need to spend US\$18.6 billion (B 745 billion) over the subsequent decade, the government saved US\$43 (or B 1720) for each dollar (or baht) invested in the 1990s. It is doubtful that any other Thai government investment achieved such a high benefit-cost ratio.

This experience offers a critical lesson for other countries about the importance of prevention. When the finance ministries of such countries as China and India—where the HIV/AIDS epidemic is at an earlier stage—make intersectoral allocations of the government’s budget, they should be aware of the high return to HIV/AIDS prevention campaigns. The experience also offers an essential lesson to Thai policy makers on the importance of not allowing the demand for treatment and care to crowd out continued prevention efforts.

Spatial Patterns of HIV/AIDS in Thailand

The HIV epidemic in Thailand presents some distinct spatial and geographic patterns, which lead to very different needs across regions and geographic areas in terms of availability of treatment. The epidemic started in the northern region, and this region still contains the largest number of people living with HIV/AIDS (PHAs), as well as the largest number of people who are symptomatic and in need of

treatment. But since the start of the epidemic, HIV has spread to all other regions of Thailand. As the number of new infections has come down in the north—the result of aggressive and successful prevention efforts among the main risk groups—it has risen in other regions. Infections among IDUs and indirect sex workers have been rising in Bangkok, the central region, and the south.

The latest figures from the 21st round of the seroprevalence surveys shows prevalence rates for IDUs in the central and southern regions of about 50 percent. In Bangkok, HIV prevalence rates among direct sex workers rose between 1996 and 2000. Although prevalence rates among male conscripts have declined across most regions, the decline has been much sharper in the upper north than in other areas. In the south, the prevalence rate among male conscripts (a proxy for the prevalence of HIV in the general male population) has stagnated at a relatively high level of 2.4 percent. It actually increased slightly in Bangkok between 1993 and 2000 (World Bank 2000). Prevalence rates among male clients of sexually transmitted infection (STI) clinics are much higher in the central and southern regions (at 6.9 percent and 7.5 percent, respectively) than the national rate for the same group (4 percent).

Map 2.1, located in the Map section at the end of the book, shows the spatial distribution of cumulative AIDS cases in Thailand by province for 1986 to 2003 and the spatial distribution of symptomatic HIV cases reported through the public health system as of March 2004. Map 2.2 presents the same two variables at the district (*amphoe*) level. Both maps illustrate the spatial patterns of the epidemic in Thailand, showing a high concentration of both reported AIDS cases and symptomatic HIV cases in the north (with particular concentration in some districts) and in Bangkok—where people were infected earlier and are at a more advanced stage of disease. Nevertheless, both AIDS and symptomatic cases are reported in all parts of Thailand. Over time, as many of those infected later become symptomatic, the concentration of cases in the central and southern regions will increase. It is interesting to note that almost all provinces have pockets (districts) with high prevalence rates of AIDS or symptomatic HIV.

Although a substantial literature exists on the dynamics of HIV transmission in Thailand, empirical research on the socioeconomic determinants of HIV infection is quite scarce.³ In bivariate analyses, the numbers of HIV or AIDS cases in a province or district are not strongly associated with indices of poverty or inequality.

Multivariate analysis of the determinants of HIV infection, allowing for spatial correlation across neighboring geographic units, is under way (Beegle and others 2006).

Policy Response to the Epidemic

Thailand is now widely recognized for its progressive policy response to HIV/AIDS, but this was not always the case.⁴ Initially the policy response was muted. Only when HIV infections exploded among IDUs and sex workers in 1988 and 1989 did the government respond and act decisively with a nationwide, multisectoral HIV/AIDS prevention campaign. The campaign was hugely successful in changing behavior and lowering the rate of new infection among commercial sex workers and their clients. Since then, the national policy response has evolved, driven by the changing nature and stage of the HIV/AIDS epidemic and by innovation and progress in instruments of both prevention and treatment. Throughout, policies and programs have been strongly influenced both by epidemiological, social, and behavioral data and, very significantly, by the efforts of PHA networks, PHA activists, and the nongovernmental organization (NGO) community (Phoolcharoen and others 2004b; Thanprasertsuk and others 2004; World Bank 2000).

Thailand's success in lowering HIV incidence rates and combating the epidemic, however, leaves no room for complacency. Some of the riskiest behaviors in Thailand (among IDUs, men having sex with men, and indirect sex workers) have not been fully addressed and stand out as major causes of continued HIV transmission (World Bank 2000). Moreover, as the demand for HIV/AIDS-related medical care and treatment grows, so does the risk that prevention efforts will be relaxed and Thailand's success in controlling the epidemic jeopardized.

The Three Phases of the National Response

Phase 1: Public Health-Focused Phase

In the early years of the epidemic, policy largely followed a focused public health approach to HIV control. The government response was confined mainly to the Ministry of Public Health (MOPH), which established a case reporting system that required all health settings in

the country to report possible cases to its newly established AIDS Control Center. This system failed to detect the rapid spread of HIV infection, which is asymptomatic for many years before it progresses to AIDS. Between 1984 and 1989, only 43 AIDS cases and 145 AIDS-related complex cases were reported, even though subsequent reconstruction of the dynamics of the epidemic showed that more than 100,000 HIV infections had occurred by 1989 (Phoolcharoen and others 1998). At that stage, no surveillance surveys had been done, and small surveys of seroprevalence in Bangkok through 1987 found little evidence of HIV. Information on the extent of risky behavior that might spread HIV in the general population was very limited.

The first evidence that HIV could spread rapidly in the Thai population did not appear until 1988, when HIV testing was introduced in government methadone treatment centers for heroin addicts, revealing very high rates of prevalence (Phoolcharoen and others 2004a). This finding coincided with cabinet approval of the Medium-Term Program for the Prevention and Control of AIDS, 1989–91. This program was intended to provide a working framework for government, NGO, and private initiatives, including measures for program management, health education, counseling, training, surveillance, monitoring, medical and social care, and laboratory and blood safety control. However, most funding for HIV/AIDS activities through 1990 came from external sources, including international organizations and bilateral aid. Internal resource mobilization was very limited (Phoolcharoen and others 2004a; Thanprasertsuk and others 2004b; World Bank 2000).

The explosive spread of HIV among IDUs prompted the Royal Thai Army and the Epidemiology Division of MOPH to launch a national HIV surveillance survey of key population groups in 1989. Testing was launched in samples of 100 to 200 persons from each of several sentinel groups—IDUs, brothel-based sex workers, male sex workers, male patients at STI clinics, blood donors, pregnant women, new prisoners, and ex-prisoners. Testing began in 14 provinces and was expanded to all 73 provinces by 1990.⁵ Simultaneously, the army launched biannual testing of the 60,000 21-year old army conscripts chosen annually by national lottery, finding an HIV prevalence of 0.5 percent during the first round. Since then, the prevalence of HIV among Thai conscripts has been used as a surrogate marker of infection in young Thai males. The first national survey of behavioral risks for HIV infection (the Partner Relations Survey) was launched in 1990,

sponsored by the World Health Organization (WHO) and conducted by the Thai Red Cross and Chulalongkorn University. The systematic and periodic Behavioral Surveillance Survey (BSS) was started in 1995.

Early on, policies were put in place to ensure that the nation's blood supply was protected. Nevertheless, the government downplayed the significance of the epidemic to the general population. It did little to correct the perception that HIV was likely to affect only marginal groups such as gay men, male sex workers, and IDUs and focused its preventive concerns on those groups (World Bank 2000). In 1989, prominent activists inside and outside government lent their credibility and prestige to the anti-AIDS campaign. Armed with the findings of the first round of sentinel surveillance and joined by a growing number of NGOs concerned about human rights and the spread of HIV in their communities, these activists were able to raise awareness and initiate the process of change. By 1990, the administration was showing signs of increasing recognition that HIV/AIDS prevention and control needed to be a government and development priority. In January 1990, Prime Minister Chatichai Choonhavan announced an official campaign to prevent and control HIV/AIDS. This announcement was the first clear-cut government stance on AIDS (Phoolcharoen and others 2004a; Thanprasertsuk and others 2004; World Bank 2000).

Phase 2: Socially Focused and Multisectoral Phase (1991–96)

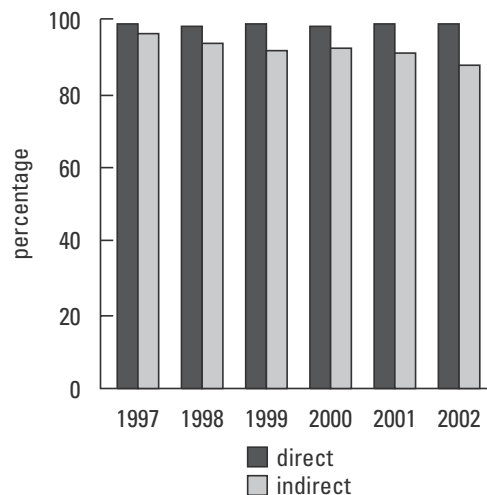
In 1991, under the brief government of Prime Minister Anand Panyarachun (1991–92), AIDS prevention and control became a national priority at the highest level. AIDS policy was brought under the coordination of the Office of the Prime Minister, with the establishment of an official multisectoral National AIDS Prevention and Control Committee, chaired by the prime minister. This move signaled commitment at the highest political level and also allowed for the formal participation of NGOs in the policy-making process. The National Economic and Social Development Board (NESDB) was given responsibility for planning the national AIDS strategy. The result was the first five-year AIDS control program and budget, which allocated funds to a number of government agencies and NGOs. The plan emphasized mobilizing society and communities to participate in the prevention of HIV, to care for those who are sick, and to reduce stigma and discrimination (World Bank 2000). This type of strategic, multisectoral HIV/AIDS plan has continued to be formulated and implemented.

A massive public information campaign on AIDS was launched under the leadership of a highly respected Thai figure, Mechai Viravaidya, through the mass media. The messages emphasized prevention, behavior change, and condom use and identified AIDS as a social problem, not just a health problem. All ministries were recruited to actively educate and train their staffs, and the Ministry of Education was asked to launch peer education groups. Private initiatives by business and NGOs complemented the government's efforts.

The 100 Percent Condom Program was adopted nationwide to promote universal use of condoms in commercial sex all the time. The mechanisms for monitoring compliance already existed through Thailand's extensive network of STI clinics. Under the program, sex workers were screened for STIs weekly or biweekly at government STI clinics, were treated, and then were provided with a box of 100 free condoms (World Bank 2000). The presentation of male patients at STI clinics was considered evidence of lack of use of condoms, and the sources were traced back to the brothels where the men were infected. Health workers then followed up with visits to the brothels, during which they provided information and condoms.

The campaign was very effective: condom use among direct sex workers went from 14 percent at the start of the program to nearly 100 percent. Recent sentinel surveys suggest that condom use among direct sex workers remains high (although not universal) at about 95 percent (figure 2.6). The campaign had somewhat less success among

Figure 2.6 Condom Use among Commercial Sex Workers



Source: MOPH 2004; Thanprasertsuk 2004.

indirect sex workers. In a worrisome trend, condom use among indirect sex workers may have recently declined to as low as 85 percent (Thanprasertsuk 2004). MOPH officials acknowledge that such a decline in condom use among indirect sex workers is a cause for concern and signals the need to relaunch the campaign to encourage more condom use among all sex workers.

Since the start of the campaign, condom promotion has been extended to target a broader array of risk groups, with mixed success. As shown in figure 2.6, condom use is not universal among indirect sex workers; it is even lower among male sex workers—a group not originally targeted by the 100 Percent Condom Program. In a Chiang Mai survey, just over 50 percent of male sex workers reported consistent condom use with clients; consistent use with noncommercial partners was markedly lower. Other groups in which condom use is likely to be low are illegal or undocumented sex workers (many of them migrants from the Lao People's Democratic Republic, Myanmar, and other neighboring countries) and migrant fishermen from Cambodia and Myanmar.

Inconsistent condom use among the general public is another major gap in the population's defenses against HIV. Behavioral Surveillance Surveys in the past five years suggest that risky sexual behavior patterns have shifted away from men visiting sex workers to men having sexual relationships with casual female partners or girlfriends, and with other men (Thanprasertsuk 2004). The rate of condom use in these other types of relationships (including those with casual female partners or steady girlfriends) is quite low. The most recent round of the BSS among military conscripts reports a rate of condom use in first sexual experiences of 22.6 percent. Consistent condom use with female sex workers is reported by only 59 percent of respondents, and only 25 percent of respondents report consistent condom use with irregular female partners.

Phase 3: The Holistic Phase (1997 to present)

The growing number of AIDS cases (including those among children) and the increasing awareness of the extent of HIV infection in the Thai population gradually built a national understanding that no community would remain unaffected. This realization happened at the same time that the NESDB planning efforts were moving in directions strongly focused on building the capacity of all communi-

ties to participate in the overall development process. These forces combined to move the Thai response to HIV/AIDS in new directions. In 1995, the NESDB was entrusted with the formulation of a new national AIDS strategic plan for 1997 to 2001. The planning process was a participatory one, involving a wide spectrum of agencies across sectors as well as networks of PHAs. This process took advantage of the experience in HIV/AIDS prevention and care gained in the first decade of the Thai epidemic. The resulting program gave PHAs an important role as an essential human resource in the fight against HIV/AIDS. Collaboration between PHA groups and between PHA networks and the national program was enhanced to allow PHAs to become active partners in planning and implementing a wide range of HIV/AIDS programs from the national level to community levels.

Building on experience, the plan provided for a number of specific strategies to strengthen the HIV/AIDS policy response:

- continued awareness campaigns
- reinforcement of traditional community support networks
- integration of life skills training into school curricula
- expansion of health promotion activities and medical care for those with HIV/AIDS in both public health and community settings.

The key objective was to establish mechanisms to deliver health and welfare services to PHAs in a holistic manner, covering prevention, care, and alleviation of the socioeconomic impact of AIDS.

National Plan for the Prevention and Alleviation of HIV/AIDS (2002–6)

The most recent HIV/AIDS plan is in actuality a continuation of the previous plan, sharing the same holistic approach and emphasis on the participation of private and public sectors, as well as communities, in the fight against AIDS. This plan sets forth three targets:

- HIV prevalence rates among the reproductive-age population to be reduced to less than 1 percent by 2006
- at least 80 percent of PHAs and affected individuals to have access to and be receiving care and support from public, private, and community providers of social, economic, educational, and primary health care services in an appropriate and fair manner

- local administrations and community organizations to be efficiently and continuously planning and carrying out plans for HIV/AIDS prevention and alleviation.

Some of the main strategies of the national plan include

- Promotion of condom use and sex education among youth.
- Prevention of mother-to-child transmission (PMTCT) of HIV. Voluntary counseling and testing (VCT) for pregnant women was introduced in 1995 and has been gradually expanded to reach 559,702 women in 2002. About 1.1 percent were found to be HIV positive. Among these, 80 percent received a short regimen of AZT (zidovudine) during the prenatal period and delivery, as did 95 percent of infants born to HIV-positive mothers. In 2003, the regimen for PMTCT was revised to include AZT plus nevirapine. The effect has been to reduce the risk of transmission to the child from 30 percent to 8 percent, resulting in the aversion of 2,500 to 3,000 child infections each year.
- VCT. Counseling and testing is available at nearly all provincial and district hospitals, at selected health centers, and through the private sector.
- Reduction of transmission among IDUs. Drug treatment programs have been initiated in Bangkok and five regional drug treatment centers.
- Access to care (subsequently expanded into NAPHA). Services for treatment and prophylaxis of common opportunistic infections are being expanded to ensure coverage. Services are also being developed to provide combination ART for all symptomatic HIV-positive individuals, with a target to reach all estimated 80,000 HIV-positive people by the end of 2005.
- Community responses. Measures have been taken to promote community role in organizing and implementing prevention, care, and support activities, especially in rural areas.
- Support to networks of NGOs and PHAs. The Thai NGO Coalition on AIDS represents more than 300 NGOs working on AIDS throughout Thailand, and the Thai Network of People Living with HIV has a network of more than 300 PHA organizations throughout the country. Both are represented on the National AIDS Committee.

Impact, Lessons Learned, and Risks

The success of Thailand's strong national policy response to HIV/AIDS has been extensively documented (Chamrathirong and others 1999; Phoolcharoen and others 1998; Phoolcharoen and others 2004a; World Bank 2000). The Thai experience is often evoked as an example of how a national response that effectively mobilizes government, NGOs, and the private sector can be effective in controlling a growing epidemic through relatively simple interventions.

A number of factors worked in Thailand's favor:

- political commitment at the highest level
- the ability to draw on strong institutions, including an established network of STI clinics, a successful family planning program, a cadre of trained epidemiologists, and health infrastructure with qualified staff
- a strong civil society with a tradition of activism and volunteerism
- an established network of NGOs.

However, Thailand's successful response also required a significant commitment of national resources. Starting in 1990, the Thai government devoted a large amount of its budget to its AIDS program. Between 1987 and 1997, public spending on AIDS prevention and control in Thailand expanded dramatically to reach some US\$82 million annually by 1997. As much as 96 percent of this was financed by the Thai government. This amount was equivalent to about one-fourth of the entire international expenditure on AIDS programs in the developing world at the time (World Bank 1999).

Thailand's successful prevention interventions had a large effect on the course of the epidemic. Recent estimates from the Asian Epidemic Model (AEM), suggest that, in the absence of these interventions, the current number of infections would be nearly 14 times higher than the number we observe today. As shown in figure 2.5, almost 7.7 million people would be infected. There is no room for complacency, however. Although policies successfully lowered prevalence rates, a large number of Thais were infected with HIV in the early years, when the epidemic took hold in the population. As a result, more than 1 million Thais have been infected with HIV and more than 400,000 have died. Estimates suggest that more than 572,000 people are currently infected with HIV in 2004 and that nearly 50,000 of them will

develop AIDS. Providing care and treatment for these large numbers of people presents a challenge to the public health system. Moreover, the prevalence of HIV in high-risk groups is still high—especially among groups that were not explicitly targeted by prevention efforts in the past, such as IDUs or male sex workers. The prevalence rate among IDUs remains very high (in excess of 40 percent) and has not come down.

Evidence also exists that the effect of past prevention campaigns is waning. Recent rounds of the BSS show that the percentage of male conscripts reporting sexual relationships with commercial sex workers, after declining for several years, started to pick up again in 2002 and 2003. The same pattern is visible with the percentages of male conscripts reporting other female sex partners and of married conscripts who have extramarital sex. Condom use among these male conscripts is not high: only 59 percent report consistent use of condoms with sex workers, and only 25 percent do so with irregular female sex partners. New risk behaviors by other groups of the population, such as youth (box 2.1), also need to be addressed. In 2002 and 2003, the BSS found a sharp increase in the proportion of grade 11 students who report having sexual relationships with girlfriends or boyfriends. Among grade 11 male students, there was also a rebound in the proportion who have sexual relationships with commercial sex workers. Prevention efforts targeted at these groups need to be strengthened and to be extended to the general population.

Thailand's ART Program

A discussion of Thailand's ART program must begin with a description of past measures of ART provision.⁶

Past Provision of ART in Thailand

Figure 2.7 shows the progression of HIV/AIDS treatment in Thailand. Several phases were involved.

Phase 1: Introduction of ART Thailand commenced publicly funded ART in 1992. The MOPH's priority at the time was provision of a single-drug treatment (AZT monotherapy) to low-income groups. Only a handful of referral and university hospitals participated in the program. Because of the high cost of the drugs, the initial budget of B 35 million (US\$875,000) increased to B 300 million (US\$7.5 million)

Box 2.1 Youth and HIV/AIDS in Thailand

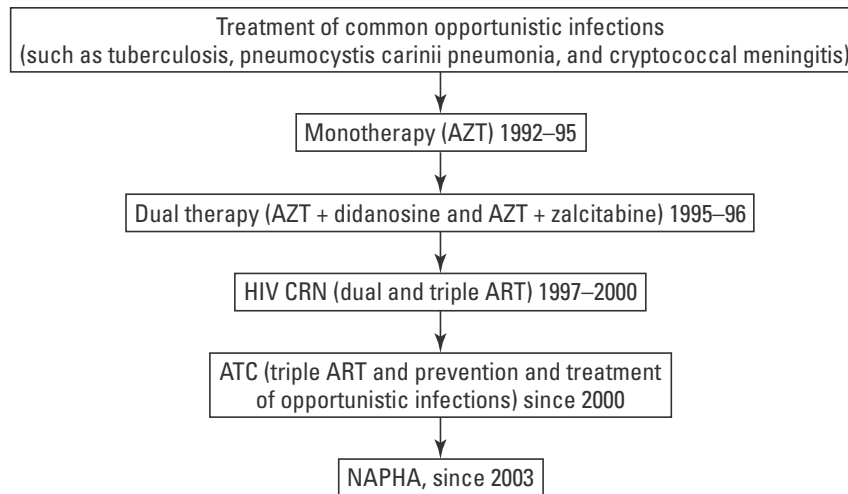
Hardly a taboo now, sex among youths is a fact of life as Thai attitudes about sex have become more open, especially among young people.

—“Don’t Leave Love Out of All the Sex Talk,” *Nation*, February 14, 2004

A shift of mindset is required in order to work on youth HIV/AIDS issues in Thailand. What proved successful in the old days may not work as well in the current environment. The dynamics of the epidemic of HIV/AIDS in Thailand are changing. Spreading patterns are now not limited to the traditionally defined risk groups. Young people are emerging as a new group at risk: not only are they having sex at a younger age than before, but they also have a very low condom usage rate. Recently, the MOPH conducted a survey among public school male students in grade 11 (15 to 20 years old) in 20 provinces, covering the period 1996–2003. The surveys were conducted in seven rounds (one each year), with an average sample of 5,440 per round. In 1996, the survey found that 9.8 percent of male students had had their first sexual relationship by grade 11; this figure had risen to 13.2 percent by 2003. The survey also showed very low rates of condom use among male students, especially in relationships with their girlfriends or close friends (only 9.4 to 17.5 percent reported using condoms). In the case of male students who had sex with men, the condom usage rate was not much better: 3.9 to 25 percent.

Accepting changing sexual behavior among youth requires a significant shift in entrenched conservative mores and attitudes in Thai society. The MOPH has been spearheading a strong prevention campaign aimed at youth, but many of the measures—such as the introduction of condom vending machines in universities—have met substantial resistance. The MOPH’s prevention efforts need greater support from other ministries and from society at large. A top priority is achieving greater cooperation with (and stronger support from) the Ministry of Education to include life skills in the curriculum, to provide access to information about HIV, and to disseminate basic knowledge about the disease through the school system. Other government initiatives related to youth and their sexual behavior include

- a proposal for a youth curfew
- introduction of a program to block access to Web sites with gambling or pornographic content
- other public relations activities to dissuade teenagers from having sex when they are not “ready,” such as providing AIDS information sessions in schools and regulating academic dormitories.

Figure 2.7 Access to HIV/AIDS Medical Care

Source: MOPH 2004; Thanprasertsuk 2004.

by 1997, yet the number of patients enrolled in the program was low. An economic review of this antiretroviral supply program, carried out by the World Bank, WHO, and MOPH in 1995, concluded that it demonstrated high cost and low benefit to the targeted population (Kunanusont and others 1995). This conclusion was based on the low coverage rate, poor patient adherence, and high rates of loss to follow-up (Prescott 1997).

Phase 2: Clinical Research Network Following this review, the focus of the ART program was switched. Instead of the MOPH acting as a central supply of antiretrovirals to its hospitals, a clinical research network (CRN) distributed antiretroviral drugs to selected hospitals that agreed to participate in operational research. This link of clinical research to access to comprehensive care, including antiretroviral drugs, for patients with HIV/AIDS continued to be the basis of the publicly funded antiretroviral program until 2000. The program formed part of the National Strategy for the Prevention and Treatment of HIV/AIDS, which included programs for PMTCT, a safe donated blood supply, and HIV vaccine development, as well as the condom use campaign. The network initially consisted of 45 hospitals (expanded to 58) in 20 provinces and provided ART to 1,095 patients. Monotherapy was initially used, but starting in 1998, dual therapy with an appropriate combination of antiretroviral drugs became the standard treatment.

The effect of the CRN was evaluated in July 2000. A report commissioned by the WHO in collaboration with the Division of AIDS,

Department of Communicable Diseases, MOPH, was published on December 21, 2000 (MOPH 2000). The report concluded that, during the three years of operation of the CRN, its effect on program planning for HIV/AIDS prevention and care was limited because its roles in clinical research and prevention and care activities were not clearly defined, the hospitals and research institutions in the network had too many tasks, and the network was underresourced.

Phase 3: Move Toward National Access to ART In 2000, the MOPH established a pilot Access to Care (ATC) initiative to provide ART through the CRN and an additional 109 district and provincial hospitals, expanding access to another 1,000 patients. Criteria for enrollment into the program were

- having been diagnosed with an AIDS-defining opportunistic infection or cancer
- having symptomatic HIV
- having a CD4 count of less than 200 cells per cubic millimeter.

The initiative offered 8 ART regimens for adults and 12 regimens for children. About 78 percent of patients received two nucleoside reverse transcriptase inhibitors (NRTIs) plus one nonnucleoside reverse transcriptase inhibitor (NNRTI), while 22 percent of patients received two NRTIs plus a protease inhibitor. ART in this program was provided on a patient copayment basis. For example, the MOPH supplied either efavirenz or ritonavir-boosted indinavir for free, and the patient purchased the two backbone nucleoside drugs to make up a triple antiretroviral combination.

In parallel to the development of the ATC program, the government decided to strengthen national capacity to manufacture a variety of off-patent antiretroviral drugs. Generic production of antiretroviral drugs by the Government Pharmaceutical Organization (GPO) significantly reduced their price in Thailand (table 2.2). Most important, GPO started to produce a single-tablet triple-drug combination regimen called GPO-vir (stavudine + lamivudine + nevirapine) at a price of US\$30 (B 1,200) per month.⁷ With the availability of the GPO-vir single-tablet combination regimen in 2002, the ATC program was upgraded, and GPO-vir became the first-line regimen for treating naive patients. The availability of a low-priced generic ART in a

Table 2.2 Declining Minimum Prices of ART in Thailand

<i>ART triple-drug regimen</i>	<i>Year</i>	<i>Price (B per month)^a</i>
2 NRTIs + PI	Before 2000	> 25,000
2 NRTIs + boosted PI	2000	13,000
	2002	6,000
2 NRTIs + NNRTI	Before 2000	15,000
	Early 2001	13,000
	Mid-2001	< 6,000
	Late 2001	2,300
GPO-vir	2002	1,200
GPO-vir	2004	1,200

Source: Phoolcharoen and others 2004b.

Note: NRTI = nucleoside reverse transcriptase inhibitor; NNRTI = nonnucleoside reverse transcriptase inhibitor; PI = protease inhibitor.

a. These are the minimum prices for drugs in Thailand in the public sector. Actual prices paid may vary significantly.

triple-drug combination suddenly opened the possibility of large-scale provision of ART to eligible patients (table 2.2).

The pilot ATC initiative was first evaluated in several hospitals in six northern provinces in 2001 (Leusaree and others 2002). From February to October 2001, 774 adult HIV patients in 54 district and provincial hospitals enrolled into the program. The mean CD4 count at commencement of ART was 84 cells per cubic millimeter. After 24 weeks, 68.6 percent were still on treatment. Reasons for stopping therapy were

- adverse events (101 patients, or 13.1 percent of the cohort)
- death (41 patients, or 5.3 percent)
- nonspecified treatment failure (42 patients, or 5.4 percent)
- loss to follow-up (35 patients, or 4.5 percent)
- other (24 patients, or 3.1 percent).

A parallel rapid assessment of the ATC program in northern Thailand found even greater dropout rates (of about 45 percent) (Community Medicine Department, Chiang Mai University 2002). Both evaluations concluded that significant improvements in the program were needed to ensure greater adherence. Areas identified for improvement included

- the need for ongoing capacity building in ART management among health care providers, especially nurses and pharmacists

- a strengthened role for counselors
- greater involvement of family and community in ART delivery and support for patients.

Scale-up of National Access to ART Program

In 2003, the Thai government expanded the ATC program with a four-year commitment (2003–6) to provide triple-drug ART as a standard of care. The objective of this program, named the National Access to Antiretrovirals Program for People Living with HIV/AIDS, or NAPHA, was to provide access by the end of 2004 to triple-drug ART to a large proportion of all persons living with symptomatic HIV/AIDS. The number of PHAs on ART increased from about 3,000 at the start of 2002 to 27,000 by the end of 2003 and to 52,000 by February 2005. The program is financed in part with funds from the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM) and in part with government budget funds. The number of treatment sites increased from 112 in 2001 to 462 in early 2003 and to 841 by February 2005.

Table 2.3 shows the evolution of estimated cases of PHAs, AIDS cases, and access to public ART in Thailand. As of the end of 2004, more than 80 percent of those living with AIDS had access to public ART—a remarkable achievement. Figure 2.8 plots those trends, illustrating that

Table 2.3 Estimated Cases of People Living with AIDS, AIDS Cases, Reported AIDS Cases in Public Hospitals, and Access to Public ART

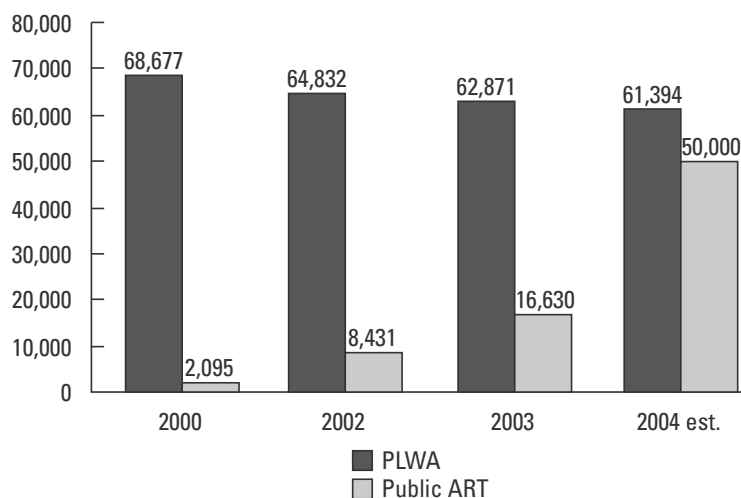
<i>Type of case</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>
People living with HIV/AIDS	751,235	740,349	719,765	649,564	665,344	635,057	603,942	572,484
People living with AIDS	59,752	65,333	68,311	68,677	67,057	64,832	62,871	61,394
People using ART from public care	1,095 ^a	1,095 ^a	1,095 ^a	2,095 ^a	2,095 ^a	8,341 ^a	27,158	52,593 ^b
Percentage of AIDS cases in public ART	1.8	1.7	1.6	3.1	3.1	12.9	43.2	81.4
Percentage of reported AIDS in public ART	4.1	4.0	4.0	4.5	8.5	35.5	122.6	—

Source: Thai Working Group on HIV/AIDS Projection 2001; Gold and others 2004; MOPH 2004.

Note: — = not available.

a. Follow-up to the *Declaration of Commitment of HIV/AIDS (UNGASS) Country Report 2002*.

b. Figures are as of February 2005. The data were provided by the Bureau of AIDS, TB, and STI at MOPH (2004)

Figure 2.8 People Living with AIDS and Public ART Provision

Source: Thai Working Group on HIV/AIDS Projection 2001; Gold and others 2005. Clinical Background Paper for Expanding Access to ART in Thailand Report 2004; MOPH 2004. The data were provided to the authors by the Bureau of AIDS, TB, and STI at MOPH 2004.

the proportion of people living with AIDS in Thailand with access to public ART has increased sixfold since 2002.

Table 2.4 shows the number of people on public ART by region as of March 2004, as well as the ART targets that MOPH set for the end of 2004. These targets were calculated as a function of the estimated number of AIDS and symptomatic HIV cases in the corresponding region (as reported by the hospital system for reporting AIDS cases). The table shows that some regions have come closer to reaching their targets than others: the north and the northeast have the highest ratios of people on ART relative to their targets. This finding may

Table 2.4 Number of Patients on ART in Thailand by Region, March 2004

Region	Accumulated patients ^a	Current patients on ART	New patients	Target in 2004
Bangkok	2,846	2,648	272	5,830
Central	7,491	6,749	1,537	16,240
North	8,777	7,459	1,030	11,648
Northeast	7,643	6,983	1,461	8,673
South	3,232	2,825	213	6,109
Other (PHPT)	494	494	—	1,500
Total	30,483	27,158	4,513	50,000

Source: MOPH 2004.

Note: PHPT = Program for HIV Prevention and Treatment (PHPT): Clinical trials on the prevention of mother to child transmission of HIV; — = not available.

a. Accumulated from ATC 2000 up to NAPHA, March 2004.

reflect the fact that those regions saw an earlier expansion of ART and have larger numbers of facilities providing ART, or it could reflect higher uptake rates. The figures do not allow us to distinguish between those possibilities.

Map 2.3, located in the Maps section at the end of the book, presents a spatial illustration of the expansion of ART in Thailand by showing the distribution of current ART patients and that of symptomatic HIV patients (a proxy for the implicit target population for ART) by province, as of March 2004. Map 2.4 gives a slightly different perspective on coverage by showing the distribution of symptomatic HIV patients against province-level ART coverage (district-level data on ART are not available).

Anecdotal evidence, as well as conversations with the MOPH, suggests that contrary to what may be expected, little rationing of access to public ART has taken place. Many hospitals in parts of the country report not using all the ART treatment slots allocated to them. This lack of rationing could exist because hospital capacity to deliver ART is stretched in other ways (for example, scarce human resources able and willing to deliver ART); it may be that people living with AIDS are not going to the public health facilities for care or are going only once they are very sick. Stigma, discrimination, and a desire not to self-disclose could work against PHAs coming in for treatment. Access to publicly provided ART requires PHAs to disclose their status to their local district hospital. Fear of discrimination for themselves and their families could prompt many to seek treatment outside their districts, from other district hospitals, or from the private sector (see, for example, the case presented in chapter 1, box 1.1). In both cases, PHAs would have to pay for ART out of pocket, which could impose a sizable financial burden.

Interviews with PHAs in different regions suggest that discrimination and stigma may be a factor, but many PHAs pointed also to the lack of readiness of providers in some hospitals to be involved in ART as a major barrier to access. Financial barriers are also mentioned as an important factor, particularly for those who are not part of the “30-Baht” scheme (the UCS, or Universal Coverage Scheme) (Phongphit 2004). Even for those who are covered under the UCS and entitled to free ART drugs, costs may be sizable; typically, monitoring tests (in particular, CD4 counts and viral-load tests) are not free and can be quite costly. The price of CD4 testing by standard flow cytometry varies from B 200 to B 800 (US\$5 to US\$20), depending on the institution providing it (see

chapter 3). The price of a viral load test can be as high as B 3,500 (US\$90). A basic safety chemistry panel—testing SGOT (serum glutamic oxaloacetic transaminase), creatinine, and glucose—costs B 100 (US\$2.50). Lack of information about ART is cited as another significant barrier to access (Phongpit 2004).

Enrollment in the national ART program has been voluntary for hospitals, and many have elected not to join or elected to take only a very small quota of patients. Map 2.5 gives yet another perspective on the expansion of NAPHA by showing the increase in the number of health facilities providing ART. The total number went from 112 in 2001 to 462 in 2002; it increased further to 841 facilities by the end of 2003. The expansion of facilities providing ART between 2001 and 2003 correlates geographically with the distribution of cumulative AIDS and symptomatic HIV cases. Map 2.6 shows the average number of ART participants per enrolled NAPHA hospital. The hospitals handling the largest numbers of patients per facility are located in Bangkok and in the north.

Augmented Public ART

In addition to those accessing ART through the public system, a limited number of PHAs are receiving treatment at public hospitals in an “augmented” setting, with the active support of nongovernment institutions such as Médecins sans Frontières (MSF) and the Thai Red Cross and the HIV–Netherlands Australia Thailand Research Collaboration (HIV-NAT) and greater involvement of PHA peer support groups. MSF, for example, has been working with three district hospitals in Thailand since 2000 to provide care for about 330 patients on ART. Estimates suggest that about 1,800 patients are receiving this augmented ART (table 2.5).

In the MSF model, patient care is the responsibility of the district hospital and is provided by a nurse-managed multidisciplinary team. The team includes doctors, pharmacists, nurses, lab technicians, and PHA peer counselors. The team leader is usually a senior nurse with sufficient experience and authority to manage staff members from other disciplines. Because doctors in district hospitals are extremely busy—one doctor is often responsible for as many as 100 outpatient consultations daily as well as wards and the emergency room—not all patients taking ART see the doctor at every appointment. Patients are referred to doctors for adverse reactions or suspicion of opportunistic infection. In this setting, the PHA peer counselors have many important roles:

- informing their community about availability of treatment
- giving basic information to clients in easy-to-understand language
- discussing treatment plans and disclosure
- solving problems in case of practical difficulties with adherence
- visiting clients at home in case of loss to follow-up.

In addition to supplying drugs, MSF provides ongoing support that includes shared consultations and home visits, case conferences, and training for both hospital staff members and PHAs (Wilson and Ford 2004).

Patients receiving ART in this augmented public setting are likely to benefit from more active counseling and support from other PHAs than those receiving ART without the benefit of NGO involvement. The expectation is that this augmentation will help sustain adherence. Indeed, experience over the past three years at MSF indicates that PHAs can make a large contribution in supporting adherence to treatment. This contribution comes from the willingness of PHA to help their peers and share their experiences, but the necessary training and coordination demands long-term funding and ongoing technical support. Given the low level of education of PHAs in general, particular attention needs to be given to developing an easy-to-use, reliable reporting system (Wilson and Ford 2004).

Since October 2003, TNP+ (the Thai Network of People Living with AIDS), MSF, and the AIDS Access Foundation have been cooperating to prepare PHA groups further for a role to support the government's rapid scale-up of ART. In May 2004, the beneficiaries of this project were 104 PHA groups working alongside hospital staff, according to

Table 2.5 Number of Patients on ART by Type of Provider, March 2004

<i>Type of provider</i>	<i>Accumulated patients</i>	<i>Current patients on ART</i>	<i>MOPH target</i>
Public	47,100	40,939	50,000
Augmented public	2,000	1,800	
Private	—	—	—
Total on ART	49,100	42,739	50,000
Not on ART	12,294	18,650	
People living with AIDS	61,394	61,394	61,394

Source: Data for public providers are from the MOPH; data for augmented public providers are estimated on the basis of numbers provide by MSF, HIV-NAT, and the MOPH; data for private providers are not available.

the model described above, in the three MSF pilot hospitals. The geographic distribution of these PHA groups is shown in map 2.7. Most of the funding for this effort is provided by the GFATM as part of Thailand's successful first-round application. The MOPH's goal is that eventually all public hospitals providing ART will actively engage PHA peer counselors and support groups. However, for this PHA role to be sustainable, long-term funding and ongoing technical support will be essential, and the government will need to facilitate liaison between PHA representatives and hospitals.

The work of PHAs has been a valuable contribution to the government's rapid scale-up of ART. The change in PHAs' involvement in health care from receiver to coprovider has led to improved acceptance of and support for PHAs within the health care system. Increased control over their health has also brought benefits for PHAs in terms of self-image, confidence, and dignity. MSF acts as a bridge between PHAs, donors, and the government. This work, which has addressed both practical and political obstacles, has succeeded in part because PHAs maintained the space to develop their own priorities. The partnership with other national groups and international organizations has been successful because of an understanding among all involved that the relationship is one of equals.

Private Access to ART

Data on private access to ART in Thailand are relatively scarce, with no direct data from private providers available. However, because the GPO sells a share of its GPO-vir triple-drug combination tablet directly to the private sector through several retail centers in Bangkok, figures on those sales can be used as a proxy for private sector access. This information is synthesized in table 2.6, which shows the share of sales of GPO-vir to the public, domestic private, and pri-

Table 2.6 Sales of GPO-vir by Sector, 2002–4

Sector	2002	2003	2004 (projected)	Total (projected)
Public	58.2	78.2	82.2	80.5
Private domestic	39.9	20.0	15.9	17.7
Private international	1.9	1.8	1.9	1.8
Total	100.0	100.0	100.0	100.0
For memo:				
Total volume of sales	44,415	283,894	929,656	1,257,965

Source: Data from Thailand's Government Pharmaceutical Office provided by the MOPH to the authors in 2004.

vate international sectors for 2002 to 2004. According to these figures, roughly 20 percent of total sales of GPO-vir in 2003 went to the private domestic sector (down from about 40 percent in 2002). This share was projected to decline further, to about 16 percent, by the end of 2004. Private international sales for 2004 were expected to remain constant at about 2 percent of the total.

According to MOPH officials, ART cannot be dispensed outside a hospital setting by private doctors. However, private hospitals in Bangkok and other major cities can and do provide ART, typically on an out-of-pocket payment basis. Many doctors working in public or university settings report seeing patients privately, but no representative nationwide figures can be used to estimate the scale of private sector delivery. The only evidence comes from a survey of Thai physicians that was conducted in January 2004 at a Thai Red Cross and HIV-NAT conference on HIV/AIDS management for practicing clinicians and health care staff. This survey was given to some 84 practicing AIDS clinicians from a wide range of clinical and geographic settings (see Gold and others 2004).

Survey results from these doctors, many of whom practiced in both the private and the public sectors, suggest that only about 18 percent of patients were seen privately. The survey revealed few differences in patient characteristics at the start of ART whether the physician practiced in the private, public, or academic sector. Most patients were generally very immunosuppressed (66 percent with CD4 counts of less than 100 cells per microliter) and symptomatic (68 percent). About 60 percent were on ART, with most taking GPO-vir or other first-line therapies. Very few patients were taking protease inhibitor-based regimens (13 percent), and about 30 percent were not on ART but receiving treatment or prophylaxis for opportunistic infections.⁸

AIDS Expenditure and Financing

Thai health policy makers have been working to expand insurance coverage to the Thai population while ensuring the financial soundness of the government health care system. In this context, the government's decision to finance AIDS care raises issues regarding the sustainability of the overall health care financing system and whether AIDS care should be financed in the same way as care for other health problems.

Health Care Coverage for AIDS Prevention and Treatment

The four main health insurance schemes cover nearly 100 percent of the population:

- The Social Security Scheme (SSS) and Workmen’s Compensation Fund (WCF) cover formal private sector workers.
- The Civil Servant Medical Benefit Scheme (CSMBS) covers government employees.
- The “30-baht” or Universal Coverage Scheme covers the rest of the population.

The characteristics and scope of each program are described in table 2.7. The schemes are managed independently, with different reimbursement mechanisms and separate reporting requirements for providers.

The largest scheme is the UCS, which was introduced on a national scale in April 2002 with the aim of guaranteeing access to health care to every Thai citizen, regardless of income and means. The UCS replaced all previous schemes targeted to the poor and uninsured. Evidence from its operation during 2002 to 2004 suggests that it has succeeded in

- increasing health care coverage from about 70 percent of the population before its introduction to nearly 100 percent
- significantly increasing health care use, particularly of outpatient services, while reducing out-of-pocket expenditures by households.

These increases and decreases have been proportionally largest for those in the bottom two quintiles of the income distribution, suggesting that the UCS is significantly pro-poor.

Despite these accomplishments, broad agreement exists on two points:

- Existing capitation rates under the UCS are too low.
- The system is underfunded.

The impact of this underfunding is partly dampened by cross-subsidization at the provider level from the other health insurance

Table 2.7 Health Insurance Schemes in Thailand

<i>Characteristics</i>	<i>SSS and WCF</i>	<i>CSMBS</i>	<i>UCS ("30-baht")</i>
Model	Public contracted	Public reimbursement	Public contracted
Population covered	Private formal sector employees, but not their dependents (establishments with more than 10 workers): 8 million	Government employees and their dependents: 4.5 million	People not covered by SSS or CSMBS: 47 million
Benefit package			
Ambulatory services	Public and private	Public only	Registered public and private
Inpatient services	Public and private	Public and private	Registered public and private
Choice of provider	Contracted hospital or its network, registration required	Free choice	Registration required
Types of benefits	Non-work-related illnesses, injuries (work-related covered under WCF)	Comprehensive package	Comprehensive package
Financing			
Source of funds	Contributions from employees, employers, and government amounting to 4.5 percent of insurable earnings payroll	General tax revenues	General tax revenues
Financing body	Social Security Office (SSO)	Ministry of Finance	National Health Security Office (NHSO)
Payment mechanism	Capitation	Fee for service	2 options: inclusive capitation for inpatient, outpatient, and preventive and health promotion; (ii) or capitation for outpatient and preventive and health promotion; Diagnosis Related Group (DRG) with global budget for inpatient
Copayment	Maternity, emergency services if above ceiling	Yes, if inpatient at private hospital	Yes, 30 baht per visit. No copay for inpatient.
Expenditures per capita	B 1,558 (in 1999)	B 2,106 (in 1999)	B 1,202 (in 2003)

Source: Jogudomsuk and others 2003.

schemes (especially CSMBS). However, over time—and especially as cost containment efforts in CSMBS take effect—the financial squeeze on UCS providers is expected to tighten, which could lead to deteriorating quality. Current programming and budgeting practices for the UCS—with capitation rates set annually on the basis of available budget resources—make its funding highly vulnerable to cyclical downturns and swings in tax revenues. Over the long term, such practices may undermine its financial sustainability.

In addition to financial constraints, scarcity of human resources, especially physicians, may present a problem for the sustainability of the UCS system in its present form. Increased health care use in a limited-resource context has sharply increased workloads for the staff in the public health system. Indeed, since the introduction of the UCS in 2002, the number of physicians leaving the public system because of increased workloads and low pay has accelerated. The rapid scale-up of ART will add substantially to these pressures.

The different schemes offer slightly different coverage and quality of care for PHAs. The UCS covers preventive and curative care (treatment of all opportunistic infections) but does not cover ART or associated testing and monitoring. Access to ART for PHAs covered by the UCS is offered under NAPHA, which is run as a separate vertical program under the MOPH. ART is available for all PHAs who meet the eligibility criteria and present for treatment at their registered hospitals (assuming the hospital has a treatment slot available; some regions have waiting lists). The patient must pay for the first CD4 test (about B 500), but all monitoring and testing after enrollment is covered by NAPHA, as is the cost of the drugs. In practice, however, hospitals exercise some discretion in asking patients to copay, depending on an assessment of their means.

Discussion continues among policy makers and politicians about the desirability of integrating ART treatment into the UCS. The political commitment to include ART in the package has been made explicit on several occasions by the minister of public health—and recently, at the July 2004 Bangkok International AIDS conference, by the prime minister himself. Indeed, it is expected that ART will be included under the UCS soon.

Until August 2004, NAPHA also covered access to ART for PHA under the SSS. As under the UCS, SSS patients were required to pay

for the first CD4 count, but all subsequent monitoring and testing, as well as the cost of the ART, was covered by NAPHA (although, again, with discretion on the part of the hospitals for copayments). All other inpatient and outpatient care for PHA was covered by SSS. As of August 2004, the SSS includes access to ART as part of its care package for PHAs. All SSS patients being treated under NAPHA will thus be transferred to SSS (about 13,000). Guidelines for treatment (including the choice of drug regimens for first-line treatment) are purported to be similar for SSS and NAPHA. The CSMBS covers all PHA care including ART and associated monitoring and testing.

Trends in AIDS Expenditure

According to the National AIDS Accounts (Teokul and others 2005), total health expenditure on HIV/AIDS increased from B 2.996 billion in 2000 (US\$74.4 million) to B 4.188 billion in 2003 (US\$101.3 million). The largest increases in spending during this period came from the ART program (which more than tripled in spending) and from outpatient care (table 2.8). In response, the share of total AIDS

Table 2.8 National AIDS Expenditure by Function, 2000–2003

<i>Functions</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Current health spending (B million)	2,690	2,922	3,154	3,999.6
Inpatient care	687.1	715.7	432.5	431.6
Outpatient care	836.5	928.4	1,010	1,033
ART	606.9	797.1	1,242.9	2,099
PMTCT	210.8	188.7	184.2	140.1
VCT	28.5	27.6	24.9	39.5
Blood safety	84.3	84.3	84.3	84.3
Condom program	49.4	35.5	69.7	42.2
AIDS education	21.7	36.2	29.5	41.3
IDU harm reduction	100.2	28.1	59.3	73.4
Surveillance	19.1	18.0	16.9	15.2
Program administration	45.5	63.2	—	—
Health care–related expenditure (research and development, training)	201.1	104.9	5.49	102.7
Total (B million)	2,996.0	3,312.4	3,253.5	4,188.0
Total (US\$ million)	74.4	70.4	75.9	101.3

Source: Teokul and others 2005.

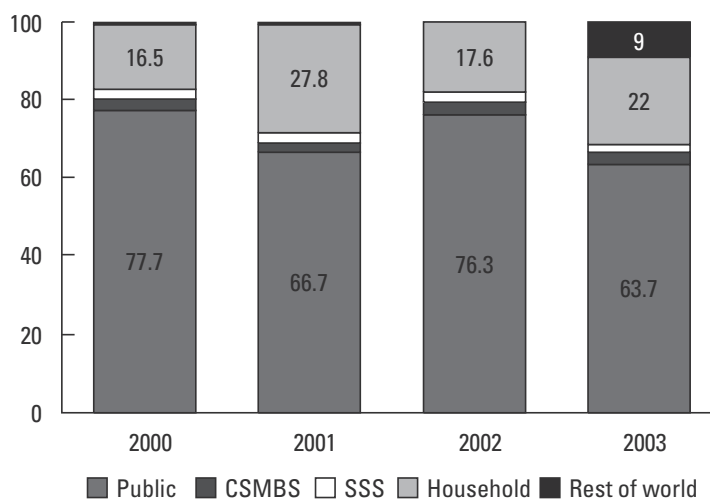
Note: — = not available.

expenditure going to ART increased from 20.3 percent in 2000 to 50.1 percent in 2003. Jointly, ART and treatment of opportunistic infections account for 85.1 percent of total AIDS spending. The share of spending going to prevention activities has declined sharply, from 9.3 percent in 2000 to 5.1 percent in 2003, but the level has remained roughly constant in current prices. Within the prevention budget, the sharpest decline in both share and levels has occurred in harm reduction activities for IDUs.

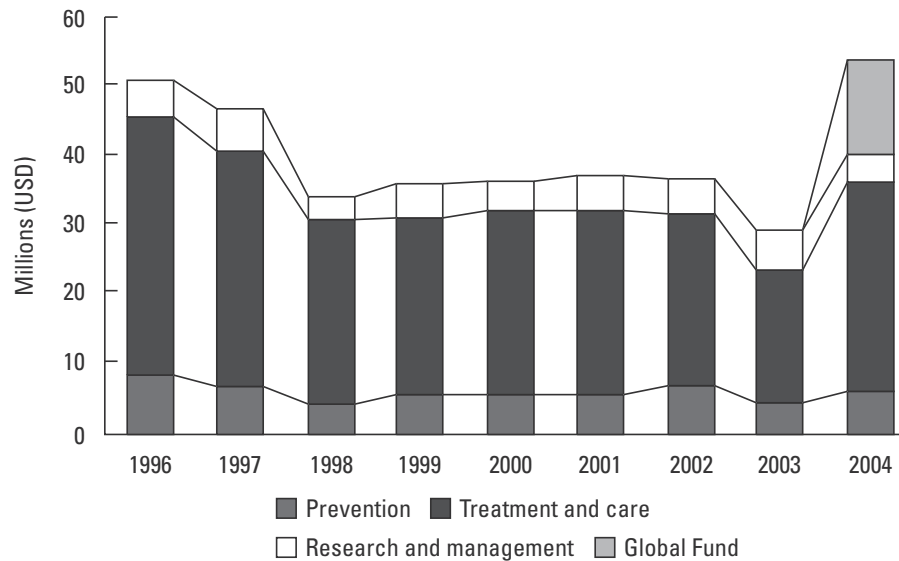
Sources of Financing

Most expenditures on HIV/AIDS have been financed from public budgetary sources, which accounted for about 65 to 80 percent of total AIDS expenditure during 2000 to 2003 (figure 2.9). The share of financing coming from the two main health insurance schemes, SSS and CSMBS, has remained stable at about 2.5 percent and 3 percent, respectively, for the same period. However, the share of spending by SSS is expected to increase; the scheme recently started to cover ART. Under this new policy, about 13,000 patients are expected to shift from NAPHA to SSS. Household out-of-pocket spending has also played a significant role in financing AIDS expenditures, accounting for 27 to 28 percent of total AIDS spending. Other donor sources played a negligible role until 2003, when resources from the GFATM started to kick in, raising the share of financing by external sources to about 9 percent of the total.⁹

Figure 2.9 Sources of HIV/AIDS Program Financing, 2000–2003



Source: Teokul and others 2005.

Figure 2.10 National AIDS Budget Allocation, 1996–2004

Source: MOPH, National Prevention and Alleviation of AIDS Budget Allocation by the Royal Thai Government 2004; Bureau of AIDS, TB, and STI at MOPH 2004; MOPH 2004.

National Budget Allocations for AIDS Prevention and Treatment

Figure 2.10 shows the evolution of the national AIDS budget for the period 1996–2003. The patterns in the budget allocation parallel those reflected in the National AIDS Accounts—namely an increase in the level and share of expenditures on treatment and care, of which the largest share is due to ART, and a slight reduction in the share and level of prevention spending.

Notes

1. HIV prevalence refers to the stock of existing infections at a point in time; HIV incidence refers to the flow of new HIV infections at a given period of time. Greater access to ART has changed the dynamics of the AIDS epidemic. HIV prevalence can decline either with more deaths among AIDS patients or with fewer new infections among the population. Successful scale-up of ART would increase HIV prevalence as a result of both delays in AIDS deaths and increased life expectancy with treatment. In the era of universal access to ART, incidence rate is a better measure of prevention success than prevalence rate.

2. On average in Thailand, the delay between infection with HIV and the onset of AIDS is 7 to 10 years (see chapter 3).

3. This scarcity is unfortunate because these socioeconomic determinants of HIV infection are also likely to affect demand for voluntary counseling and testing and ART, as well as have an influence on adherence.

4. This section draws heavily from an earlier World Bank study (World Bank 2000); from a background paper on policy development prepared by the Bureau of AIDS, Tuberculosis, and STIs, the Department of Disease Control of the Ministry of Health (Thanprasertsuk and others 2004); and from the UNDP thematic Millennium Development Goal report on AIDS (Phoolcharoen and others 2004a).

5. The HIV surveillance survey was originally carried out twice a year, but since the decline in new infections in 1995, it has been conducted only once a year (in June) among five major target groups. At the time of writing, the most recent survey had taken place in June 2003.

6. This section draws on Duncombe (2004) and Thanprasertsuk (2004).

7. The price of GPO-vir has not changed since 2002, unlike the prices of other generic triple-drug combinations produced by manufacturers in India.

8. A second round of the Thai physicians' survey was carried out in January 2005 at the annual Thai Red Cross and HIV-NAT conference. The data have been processed but still need to be analyzed.

9. Although the World Bank has been a major funder of AIDS prevention interventions, Thailand has never sought World Bank financial support for AIDS prevention or treatment.