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HIV/AIDS Prevention in Thailand: Success and Challenges

Wiput Phoolcharoen

Thailand's human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) epidemic is one of the most extensively documented of any developing country. Thailand has made substantial progress in the fight against HIV/AIDS because of strategies and policies for prevention that were initially based on research and evaluation and then received the necessary level of commitment to implementation and financing. Sexual behaviors have changed significantly, with condom use increasing and visits to sex workers decreasing (*1*). The spread of HIV has been slowed dramatically but not before close to a million people were infected (*2*).

A country's response to the epidemic is influenced to a great extent by the information available. Modifications of health and social services to cope with the evolving epidemiological trends of disease are vital to the success of HIV prevention. The first few AIDS cases in Thailand were in men who had sex with men, but by 1988, HIV was detected in intravenous drug users. Findings from the first round of HIV sentinel sero-surveillance in 1989 showed that heterosexual transmission (from commercial sex workers) would be the predominant mode of transmission. This first sentinel surveillance alerted the public so that HIV/AIDS control became national policy by 1990 (*3*).

In 1990, the first behavioral study at the national level, the Survey of Partner Relations and Risk of HIV Infection, was conducted, and it demonstrated the pervasive extent of risk behavior throughout Thai society (*4*). The result was that policy-makers allowed HIV/AIDS warning messages to be publicized through all kinds of media. They were aired regularly and repeatedly on television as part of the national strategy in 1991 to minimize transmission of HIV. The education and prevention messages were chosen to do more than just suggest measures to avoid infection. These messages also defined characteristics of people who were considered to be substantial risks for transmitting HIV (*5*).

In 1991, all government-sponsored sexually transmitted disease (STD) clinics began to promote condom use in the commercial sex setting. The "100% condom program" enlisted the cooperation of sex establishment owners and sex workers to encourage all clients to use condoms when obtaining sex. The government supplied almost 60 million free condoms a year to support this activity (*6*).

School education on AIDS was initiated in 1990. At this time, the Thai HIV/AIDS research community was also extremely active in conducting quantitative and qualitative studies of risk behavior and its determinants. These studies demonstrated that the idea of individual risk that had been dominant in the beginning of the epidemic was too narrow to address the underlying social, cultural, and economic forces driving the epidemic in Thailand (*7*–*9*). Thus, the concept of individual risk was broadened to include the influence of the social environment. Conventional AIDS education evolved to foster life-skills empowerment in Thai youth rather than behavior modification, so that their culture, peer pressure, and norms would promote safer sex behavior.

Also of note is the important role currently given to people with HIV/AIDS as an essential human resource for prevention and care, rather than viewing them as a potential reservoir or unfortunate consequence of the epidemic, as was often the case in earlier responses (*10*). The collaboration between groups of people with HIV/AIDS and the national program has been enhanced so that they can be active partners in the planning and implementation of a wide range of programs from national to community levels.

A major contributor to the Thai program's impact has been the willingness of the government to alter strategies and policy as knowledge of the extent of risk behavior grew and the social, economic, and cultural roots of the epidemic were understood. This willingness helped to illuminate the role that each sector of society had to play in the response. Thus, implementation has been expanded from the public health sector to the social and economic sectors. The strategic alliances have included nongovernmental organizations, private businesses, and community organizations that have worked as equal partners with the government (*10*).

There has also been an evolution in the funding of our efforts from international agencies to government and local funding. The Thai government's AIDS budget in 1996 expanded to cover 91% of all the expenses in AIDS programs in the country.

Evidence of Success

The changing trend of HIV infection in the general population is shown by two sets of data. First is the Royal Thai Army's information on the HIV infection rate among its roughly 60,000 annual military conscripts, selected by lottery from 21-year-old Thai males. The rate started to increase steadily from 0.5% in 1989 to a peak of 3.7% in mid-1993 before leveling off at 1.9% in 1997 (*11*). The second source of data is the sero-surveillance tests of the Division of Epidemiology in the Ministry of Public Health, which have been conducted on samplings of pregnant women in all 76 provinces yearly since 1989. The HIV infection rate in pregnant women was about

The author is in the Department of Communicable Diseases Control, Ministry of Public Health, Tivanont Road, Amphur Muang Nonthaburi 11000, Thailand.

0.5% in 1990, then increased to peak at 2.4% in 1995, and declined to 1.7% in 1997 (*12*).

Cohort studies also show a decrease in the incidence of infection. The military conscripts' HIV incidence rate fell from 3 per 100 person-years between 1991 and 1993 (*13*) to 0.3 per 100 person-years in 1995 (*14*). A cohort of repeat blood donors in the northern provinces had a decrease in incidence rate from 1.7 per 100 person-years in 1989 (*15*) to 0.5 per 100 person-years in 1994 (*16*).

National surveys of sexual behavior illustrate that both exposure to extramarital sex and sex with commercial sex workers decreased from 22% in 1990 (*4*) to 10% in 1997 (*17*). This finding implies that male abstinence from risk behavior may have decreased the number of individuals being infected by 50%.

A sequential study in the Bangkok metropolitan population has confirmed that clients of STD clinics, factory workers, and vocational students had a lower rate of sex with commercial sex workers in the past year relative to the period from 1993 to 1996 (*18*). Furthermore, the percentage reporting sex with a nonregular sex partner other than commercial sex workers in 1997 decreased relative to the 3-year period before 1996.

A study of three cohorts of new military conscripts in the six northern provinces from 1991 to 1995 reflected two crucial changes in sexual behavior (*1*). The first is the decrease in the rate of conscripts having sex with commercial sex workers from 57.1% in 1991 to 23.8% in 1995. The second is that individuals who continued to have sex with commercial sex workers increased their condom use from 61% of the cohort in 1991 to 92.6% in 1995.

The increased use of condoms by commercial sex workers has been confirmed by a survey in Bangkok in which five cross-sectional studies were conducted from 1993 to 1996 (*18*). The reported condom use in the last sex exposure of direct sex workers (individuals working in brothels) increased from 87% in 1993 to 97% in 1996. For the indirect sex workers (working, for example, in massage parlors), condom use increased from 56% in 1993 to 89% in 1996.

These data demonstrate that changes in sexual behavior have occurred among vulnerable individuals who act as a bridge between a high-risk group and the general population. This change has contributed substantially to the declining HIV incidence rate in the general population. However, the Thai HIV epidemic is continuing to evolve into an endemic situation that will threaten the health and social infrastructure of the country. That is why more effective prevention, such as HIV vaccine development, is critical for future strategies.

Challenges

In contrast to the declining trend of HIV infection in the general population, the prevalence of HIV is still as high as 30 to 40% in intravenous drug users and 20 to 30% in female commercial sex workers (*12*), which are areas where more intensive intervention efforts are needed. Even though the prevention program has continued its progress, the HIV/AIDS burden, both in term of social and health costs, is increasing. The future health burden has been estimated in projections of the numbers of AIDS-related deaths, HIV-infected infants, and HIV-related tuberculosis cases (*2*). The number of AIDS-related deaths is expected to increase rapidly to around 70,000 cases per year in 2000 and then increase at a slower rate until 2010. This projection may represent a worst-case scenario as social and health care for HIV-infected individuals has improved since 1995 and the prevention of perinatal transmission is expected to improve. However, it will be difficult to alleviate the social impact from, for example, the increasing numbers of children orphaned by AIDS fatalities and families affected by HIV/AIDS. It has been estimated that by 2000 the cumulative number of those under 15 years of age orphaned by AIDS fatalities will be about 95,000 (*2*).

In the midst of these challenges, Thailand has been hit by the Asian financial and economic crisis. The financial turmoil from August 1997 to the end of the year caused by instability and speculation in the Thai currency market has resulted in the population and the government seeing a lack of funds. This crisis has become our latest challenge to overcome.

The devaluation of Thai currency resulted in bankruptcy for many investors who financed loans from abroad (*19*). Most of the industries and entrepreneurs have been hit by the economic crisis, which has resulted in an increase in unemployment to 1.1 million, or 3.5% of laborers, at the end of 1997. In 1998, it is anticipated that 1.8 million laborers, or 5.6% of the labor force, will be unemployed (*20*). This unemployment may result in a wide range of social crises, such as increasing crime in the city, as well as worsening economic situations for women and children, which may lead to unsafe behavior. At the same time, the upsurge in numbers of migrant laborers entering Thailand illegally as a consequence of warfare, economic problems, and political instability in neighboring countries still continues. It has been estimated that in 1997 nearly 1 million laborers migrated across the border. This migration also fuels the rapid spread of the epidemic.

For AIDS-related program managers, it is a difficult time because the budget of the national AIDS program has been cut from 2 billion Baht (50 million US$) in 1997 to 1.3 billion (26 million US$) Baht in 1998. The costs of continued surveillance and preventive measures continue to rise, which has limited the scale of our preventive program and makes the future uncertain.

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