EXECUTIVE SUMMARY
Thai Working Group on HIV/AIDS Projection, Jan 31, 2001

Background – The Need for Projections

Although Thailand has had substantial success in HIV prevention efforts, close to 30,000 new infections continue to occur each year. At present almost three-quarters of a million people in the Kingdom are living with HIV or AIDS creating serious demands for care and social support. Thus, the Ninth Economic and Social Development Plan needs to be based on realistic assessments of what is required to improve the effectiveness of prevention efforts while mobilizing the resources needed to provide appropriate care and support for those living with HIV and AIDS and their children and parents who are affected by the AIDS epidemic. To provide the information needed by Thai national planners, the AIDS Division of the Ministry of Public Health, the NESDB, UNAIDS and USAID have supported the development of a new model and a new set of HIV/AIDS projections for use in preparing the Ninth National Economic and Social Development Plan. This executive summary presents the most important findings of these projections.

The Thai Epidemic Today – Impacts of Changing Behavior

The current and future state of the Thai epidemic

Figure S - 1 shows the number of HIV infections over the course of the epidemic assuming behaviors remain as they are today through the end of the Ninth National Plan. From this baseline scenario, the state of the Thai HIV/AIDS epidemic today is:

- 984,000 people (951,000 adults and 33,000 children) have been infected with HIV in Thailand since the start of the epidemic.
- 289,000 of these people have subsequently died of AIDS.
- 695,000 people are currently living with HIV and AIDS in the country.
- 29,000 new infections will occur this year of which 4,200 are children
- 55,000 Thais will develop serious AIDS related illnesses this year requiring medical care and approximately the same number will die of AIDS complications.

These projections show:

- Approximately 2 percent of Thai men and 1 percent of Thai women are living with HIV.
- Infection levels in the adult male population will remain above 1.5 percent through the end of the Ninth Plan.
- Each year of the Ninth Plan over 50,000 Thais will die from AIDS related causes.
- Over 90 percent of these AIDS related deaths will occur in people aged 20-44, the most productive sector of the workforce.
- Unless prevention efforts are sustained at a high level, the epidemic could quickly regain momentum and start to increase rapidly.
Changes in risk behavior and reduction in new infections

The Thai national HIV/AIDS response has substantially changed the levels of risk behavior in the country:

- The percentage of adult men visiting sex workers annually has fallen from almost one-quarter of the population to roughly ten percent, and
- Condom use when visiting sex workers has become the norm.

The model finds that these behavioral changes, along with the resulting reduction in other sexually transmitted diseases, have reduced the number of new HIV infections each year from almost 143,000 in 1991 to 29,000 in 2000. But while commercial sex largely determined the course of the Thai epidemic in the early 1990s, producing 85 percent of new infections in 1990, the success of condom promotion efforts for sex workers and clients has now made other modes of transmission important. The model shows that in the year 2000, one-fifth of new infections were coming from needle sharing among drug users, while one-half involved transmission between husband and wife—only 16 percent were now attributable to sex work. These changes highlight a need for expanded prevention efforts to address these increasingly important modes of transmission, while simultaneously sustaining at a high level the essential efforts to keep HIV transmission through sex work at low levels. Maintaining these lower levels of transmission in sex work is not an easy task. It requires a serious and continuing effort to ensure that heterosexual risk reduction programs evolve and are expanded to
deal with the ongoing shift from direct to indirect sex work sites, which are more difficult to reach with prevention efforts.

**The Need for Vigilance - Sustaining the Success**

But while Thailand’s HIV/AIDS prevention efforts have paid great dividends, there is no room for complacency. Thailand’s HIV/AIDS response has been a comprehensive multisectoral effort. It has mobilized the various sectors of society at all levels (national, provincial, district, and village) to respond to the epidemic. However, should the sense of urgency be lost and these efforts begin to falter at any level or should men no longer perceive significant risk in visiting sex workers, condom use rates could begin to fall and the epidemic could begin to grow rapidly again. The recent rise in seroprevalence among pregnant women in national surveillance data and continuing rises in seroprevalence among young men in the South and in Bangkok may be the effects of such a “relapse” and the situation needs to be monitored closely. Unfortunately, the last national level behavioral survey was done in 1997 and it is difficult at present to assess behavior change since that time or the impacts of the Asian economic crisis on HIV/AIDS prevention efforts. Thus, given recent epidemiological evidence, it is possible that the epidemic is once again on the rise as complacency has set in and the intensity of prevention efforts has slowed.

**Figure S - 2. Effects of failure to sustain high levels of condom use in sex work – rapid epidemic regrowth (Figure assumes condom use falls to 60% from 85% starting in 1998).**

The model makes clear the serious consequences of any such failure to sustain prevention efforts. Figure S - 2 shows the effects of condom use falling to 60 percent in 1998 – the epidemic once again begins growing explosively as it did in the early 1990s. With 2 percent of adult Thai males living with HIV, any significant drop in condom use will certainly lead to a resurgence of the epidemic. Thus, intensive
multisectoral prevention efforts must be sustained and further expanded to cover other increasingly important forms of transmission, even as care and support needs create greater demands on resources through the period of the next national plan.

**Results of Projections – Five Scenarios for Policy Development**

Five scenarios, that is possible alternatives, for the future of the epidemic were designed to compare the effects of different levels of program effort and budget:

**Scenario 1 - Baseline** – all behaviors remain as they are in the year 2000. That is:
- Approximately 10 percent of adult males visit sex workers annually
- Condom use in commercial sex remains at approximately 85 percent
- Sexually transmitted diseases remain at current levels
- Needle sharing among drug users stays the same levels as in 2000.

**Assumption:** effort levels and budget stay where they are in 2000.

**Scenario 2 – Heterosexual Risk**
- Programs for risk reduction in commercial sex are strengthened. In this scenario by the end of the Ninth Plan, only 5 percent of males visit sex workers and 90 percent use condoms.

**Assumption:** budget and resources are provided to ensure ready access to condoms, promote norms of not visiting sex workers among the young, and strengthen the 100 percent condom program efforts in indirect sex sites.

**Scenario 3 – Heterosexual Risk + IDU (Injecting Drug Users)**
- In addition to strengthening programs for sex work, programs are introduced to reduce needle sharing by 50 percent among drug users.

**Assumption:** additional budget and resources over scenario 2 are provided to support outreach and peer education for injecting drug users in communities, strengthen primary prevention efforts for drug use, and expand clinic programs to reduce needle sharing.

**Scenario 2 – Heterosexual Risk + IDU + MTCT (Mother to Child Transmission)**
- In addition to strengthening programs for sex work and IDU, short course AZT (one month) is implemented for all HIV positive pregnant women by 2005. This reduces the number of children infected by their mothers by 50 percent.

**Assumption:** additional budget and resources over scenario 3 are provided to implement voluntary counseling and testing for all pregnant women and provide maternal AZT.

**Scenario 5 – Heterosexual Risk + IDU + MTCT + Couples**
- In the final scenario all of the activities in the preceding scenario are undertaken along with efforts to promote voluntary HIV counseling and testing and encourage condom use in couples where one partner is infected with HIV. These efforts are assumed to produce 30 percent condom use among couples with one partner living with HIV.
Assumption: additional budget resources are provided over scenario 4 to strengthen access to voluntary HIV counseling and testing before and after marriage and to promote condom use within infected couples.

The results of these 5 scenarios are shown in Figure S - 3 and in Table S-1.

![Graph showing cumulative HIV infections](image)

**Table S - 1. Comparison of HIV infections between years 2000 and 2006 in the 5 scenarios at the end of the Ninth National Economic and Social Development Plan.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Scenario 1 Baseline</th>
<th>Scenario 1 Baseline</th>
<th>Scenario 2 Het</th>
<th>Scenario 3 Het+IDU</th>
<th>Scenario 4 Het+IDU +MTCT</th>
<th>Scenario 5 Het+IDU +MTCT +Couple</th>
</tr>
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<tbody>
<tr>
<td>2000</td>
<td>29,000</td>
<td>17,000</td>
<td>14,800</td>
<td>11,800</td>
<td>10,400</td>
<td>9,100</td>
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<td>2006</td>
<td>4,190</td>
<td>2,730</td>
<td>2,680</td>
<td>2,670</td>
<td>1,330</td>
<td>1,290</td>
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<tr>
<td>Total number of new HIV infections in year</td>
<td>33,000</td>
<td>53,400</td>
<td>53,200</td>
<td>53,200</td>
<td>46,800</td>
<td>46,700</td>
</tr>
<tr>
<td>Total pediatric infections in year</td>
<td>beginning through year</td>
<td></td>
<td></td>
<td></td>
<td></td>
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