

Responding to HIV/AIDS in the East Asia and Pacific Region

A Strategy Note for the World Bank

East Asia and Pacific Human Development Sector Unit
The World Bank

December 2003



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AND PACIFIC REGION**

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**Michael Borowitz, Elizabeth Wiley,
Fadia Saadah and Enis Baris**

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Health, Nutrition and Population (HNP) Discussion Paper

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Responding to HIV/AIDS in the East Asia and Pacific Region *A Strategy Note for the World Bank*

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The paper was prepared in December 2003 for the East Asia and Pacific (EAP) region and in response to the increasing importance of the issue in the regional and since HIV/AIDS is a corporate priority of the World Bank, Washington, D.C.

Abstract: With almost half the world's population, Asia will determine the future of the global HIV/AIDS pandemic. This paper outlines a strategic direction for the World Bank in its multisectoral response to HIV/AIDS in the East Asian and Pacific region in light of this challenge. There is a significant risk of a large-scale HIV/AIDS epidemic in the region. And many countries have already begun the fight: lessons have been learned in various contexts, including experiences from Thailand, the Philippines, Indonesia, and Papua New Guinea. Governments, civil society, and other partners are key players in this response. However, with new methods of funding, issues of capacity, and an evolving epidemic, responses must take into account five key challenges: political commitment and multisectoral support; public health surveillance and monitoring and evaluation; prevention; care, treatment and support; and health services delivery.

This paper identifies options for how the World Bank, in close partnership with government, civil society and other partners, can assist in the response at the country and regional levels. The paper stresses the need for country specific strategies to address the diversity of issues within the region. It highlights the importance of analytic and advisory work in this area to support ongoing and planned programs as well as capacity building efforts. Lending (granting) will be demand driven, based on the needs in various countries and taking into account what governments and other partners are doing. We will also work towards strengthening the collaboration with various sectors and mainstreaming HIV/AIDS into other lending projects, such as education and infrastructure. Regional work is also important. This will include knowledge sharing initiatives and development of regional tools that can be utilized by several countries in coordination with partners, analytic work, and other similar programs.

Keywords: HIV/AIDS, East Asia and Pacific, strategy, World Bank.

Disclaimer: The findings, interpretations and conclusions expressed in the paper are entirely those of the authors, and do not represent the views of the World Bank, its Executive Directors, or the countries they represent.

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FOREWORD

Combating the spread of HIV/AIDS presents the international community with one of its most difficult global challenges. The tragedy now unfolding in sub-Saharan Africa does not reflect the extent of the disease's devastating effects on populations around the world and there is now growing concern that the countries of East Asia and Pacific Region may share a similar fate unless timely and appropriate measures can be taken.

This strategy paper is intended to help chart the nature of the epidemic in East Asia and the Pacific, to survey some of the successful practices being pioneered in its cities, provinces and countries and to offer suggestions as to how the distinct characteristics of the HIV/AIDS epidemic faced in each country can be addressed by effective and comprehensive responses.

This regional strategy recognizes that the challenge posed by HIV/AIDS is further complicated by changing social patterns, weak health systems, high rates of tuberculosis and large populations engaged in high-risk behaviors. Within this context, responses must take into account five key challenges: political commitment and multisectoral support; public health surveillance and monitoring and evaluation; prevention; care, treatment and support; and health services delivery.

The sheer scale of the HIV/AIDS epidemic will require ongoing, dynamic cooperation between a broad coalition of stakeholders. It is hoped that this strategy – drawn from the World Bank's experience as well as that of the many partners with whom the Bank is working – will help inform future discussion and action.

Jaemal-ud-din Kassum

Vice President

East Asia and Pacific Region

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ASEAN	Association of Southeast Asian Nations
AusAID	The Australian Government's Overseas Aid Program
CAS	Country Assistance Strategy
CDC	Centers for Disease Control and Prevention (United States)
DFID	Department for International Development (United Kingdom)
DOTS	Directly-observed treatment, short course
EAP	East Asia and Pacific
GFATM	Global Fund for AIDS, Tuberculosis, and Malaria
HIV	Human Immunodeficiency Virus
IDU	Injecting drug user
OECD	Organisation for Economic Co-operation and Development
NGO	Nongovernmental organization
STI	Sexually Transmitted Infection
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

KEY PUBLIC HEALTH DEFINITIONS

Antiretrovirals: Drugs that inhibit the replication of HIV—generally three drugs in combination—and thus extend life expectancy.

Behavioral surveillance: Tracking trends in behavior over time that carry a risk for HIV infection, such as sharing needles or having unprotected sex with multiple partners.

Epidemic: The occurrence in a community or region of an illness or group of illnesses of similar nature, clearly in excess of normal expectancy or in excess of the endemic level.

Incidence rate: The number of new cases of a disease over a defined period of time, generally a year, divided by the population at risk of acquiring the disease during the same period of time.

Opportunistic infections: As HIV infection decreases human immunity, individuals are more susceptible to other infectious diseases, which are often the proximate cause of death.

Pandemic: A disease epidemic across a wide area, usually crossing international boundaries and affecting a large number of people.

Prevalence rate: The total number of cases of disease at a certain time divided by the population at risk of having the disease.

Reproductive rate: The average number of new infections caused by one infected individual in a native population. If the rate is greater than one, a self-sustaining epidemic is possible; if it is less than one, the infection becomes extinct.

Sentinel HIV surveillance: Measuring trends over time in the prevalence of HIV in defined populations with different levels of risk behavior. These populations include those with high-risk behavior such as commercial sex workers, injecting drug users, and men who have sex with men. They may also include populations more representative of the general population, such as pregnant women, prisoners, and others, depending on the culture.

Annex 2 provides a guide to infectious disease epidemiology for understanding the trajectory of an HIV/AIDS epidemic.

Executive Summary

With almost half the world's population, Asia will determine the future of the global HIV/AIDS pandemic. If prevalence rates in China, Indonesia, and India increase to numbers similar to those seen in Thailand and Cambodia, the rate of HIV/AIDS would double globally. Such growth would be devastating for individuals—and for the region's health systems, economies, and social fabric. HIV/AIDS is therefore a multisectoral development challenge and, consequently, a corporate priority for the World Bank.

This paper outlines a strategic direction for the World Bank in its multisectoral response to HIV/AIDS in the East Asian and Pacific region. It describes the risk of a large-scale HIV/AIDS epidemic in the region. It also spells out what can be done to avert the growth of HIV—and what government, civil society, and other partners are doing. And it identifies how the World Bank can assist at the country and regional levels. The World Bank will work with countries, civil society, the private sector, donors, and other key players to formulate country-specific strategies that try to respond to the needs of the population.

CHARACTERISTIC OF HIV/AIDS IN THE EAST ASIA AND PACIFIC REGION

In trying to predict the course of the epidemic in East Asia, preconceived notions of the trajectory of HIV/AIDS in other parts of the world may not be applicable. East Asia is likely to experience concentrated epidemics among groups that practice high-risk behaviors, with spread to their partners and their children. This could lead to large epidemics, because a relatively high percentage of the population engages in high-risk behaviors.

UNAIDS predicts a staggering 10.8 million new cases of HIV/AIDS by 2010. But this projection is based on limited data. And before accurate projections can be developed, more needs to be known about how many people are affected by the disease and how many people practice behaviors that put them at risk.

In the East Asia and Pacific region, the epidemic generally begins at a low level among commercial sex workers regularly having unprotected sex with clients, injecting drug users sharing needles and syringes, or men having unprotected sex with men. As HIV spreads among them, it becomes more heavily concentrated in these populations. And it could then spread among these (often overlapping) populations—and possibly to the general population.¹ When HIV has come close to saturation in populations with high-risk behaviors and HIV rates grow to greater than 1 percent among the general population, the epidemic is considered to be generalized. The trajectory of growth depends on the size of the at-risk populations and their overlaps, but there is significant potential for growth. In this region, the data suggest that countries are categorized² as:

¹ At the different stages, various risk behaviors will be the leading factors in driving the epidemic. In a majority of EAP countries such as in Vietnam, China, Indonesia, Myanmar, at the very beginning, IDU was the driving force for the HIV epidemic, as it was responsible for the sharp increase of HIV in these countries. At least in the foreseeable future, the dual HIV epidemic among CSWs and IDUs will be a key characteristic of HIV in EAP Region.

² This is the official classification of UNAIDS and WHO. See UNAIDS/WHO, 2000, *Second Generation Surveillance for HIV: the next decade*. It builds on the classification of the World Bank in *Confronting HIV/AIDS* with one significant difference: in the WB classification, the epidemic is not generalized until

- **Low level:** Mongolia, Lao PDR, Philippines, Timor Leste, Pacific Island Member States.³
- **Concentrated:** Papua New Guinea, China, Indonesia, Vietnam, Malaysia.
- **Generalized:** Thailand, Cambodia, Myanmar.

The above is based on the 2002 UNAIDS data. Other sources of information may lead to a slightly different classification.

Because AIDS makes people more susceptible to opportunistic infections, it would trigger concomitant growth in tuberculosis (TB) in the region, which already accounts for almost a third of the global TB burden. Given these extremely high rates of TB, increases in HIV would lead to a dangerous dual epidemic. Globally, tuberculosis has already become the leading cause of death among people with HIV, accounting for about a third of the AIDS deaths worldwide.⁴

Increases in HIV/AIDS and tuberculosis would boost demand for health services and put added stress on already overburdened public health systems, particularly in providing services to the poor. The effects would extend beyond the health sector, as families would lose wage-earners and spend their limited resources on medical care. HIV could also disrupt the social fabric by breaking up families, creating orphans, and forcing more households into poverty. In general, HIV/AIDS could lead to a significant reduction in human capital, by taking the lives of youths, and to slower economic growth. HIV/AIDS is thus a threat to development and to reaching the Millennium Development Goals.

LESSONS FROM THE REGION

In a region as diverse as EAP, there are many lessons that can be learned. Some highlights of the fight against HIV/AIDS in various contexts include experiences from Thailand, the Philippines, Indonesia, and Papua New Guinea.

In the face of a major epidemic, Thailand led the way in prevention programs, mobilizing civil society and building political commitment. By 1992, 31 percent of commercial sex workers were HIV-positive, and there were signs of HIV spreading to the heterosexual population. The national response was strong, swift, and comprehensive, thanks to strong political commitment from the King and Prime Minister. This multi-sectoral response was complemented by a sophisticated system of surveillance, including serological surveillance of the general population, sentinel surveillance of groups practicing high-risk behaviors, and behavioral surveillance monitoring risky behavior. This information was backed by strong leadership to support HIV-prevention programs among commercial sex workers and their clients. The result: a profound decline in high-risk behavior, reducing new cases of HIV and eventually decreasing the level of HIV in the population.

But HIV/AIDS transmission remains high among injecting drug users in Thailand. And prevention programs have been cut back, particularly since the Asian economic crisis in 1998. There is some concern that the behavior changes early in the epidemic could diminish as the perceived risks decline and prevention programs reach fewer people.

it reaches 5 percent prevalence in the general population. In this paper, a generalized epidemic is defined as one that reaches greater than 1 percent in the general population.

³ The Pacific Island Member States include: Fiji, Kiribati, Marshall Islands, the Federated States of Micronesia, Palau, Samoa, Solomon Islands, Tonga, and Vanuatu.

⁴ UNAIDS, 2000.

The Philippines provides another success story for the region but in a completely different context. The epidemic in the Philippines has been stemmed by a set of contextual factors (differing commercial sexual practices, low rates of injecting drug use, high rates of circumcision, and fewer ulcerative sexually transmitted infections). And the country's measured response to the epidemic—national law reform to reduce the likelihood of discrimination, widely available voluntary counseling and testing services, and a fair sentinel surveillance system—have helped to keep the prevalence low and stable.

Indonesia points to the need to maintain political commitment to prevention in the low-level stage of the epidemic. In 1996 the government recognized the importance of an early intervention to prevent an epidemic and mobilized initiatives and funding. Several programs were designed to respond to the projected epidemic, including a Bank-funded project that became effective in 1996. However, many of the efforts were not sustained or scaled up. For example, the World Bank project was closed in 1999 without implementing many of its planned activities. Several factors played into this, including the severe economic crisis and limited capacity. Responsibility for HIV/AIDS was split into several parts of the Ministry of Health, and there was limited coordination. Capacity among nongovernmental organizations for preventive activities and support from some sectors of civil society, particularly religious groups, was also limited.

Even so, HIV prevalence remained low, and the predicted epidemic did not materialize. But the trajectory of HIV/AIDS in Indonesia has since changed, with HIV prevalence rates of more than 60 percent among injecting drug users in some areas of the country. Recently, government commitment appears to be increasing, and a new HIV/AIDS strategy embraces HIV prevention for groups that practice high-risk behaviors.

Limited capacity and cultural mores different from other countries in the region place Papua New Guinea at risk for an epidemic similar to those in Sub Saharan Africa. Despite numerous alerts raised in the early 1990s to the emerging epidemic, few persons in positions of leadership acknowledged HIV/AIDS as an issue of concern. After recognition of the problem, however, early efforts became difficult to sustain. The National AIDS Committee functioned only sporadically from 1988 to 1994, and efforts in the early 1990s to establish a sentinel surveillance system faltered. More recent efforts have revitalized some programming, however, to date, limited capacity in the health system, poor implementation of HIV programs in general, and a lack of human resources have hampered efforts. In addition, the breakdown of traditional methods of social control in PNG, combined with the cash economy, urbanization and greater mobility, has resulted in significant changes in sexual behavior. These factors place Papua New Guinea at risk for developing a large, heterosexual HIV/AIDS epidemic.

PARTNERS IN THE RESPONSE: GOVERNMENTS, DONORS AND BEYOND

Strong political commitment is a key element in confronting the epidemic. But resources are also important. In all countries in the region, HIV/AIDS is straining health systems. And although there has been a high level of commitment from many governments, funding has been low. The main source of funding for HIV/AIDS prevention and surveillance in the region has come from development agencies working alongside governments. The main development partners have been the World Bank, the Asian Development Bank, the UN agencies (especially UNAIDS), the large bilateral development agencies, and the Global Fund to Fight HIV/AIDS, Tuberculosis, and Malaria. Small NGOs are also offering key services and information.

The structure of those in the fight against HIV/AIDS has been changing rapidly and will have a definite impact on where and how World Bank funds will be used and needed within the region. The Global Fund channels a large amount of resources to countries that often lack full capacity to implement or support

programs. But it was not designed to assist with the implementation of programs. That places new demands on governments and donors. The Global Fund and bilateral grants are likely to support the scaling up of prevention, care, treatment, and support. But that may reduce the demand for lending and increase the demand for grants and advisory support.

FIVE KEY CHALLENGES

The East Asia and the Pacific region could avert a large HIV/AIDS epidemic if countries introduce effective HIV programs that address five key challenges:

- *Political commitment and multisectoral support.* Given the sensitivity of the disease, political commitment is key to effective HIV/AIDS programs. Preventing HIV among socially marginalized groups requires a multisectoral response, particularly an enabling legal environment with the support of law enforcement.
- *Public health surveillance, monitoring, and evaluation.* Knowledge of the exact numbers of those with HIV and those practicing high-risk behaviors is extremely limited. More information is essential to estimate the potential growth of the epidemic and to allocate resources and efforts accordingly.
- *Prevention.* Prevention has been shown to be a cost-effective method of abating the epidemic. There is a wide scope for improving HIV prevention, particularly among groups that practice high-risk behaviors (commercial sex workers, injecting drug users, men who have sex with men, and migrant workers).
- *Care, treatment, and support.* Demand is growing throughout the region for antiretroviral therapy. Treatment must also include care and support—including psychosocial support, voluntary counseling and testing, and care for the dying.
- *Health services delivery.* Prevention, care, treatment, and support have to be delivered by public health and social care systems, alongside the private sector, including NGOs. There is a definite need to build capacity to respond to the emerging needs of the epidemic.

STRATEGIC RESPONSE

The World Bank strategy responds to these challenges by developing country-specific strategies based on the needs of the country and the stage of the epidemic in the country.

- For a low-level or early-concentrated epidemic, the focus should be on surveillance and prevention. Prevention should be targeted to populations that practice high-risk behaviors, including injecting drug users and commercial sex workers, but also other groups depending on the specifics of risky behavior in a given country. Civil society can do much in reaching socially marginalized groups.
- Later, as the epidemic spreads to the general population (in late-concentrated or generalized epidemics), care, treatment, and support become more important, as does enhancing health service delivery, such as delivering antiretroviral therapy without unduly increasing resistance. It is also important to maintain an emphasis on prevention and the support for such programs. In these later stages of the epidemic, engaging the private and social service sectors becomes even more critical.

The World Bank HIV/AIDS strategy for East Asia and the Pacific will play out in analytic work, lending and grants, and regional initiatives. Assistance will be centered around the five key challenges:

Political commitment and multisectoral support

An important part of making progress in any HIV/AIDS program is using communications to build the political understanding and commitment across a broad spectrum of sectors (i.e., health, education, transport, etc.) and to increase public awareness and support for HIV/AIDS prevention programs within countries. Analytic work and lending (granting) operations will help identify key stakeholders, their relative importance, and their institutional setting. It will also assist in identifying the key sectors and help us do a better job integrating multisectoral approaches in country work.

Public health surveillance and monitoring and evaluation

Public health surveillance.

Good estimates of the number of injecting drug users and commercial sex workers and the percentage of the population visiting them do not exist in most countries. To estimate the growth of the epidemic, one needs to know the size of populations at risk and the overlaps among groups practicing high-risk behavior. This information is rarely known because it is governed by complex social taboos, with the behavior sometimes illegal and the population hidden. That makes it necessary to use several methods, including routine information systems from many sources, surveys, and qualitative research. More funding is required for regular behavioral surveillance and social science research on sexual and drug using behaviors and for increasing the capacity to conduct this research in local universities and government agencies.

Monitoring and evaluation.

A key objective is to assist countries in monitoring and evaluating the effectiveness of HIV/AIDS programs. One element of this work will be policy dialogue with governments on spending on surveillance and prevention among groups that practice high-risk behavior through the development of National Health Accounts for HIV/AIDS. We will also work with governments to develop and implement monitoring and evaluation systems including coverage of interventions for prevention and care, treatment, and support. In addition, the World Bank is assisting countries in developing approaches for monitoring and evaluation systems at the local level through the Global AIDS Monitoring and Evaluation Team.⁵

Prevention

Although prevention programs exist among groups with high-risk behaviors, they are often small pilot projects. It is important to work with governments to understand the scale needed for prevention programs to have an epidemiological impact. It is also important to understand sexual and drug using networks and their overlap to gain more knowledge concerning the potential growth of the epidemic and how to intervene effectively. There is also a risk that over time, prevention programs will receive less attention. It is essential to maintain and strengthen these interventions as a key pillar of the fight against AIDS.

⁵ Following extensive work to encourage agreement on core indicators for monitoring and evaluating HIV/AIDS programs and policies, the UNAIDS family established the Global AIDS Monitoring and Evaluation Support Team (GAMET), based at the World Bank. Other key agencies such as the GFATM, bilaterals like USAID, and technical agencies such as the U.S. Centers for Disease Control and Prevention (CDC) are part of this partnership. GAMET actively works with countries and diverse donors to strengthen monitoring and evaluation capacity at the country level, based on normative guidance from UNAIDS' Monitoring and Evaluation Reference Group. GAMET focuses, with other agencies, on helping countries to build and use monitoring and evaluation systems which will enable them to both report on progress internationally, and especially important, to identify and make tactical changes in HIV/AIDS programs and policies that improve their effectiveness.

Care, treatment, and support

Analytic work is needed to understand how to operationalize issues related to antiretroviral therapy in the context of relatively weak systems of service delivery, including the private sector. Furthermore, antiretroviral therapy needs to be embedded into a large system of care and support, including social services and care for the dying.

Health services delivery

We will work with governments to help them in the formulation of better policies for both the public and the private sectors to improve access to care, treatment, and support. This will mean that the growing demand for treatment with antiretroviral therapy, now being met in the private sector, will need to be accounted for. In addition, strengthening the coordination between TB and HIV/AIDS programs to ensure maximum effectiveness and efficiency is important. Finally, overall strengthening of the health care system is key for delivery of HIV/AIDS interventions.

WORLD BANK SUPPORT: ANALYTIC WORK, FUNDING AND REGIONAL WORK

Analytic work in the region will focus on gathering and sharing knowledge in relation to the five key challenges. This will include both country-specific and regional pieces. Our lending (granting) will need to be guided by the specific country assistance strategies and needs. We will also work towards strengthening the collaboration with other sectors and mainstreaming HIV/AIDS into other lending projects, such as those for infrastructure and education. A broad set of lending instruments and options for client countries to address the multisectoral nature of the disease and the diverse needs across the region are available. Another area where there could be added value is in the development of regional tools that can be utilized by several countries in coordination with other partners. These could include analytic work, knowledge sharing initiatives, and other similar programs. In disseminating lessons, the East Asia and Pacific region will work closely with the World Bank Institute to build institutional capacity for controlling HIV/AIDS throughout the region.

We will work in close partnerships on a regional level with other donors and agencies. With UNAIDS, we will bring together key sectors of governments and many development partners to forge strategic country and regional responses to HIV/AIDS.

SECTION 1. HIV/AIDS IN EAST ASIA AND PACIFIC REGION

The East Asia and Pacific (EAP) Region of the World Bank is the world's most populous region. In such a large and diverse area, the HIV/AIDS epidemic is as varied as the countries involved—from 12 fishermen with HIV in Tuvalu, with potentially devastating consequences for the country's fishing-based economy, to an estimated 1 million people infected in China by the end of 2002 with profound implications for the health system. As a region, EAP has an estimated 2.3 million adults and children living with HIV/AIDS, of the global burden of 42 million.⁶

CHARACTERISTICS OF HIV/AIDS IN EAP

A sense of the magnitude of the HIV/AIDS epidemic can be drawn from a rough classification based on prevalence rates which are the total number of people with the disease as a share of the population at risk (table 1).⁷ It should be noted, however, that there are numerous discrepancies in HIV data. To ensure a minimal level of standardization, numbers were first taken from 2002 UNAIDS data when possible. Other sources of information may lead to a slightly different classification (e.g., Papua New Guinea may be classified as a generalized epidemic based on recent national surveillance).

Generalized: Cambodia, Thailand, and Myanmar. HIV is close to saturation in populations whose members practice high-risk behaviors, and HIV rates are greater than 1 percent among the general population, as measured by antenatal clinic attendees.

Concentrated: China, Indonesia, Malaysia, Papua New Guinea, and Vietnam. HIV prevalence surpasses 5 percent in one or more subpopulations presumed to practice high-risk behavior, as measured by sentinel surveillance of groups such as commercial sex workers and injecting drug users, but prevalence among the general population is less than 1 percent.

Low level: Lao PDR, Mongolia, Pacific Island States, Philippines, and Timor-Leste. HIV prevalence is less than 5 percent in all known subpopulations presumed to practice high-risk behavior.

Cambodia has the highest prevalence, with an estimated 2.7 percent of the adult population living with HIV/AIDS. Myanmar is presumed to have a generalized epidemic, with an estimated 180,000–400,000 adults living with HIV, or prevalence between 0.70–1.54 percent. Thailand is next, with an estimated prevalence rate among adults of 1.8 percent.

Although this typology is useful, it paints with a very broad brush. As this classification system looks only at the national level, it can mask regional or local prevalence rates or patterns.⁸ In EAP, with huge countries like China, this is an important distinction. So this classification serves only as a broad categorization, best used with country and region-specific analysis.

⁶ Gold, 2002.

⁷ This is the official classification of UNAIDS and WHO. See UNAIDS/WHO, 2000, *Second Generation Surveillance for HIV: the next decade*. It builds on the classification of the World Bank in *Confronting HIV/AIDS* with one significant difference: in the WB classification, the epidemic is not generalized until it reaches 5 percent prevalence in the general population. In this paper, a generalized epidemic is defined as one that reaches greater than 1 percent in the general population.

⁸ FHI/UNAIDS, 2001.

Table 1 Overview of HIV/AIDS epidemic in EAP, 2001 (unless otherwise indicated)⁹

Country	Adult (ages 15-49) prevalence rate (percent)	Population (Adult population, ages 15-49) (million)	Estimated number of adults living with HIV/AIDS	HIV prevalence, selected populations, major urban areas (percent)					GNI per capita 2000 (US\$)
				Female commercial sex workers	Injecting drug users	Male patients with sexually transmitted infections	Women in antenatal care clinics ^a	Women in antenatal care clinics outside major urban areas	
Generalized									
Cambodia	2.7	13.4 (6.3)	170,000 (160,000)	26.3-31 (2000/2001)	...	8.5 (1994)	2.7 (2000)	0.6-5.7 (2000)	270
Myanmar	b ...	48.3 (25.8)	180,000-400,000	26.0-50.0 (2000)	37.1-63 (2000)	12.1-13.0 (2000)	2.0-3.5 (2000)	0.0-5.3 (2000)	390
Thailand	1.8	63.6 (36.6)	670,000 (650,000)	6.7-10.5 (2000)	39.6-50 (2000)	2.5 (2000)	1.6-1.6 (2000)	0.4-5.3 (2000)	2,020
Concentrated									
China	0.1	1,284.9 (726)	850,000 (850,000)	0.0-10.3 (2000)	0.0-80 (2000)	0.0-1.3 (2000)	0.0 (2000)	0.5 (2000)	840
Indonesia	0.1	214.8 (118)	120,000 (120,000)	Up to 2.0-27 (2002)	19-48 (2001/2002)	...	0.0 (1999)	0.0 (1996)	580
Malaysia	0.4	22.6 (11.8)	42,000 (41,000)	2.05-6.3 (1996)	16.8 (1996)	4.2 (1996)	...	0.0-0.7 (1996)	3,250
Papua New Guinea	0.7	4.9 (2.4)	17,000 (16,000)	16.0 (2002)	...	7.0 (1998)	0.2 (1995)	0.0 (1992)	670
Vietnam	0.3	79 (43.3)	130,000 (130,000)	4.2-6.0 (2002/2003)	26.8-30.4 (2003)	2.0-3.2 (2002/2003)	0.4 (2003)	0.0-0.3 (1999)	390
Low level									
Lao PDR	<0.1	5.4 (2.5)	1,400 (1,300)	1.0 (2000)	2.0	...	0.0 (1998)	...	290
Mongolia	<0.1	2.5 (1.4)	<100 (<100)	...	No reported cases	0.0 (1989)	...	...	390
Philippines	<0.1	77 (39.6)	9,400 (9,400)	0.3 (1994)	1.0	0.0 (1994)	...	...	1,020

Blank cells: Information not available.

Note: Not all countries in the EAP region are listed. These are the primary countries that will be targeted for WB HIV programming or countries of concern because prevalence rates are either high or expected to be high in the near future.

a. Antenatal care is not always indicative of prevalence in the general population (as in Indonesia, where it is not a part of regular sentinel surveillance).

b. In Myanmar, UNAIDS does not report prevalence, but it does report the estimated number of HIV cases. This gives an estimate of prevalence ranging for 0.7 to 1.54.

Source: UNAIDS: Epidemiological Fact Sheets by Country – 2002 Updates (UNAIDS & WHO); UNAIDS report on the global HIV/AIDS epidemic 2002; WHO: HIV/AIDS in Asia and the Pacific Region; (WHO, 2001); World Bank: World Development Indicators; Dave Burrows, personal communication; Khorloo, 2003; Reid and Costigan, 2002; Feng, undated; NASB/MOH, 2003; NASB, 2002; World Bank, 2003b; Pisani, Prihutomo, and others, 2003.

The prevalence rate does not tell the whole story.¹⁰ One also needs to know the number of new infections (incidence) to understand the epidemic's direction. Other keys to the severity of the epidemic are the size

⁹ There are numerous discrepancies in data on HIV. Therefore, to ensure a minimal level of standardization, numbers were first taken from UNAIDS when possible.

¹⁰ Prevalence rates (determined by the number of people newly acquiring the disease plus the number of people with the disease minus those dying) can come to a steady state at differing levels. If prevalence levels off, some might believe that this means the epidemic is under control. Although this could be true

of the population whose members practice risk behaviors and the nature of the behaviors. The main factor driving Asian epidemics is the high percentage of the population in groups engaging in risky behavior (commercial sex workers, injecting drug users) and the overlap among these groups. Many countries in the region have a large number of commercial sex workers, visited by a significant percentage of the male population. There are increasing numbers of injecting drug users, and some resort to commercial sex to fund their addiction (see Annex 5). Men having sex with men also plays a role. But without better knowledge of these groups, it is hard to fully understand the epidemic.

Regional integration can also facilitate the spread of HIV/AIDS. Though linkages between HIV and migration and mobility are complex, they are evident in many parts of the world. The most obvious factor is labor migration, with vast numbers of people traveling between and within countries. Of the Filipinos reported to be living with HIV, 28 percent are workers that have returned home after working abroad.¹¹ There are also regional networks trafficking in women and illicit drugs. These regional factors create the preconditions of high-risk behavior—behavior that can ignite an HIV/AIDS epidemic. Programs to mitigate the risks of mobility must address all stages of migration with a regional approach extending beyond country borders.

THE FUTURE OF HIV/AIDS IN EAP

Although there are limited data, predictions about the epidemic in EAP range from rates similar to those in Sub-Saharan Africa, to estimates of less than 1 percent prevalence in the general population (Annex 6).

Three predictions

- High-range predictions: EAP as the epicenter of the epidemic. The predictions of large-scale growth of Asian epidemics are based on the experience of Sub-Saharan Africa, where concentrated epidemics began in groups practicing high-risk behavior, and then HIV spread to the general population. Under this scenario, Asia is at great risk of becoming the epicenter of the HIV/AIDS epidemic in the next decade.¹²
- Low-range predictions: HIV may not be a large problem in Asia. In contrast, low-range estimates predict Asian HIV epidemics are constrained by low-risk sexual behavior in the general population.¹³ Some analysts believe that the Asian HIV epidemics will never become the generalized epidemics that are ravaging Sub-Saharan Africa. Multiple, overlapping partners and high rates of sexually transmitted diseases, which drive the Sub-Saharan African epidemics, do not exist in the region. Since risky behavior in the general population is low in Asia, HIV will stay in concentrated pockets and not spread widely through the general, heterosexual population.
- Mid-range predictions: High-risk behavior drives a moderate epidemic. The U.S. Agency for International Development (USAID) commissioned a consortium led by Tim Brown and Wiwat Peerapatinapokin to develop a dynamic model of HIV/AIDS transmission to understand the trajectory of HIV/AIDS in Thailand. The Asian Epidemic Model was used in Thailand and Cambodia where

(few people get the disease, few people die from the disease), the exact opposite could also be happening (large numbers of people get the disease, large numbers of people die from the disease).

¹¹ UNAIDS, 2002.

¹² Eberstadt, 2002.

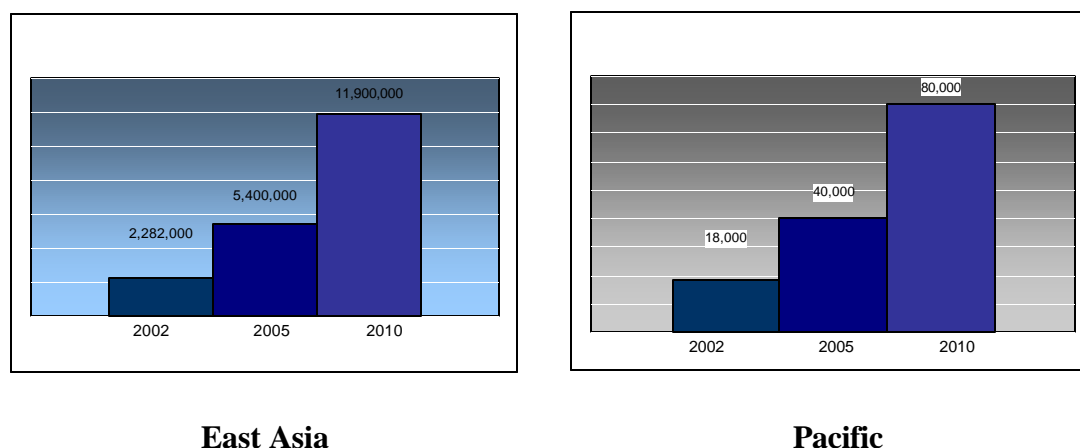
¹³ Chin, 2003.

behavioral data was available and predicted that growth of the epidemic would not be constrained by low risk behavior in the general population. The growth is driven by the high rate of high-risk behavior in the population, with reports of over 25 percent of men having sex outside of long-term partnerships.

Difficult to tell precise extent of epidemic: Call for action

Although the estimates for HIV/AIDS in the region vary widely, there is no doubt of the strong potential for the epidemic to grow in many countries, such as China, Indonesia, and Papua New Guinea. The Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates suggest that epidemics can be sizable without HIV/AIDS becoming a generalized epidemic in the entire population. It has been estimated that significant epidemics beyond 3–5 percent prevalence could occur in the adult population simply because of the size of the groups that practice high-risk behavior.¹⁴ And because many of these groups overlap, the epidemic can become self-sustaining even without generalizing to low-risk populations.

Figure 1. UNAIDS HIV projections for World Bank EAP Region



In the EAP Region, there are no large generalized epidemics with prevalence greater than 5 percent with growth sustained by heterosexual transmission in the general population.¹⁵ The main characteristic of Asian epidemics is they are *concentrated* epidemics in large populations of people practicing high-risk behaviors, with some spread to the general population. Even the generalized epidemics of Cambodia, Myanmar, and Thailand are primarily large, concentrated epidemics. Even without a generalized epidemic in the adult population, large epidemics of grave public health concern could occur, leading to an additional 11 million infections in East Asia and Pacific by 2010.¹⁶

¹⁴ Cambodia Working Group on HIV/AIDS Projection, 2002 and Thai Working Group on HIV/AIDS Projections, 2001.

¹⁵ Using the World Bank definition in *Confronting HIV/AIDS*, all of the generalized Asian epidemics would be re-classified as concentrated.

¹⁶ UNAIDS projections.

Box 1. Tuberculosis in China: A growing threat

As one of the 22 countries highlighted by the World Health Organization (WHO) as accounting for 80 percent of the global burden of tuberculosis, China has the second highest number of cases, though they have decreased significantly since China introduced DOTS (Directly Observed Therapy, Short-Course) as part of its national tuberculosis control program. The World Bank has been a key development partner in providing support for the pilot implementation of DOTS in 13 provinces (efforts in 10 other provinces were funded by the government). This was followed by a successor project in 2002, a blended operation with DFID and in collaboration with WHO. As a result, DOTS has expanded to cover more than two-thirds of the country, and there are plans to expand further, resulting in the likely achievement of the Millennium Development Goal target for tuberculosis.

Control of tuberculosis in China is threatened by a large HIV epidemic, undoing many of the gains of the tuberculosis control program. With current high rates of latent tuberculosis, the risk for significant increased tuberculosis would be enhanced as socially marginalized populations such as injecting drug users, commercial sex workers, and prisoners develop AIDS and subsequently tuberculosis as an opportunistic infection. The interaction between HIV/AIDS and tuberculosis is critical in developing strategies for the control of both diseases in China and across the rest of the region.

cases per 100,000, which is significantly high (table 2). Of the 22 countries identified by WHO as bearing the highest burden of tuberculosis, seven are in EAP. HIV/AIDS also makes tuberculosis and other infectious diseases more difficult to control by straining health systems.

Table 2. Estimated number of individuals with tuberculosis

Country	Population (thousands, 2001)	Estimated number of adults and children living with HIV/AIDS (2001)	Adult prevalence rate of HIV (percent, 2001)	Estimated cases of tuberculosis (2003)	
				Number	Rate per 100,000
Generalized					
Cambodia ^a	13,441	170,000	2.7	78,564	585
Myanmar ^a	48,364	...	...	78,473	162
Thailand ^a	63,584	670,000	1.8	85,870	135
Concentrated					
China ^a	1,284,972	850,000	0.1	1,447,948	113
Indonesia ^a	214,840	120,000	0.1	581,847	271
Malaysia	22,633	42,000	0.4	27,119	120
Papua New Guinea	4,920	17,000	0.7	11,602	236
Vietnam ^a	79,175	130,000	0.3	141,353	179
Low level					
Timor-Leste	...	...	...	...	...
Lao PDR	5,403	1,400	<0.1	8,512	158
Mongolia	2,559	<100	<0.1	4,969	194
Philippines ^a	77,131	9,400	<0.1	228,931	297

Blank cells: Information not available.

a. Part of the WHO highest burden countries responsible for 80 percent of global tuberculosis.

Source: UNAIDS: Epidemiological Fact Sheets by Country – 2002 Updates (UNAIDS/WHO) (AIDS data); WHO: WHO Report 2003: Global Tuberculosis Control: Surveillance, Planning, Financing (tuberculosis data).

As HIV/AIDS epidemics mature, as in Thailand, and the number of people living with HIV/AIDS rises, so does the need for access to care, including antiretroviral therapy and scarce hospital resources. And the effects extend beyond the health care system. A large-scale HIV/AIDS epidemic also threatens development by slowing the growth of human capital—and ultimately economic growth. Within this larger context of deteriorating human capital is an increasingly vulnerable population of children affected by HIV/AIDS. AIDS orphans and other vulnerable children now number 15.6 million.¹⁷ HIV/AIDS not only leaves children without families, it also strains education systems, weakening demand, eroding quality, widening the gender gap, and increasing sector costs.¹⁸ If the epidemic grows in EAP, the rising numbers of AIDS orphans will have a lasting effect on the region.

The good news, however, is that the HIV/AIDS epidemic can be controlled. The next sections review countries' responses to HIV/AIDS, identify progress made, and define the key challenges that must be confronted to halt the growth of the epidemic in Asia.

¹⁷ World Bank, 2002a.

¹⁸ World Bank, 2002a.

SECTION 2. CURRENT NATIONAL RESPONSES TO HIV/AIDS

At the United Nations General Assembly Special Session on HIV/AIDS in 2001, all EAP countries committed themselves to confronting HIV/AIDS. This commitment was reconfirmed at several regional meetings including the Seventh Summit of the Association of East Asian Nations (ASEAN) in November 2001. Yet commitments are often difficult to put into practice. To ensure accountability and promote sustainability, commitments must be translated into action. What lessons can be learned to date from efforts to address HIV/AIDS in EAP?

THE THAI EXPERIENCE: MERGING POLITICAL COMMITMENT, SURVEILLANCE, AND CIVIL SOCIETY

Thailand illustrates both what has been accomplished in the fight against the epidemic and what still needs to be done.¹⁹ The first country in the region with a generalized HIV/AIDS epidemic, Thailand has shown that a growing epidemic can be controlled through inexpensive, technically simple public health interventions.

The initial response to the epidemic, identified in 1984, was muted. The government believed that the epidemic would remain concentrated in groups practicing high-risk behaviors, particularly injecting drug users and men who have sex with men. This view changed in 1989, when the first national epidemiological surveillance found that 44 percent of sex workers in the northern province of Chiang Mai were infected with HIV, leading first to increasing rates of HIV infection among their male clients and then among the general population.

The Thai response

Thailand's response was based on political commitment to tackle difficult social issues such as sexual behavior and commercial sex work. The government, including the king and the prime minister, made HIV/AIDS prevention a priority and focused on decreasing high-risk behavior. Four main developments catalyzed political support for confronting HIV/AIDS.

- AIDS policy was put under the Office of the Prime Minister, and the prime minister chaired the multisectoral National AIDS Prevention and Control Committee. This signaled high-level political commitment and opened up dialogue with nongovernmental organizations (NGOs) and other groups.
- A public information campaign was launched with high-level political support from a nationally known political figure with experience in family planning campaigns and strong ties to NGOs.
- HIV prevention among commercial sex workers was introduced. This innovative program provided regular testing of CSWs, information and education for both CSWs and their clients, and condom provision. It depended on close cooperation between public health officials and law enforcement.
- A variety of repressive policies were repealed, such as the mandatory reporting of the names and addresses of people with HIV.

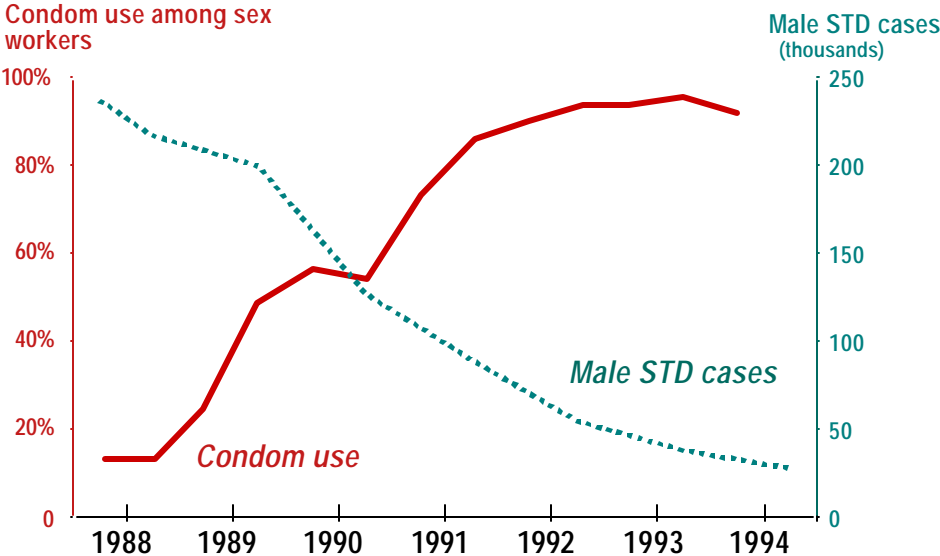
The key to the Thai success was effective HIV prevention in CSWs and their clients. The Thai intervention was also grounded in a comprehensive surveillance system. Supported by more than a decade of technical cooperation with the US Centers for Disease Control and Prevention, Thailand had good serological surveillance of the general population, sentinel surveillance of groups whose members practice high-risk behavior, and behavioral surveillance monitoring risky behavior. This surveillance

¹⁹ Much of the information in this section was drawn from the Thailand Social Monitor, World Bank, 2000.

identified some of the key sources of the spread of the disease and monitored the effectiveness of public health interventions. And this public health infrastructure enabled commercial sex workers to receive regular check-ups for sexually transmitted infections—infections that can increase the chance of contracting and transmitting HIV.

These prevention programs are associated with a decreased demand for commercial sex, a significant increase in condom use in commercial sex, a decrease in sexually transmitted infections, and ultimately a decrease in new HIV infections. Condom use in brothels rose from about 14 percent to more than 90 percent between 1988 and 1992 (figure 2). The number of men visiting sex workers also declined. Between 1990 and 1993, the percent of men reporting any premarital and extramarital sex dropped from 28 percent to 15 percent, and the percent visiting sex workers dropped from 22 percent to 10 percent. HIV prevalence among 21-year-old army conscripts, which had risen to 4 percent in 1993, began a steady decline to 1.56 percent by 1999. The decline was even more profound in the North, where it dropped from 12 percent to less than 2 percent. Sexually transmitted infections among men also declined dramatically (figure 2).

Figure 2. Rising condom use and declining sexually transmitted infections, 1988–94



Source: Rojanapithayakorn and Hanenberg (1996) as reported in World Bank (1999).

The impact of these interventions on the epidemiology of HIV/AIDS is difficult to quantify. The Asian Epidemic Model predicts that without the interventions there would have been 6.7 million additional infections in Thailand by 2000.²⁰ The model suggests that public health interventions were responsible for reducing the number of new cases of HIV from 143,000 in 1991 to 29,000 in 2000.²¹

²⁰ Thai Working Group on HIV/AIDS Projections, 2001.

²¹ Thai Working Group on HIV/AIDS Projections, 2001. The Asian Epidemic model predicts significant growth in the epidemic, however, other models suggest that the HIV/AIDS would decline regardless of the intervention because of saturation of high-risk populations (World Bank, 1996, pg. 142, Figure 3.3). Given existing data, it is difficult to determine what happened, but it is clear that there was a dramatic decline in risk behavior. This points to a need for better public health surveillance particularly on the

The Thai experience: Where to go from here?

Although Thailand eventually slowed the growth of the epidemic, the high HIV prevalence rates in the past mean that many people are now developing and dying from AIDS. So Thailand must meet a growing demand for care, treatment, and support. Thailand has an estimated 20,000 patients on antiretroviral therapy, many through unstructured treatment in the private sector, and the number is expected to grow. To prevent the growth in resistance, medical treatment should be standardized, and people living with AIDS should also be treated for opportunistic infections. Treatment is more than medical interventions and should include care and support as well as palliative care for the dying. Finally, as there is a lot we do not know about the interactions between curative and preventive interventions, it is important to maintain vigilant surveillance to understand the potential for recurring growth.

In addition, the HIV prevention agenda is unfinished. Despite the great success, Thailand continues to have high rates of HIV among injecting drug users, a major source of HIV infection that could drive future growth. Short-term substitution therapy has been introduced, but relapse rates are high, and longer-term maintenance therapy is being considered. There are few, if any, needle and syringe exchange programs. Under these circumstances it is likely that HIV will continue to grow among injecting drug users. To prevent this, the government will need to address issues that are extremely stigmatized. HIV prevention programs among men who have sex with men are also limited and would need similar levels of political support.

There is also the chance that the 100 percent condom policy for commercial sex workers could break down. The condom policy is difficult to implement and enforce among “indirect” sex workers.²² There is also concern because of the significant decrease in HIV prevention funding, particularly after the Asian economic crisis.

As the mature epidemics in Western Europe and North America have shown, high-risk behavior increases as the risk of HIV diminishes, particularly among the young who never experienced the HIV epidemic at its peak. Continued prevention programs in the general population are key to halting the epidemic.

THE CAMBODIAN EXPERIENCE: USING THE 100 PERCENT CONDOM POLICY

Similar to the Thai model, Cambodia has also been successful in decreasing high-risk behavior and slowing the growth of the epidemic.²³ With Bank support, Cambodia successfully piloted its own version of a 100 percent condom use program in Sihanoukville (under conditions quite different from those in Thailand) and has adopted such a policy nationwide. Condom use among commercial sex workers in areas where the programs have been implemented has risen. Though there has been a recent decline in HIV prevalence, attributing this to the 100 percent condom use program is questionable since the pilot

incidence of HIV among groups, better proxies for HIV in the general population, and more systematic information on risk-behavior.

²² There are two main types of sex workers: brothel-based and “indirect.” “Indirect” sex workers include those that work in massage parlors, restaurants, beauty parlors, and are believed to be “higher class” (as they do not self-identify as sex workers). In addition, there are less organized forms of sex work.

²³ Cambodia Working Group on HIV/AIDS Projections, 2002. There is great difficulty in attributing the cause of the slowing the epidemic in Cambodia. This may be due to saturation in the epidemic. Again, greater attention is needed to monitor changes in behavior and to understand the changing incidence and death rate of HIV/AIDS.

was not launched until 1998 and has still not been implemented nationally. Higher mortality may have played a role in the decline in HIV. Regardless, the program shows the importance of a local pilot and demonstrates the feasibility for wider replication that can improve political acceptability.

The decline in HIV was accomplished with limited domestic funding and limited state capacity, and supplemented by strong partnerships with international development agencies. Cambodia is a positive example of international development cooperation, linking UNAIDS, WHO, USAID, DFID, the Asian Development Bank, and the World Bank in fostering an effective national response to HIV/AIDS.

THE PHILIPPINES EXPERIENCE: A SUCCESS STORY IN A COMPLETELY DIFFERENT CONTEXT

Another success in the region is the Philippines. In contrast to Thailand's experience, however, its success is found not only in the response to the epidemic, but also in differing commercial sexual practices in the country, emphasizing yet again the diversity in the region. The success story of the Philippines lies in the country's measured response to the epidemic, with national law reform to reduce the likelihood of discrimination, widely available voluntary counseling and testing services, and an adequate number of referral centers for the relatively few people living with HIV/AIDS. There is also a sentinel and behavioral surveillance system. But the main factors constraining the epidemic in the Philippines appear to have less to do with prevention programs and more to do with contextual factors—for example, commercial sex workers have few sexual partners, there are high rates of circumcision, and low levels of injecting drug use and ulcerative sexually transmitted infections.

Although the epidemic is classified as low level, the Philippines must continue to invest in and improve public health surveillance. Currently, the sample sizes for surveillance are smaller than optimal for detecting changes in the general population. There are high levels of certain sexually transmitted infections in the population, and sexual behaviors appear to be changing.²⁴

THE INDONESIAN EXPERIENCE: THE IMPORTANCE OF POLITICAL COMMITMENT IN LOW-LEVEL EPIDEMICS

In 1996 the government of Indonesia, recognizing the importance of early intervention in preventing an epidemic, developed and funded an HIV/AIDS and sexually transmitted infections program, which included some funding from several donors, including the World Bank. HIV was reported in men who have sex with men and transvestites, and there was high-risk behavior among commercial sex workers. The program focused on building surveillance capacity and expanding interventions to commercial sex workers and the general population. But the World Bank portion was closed in 1999 after the Asian economic crisis, disbursing only \$4.52 of \$24.8 million allocated.

There are many lessons from the HIV/AIDS project in Indonesia. The economic crisis played an important role, as the health sector was preoccupied with the immediate crisis. Pharmaceutical availability was severely affected and prices rose dramatically, and large increases in poverty threatened to overwhelm an already overburdened public health system (see Box 2 for a discussion of health sector capacity).

Another contributing factor was limited government capacity. Responsibility for HIV/AIDS was spread throughout the Ministry of Health, with limited coordination across units. There was also inadequate capacity in the NGO sector. NGOs were generally too small and without the necessary experience to

²⁴ Philippines Department of Health, 2002.

carry out complex interventions. Capacity for surveillance activities, particularly behavioral surveillance was also limited, though the project did develop laboratory infrastructure for surveillance. As HIV prevalence remained low and the predicted epidemic did not materialize, sustaining the political commitment to develop innovative multisectoral interventions for vulnerable groups became more difficult.

Over the years, the epidemiology of HIV/AIDS in Indonesia has changed. HIV/AIDS is now concentrated among injecting drug users and, in some places, more than 60 percent of injecting drug users are HIV positive. HIV prevalence is also growing among commercial sex workers. HIV prevention among injecting drug users is very limited, and there is no 100 percent condom policy.

More recently, government commitment appears to be increasing, with a new HIV/AIDS strategy embracing HIV prevention in groups whose members practice high-risk behavior. Indonesia has also introduced a good epidemiological surveillance system. Mounting an effective response will remain a challenge for Indonesia in the coming years.

THE PAPUA NEW GUINEA EXPERIENCE: A DIFFERENT EPIDEMIC

Papua New Guinea is at risk for developing a large, heterosexual HIV/AIDS epidemic that might even follow the trajectory of the disease in Sub-Saharan Africa. Together the breakdown of traditional methods of social control in PNG, the cash economy, urbanization and greater mobility have resulted in very significant changes in sexual behavior. These factors combined with a health system that lacks significant capacity to deal with even basic preventive care, places the country at significant risk.

HIV was first reported in PNG in 1987. From the mid-1990s onwards the epidemic started to grow quickly. Despite numerous alerts raised in the early 1990s to the emerging epidemic, few persons in positions of leadership acknowledged HIV/AIDS as an issue of concern. With encouragement and funds from Global Program on AIDS (GPA), the National AIDS Program was formed and enlisted membership from a wide variety of stakeholders into a National AIDS Committee. These and other efforts, however, were difficult to sustain. The National AIDS Committee functioned only sporadically from 1988 to 1994, and efforts in the early 1990s to establish a sentinel surveillance system faltered and by 1995 all that remained was limited passive surveillance in some locations. In 1997 a new government response emerged, and a Medium Term Plan (MTP) was constructed to cover 1998-2002. The multisectoral approach and objectives of the MTP, however, were never operationalized, costed, prioritized or implemented. All targeted interventions were disbanded and became imbedded in a planned, but unimplemented, national peer education program. A recent review of the implementation of the MTP reveals only limited success to date.

Although the total resources available for the response to HIV/AIDS in Papua New Guinea are high (well in excess of USD8 million; more than USD1.6 per person per capita in 2003-2004), commitment of the PNG government, the nature of the response, and the quality of the interventions are in question. There is a heavy bias towards interventions in urban areas, although more than half, and as much as three-quarters, of the infected people are in rural areas. Implementation is poor and hampered by a severe lack of human resources. Targeted prevention efforts (for people practicing high risk behaviors), quality sentinel surveillance, and monitoring and evaluation of interventions are urgently needed to ameliorate the possible negative impacts of this epidemic.

OTHER COUNTRIES WILL FACE SIMILAR CHALLENGES

Experiences in the concentrated epidemics of China, Vietnam, and Malaysia are also mixed, but there is strong potential for HIV growth in all these countries. Though many countries have created national AIDS strategies, HIV prevention among groups whose members practice high-risk behavior is not sufficient to prevent significant growth of HIV. Given the relatively high rates of HIV reported in groups with high-risk behavior patterns, it is important to improve surveillance and expand prevention, as well.

Box 2. Interactions between HIV/AIDS and the capacity of health systems: SARS as a case study

In several countries in the region, HIV/AIDS is straining health systems. Health systems in many of these countries already lack capacity and are overburdened—a major concern for countries with generalized epidemics, as demand for health services increases as people acquire AIDS. It should also be a concern for countries with concentrated epidemics, as they need to look toward building infrastructure and capacity to care for the sick and dying.

A different, recent epidemic clarifies this point. The outbreak of severe acute respiratory syndrome (SARS) illustrated the critical importance of public health systems and surveillance, including accurate reporting on new cases and deaths. Health systems were overwhelmed by an influx of sick and dying people, quickly realizing that they lacked the capacity to deal with the disease. The short time between contact with the disease and death heightened fears and created panic, highlighting the need to create systems that can both allay fears and accurately report on the number of cases. The lag time between contact and the development of symptoms for AIDS is much longer, but the disease places similar strains on health systems, calling for actions to increase capacity.

SECTION 3. KEY CHALLENGES

To combat the epidemic, five key challenges must be addressed:

- Political commitment and multisectoral support.
- Public health surveillance and monitoring and evaluation.
- Prevention.
- Care, treatment, and support.
- Health services delivery.

POLITICAL COMMITMENT AND MULTISECTORAL SUPPORT

Given the sensitive nature of the disease, political commitment is key to effective HIV/AIDS programs, as Thailand and Cambodia have shown. HIV prevention programs are difficult to implement because they often involve sexual and drug-using behaviors governed by complex social taboos. An important aspect to facilitating dialogue and making progress around these issues is building political understanding by promoting public awareness of HIV/AIDS prevention programs.

Gaining political commitment for prevention in low-level epidemics, as in Indonesia in the 1990s, can be extremely difficult. One lesson is the importance of having the ministry of health actively engaged and well organized. In Indonesia, where responsibility for HIV/AIDS was spread across the ministry of health, coordination was weak. In Thailand, where the HIV program was run out of the high-profile office of the prime minister, the high level and visibility of political commitment helped to open dialogue with NGOs and other sectors.

Effective prevention also requires a social response beyond the health sector. A multisectoral response requires a political commitment to implement HIV prevention in groups with high-risk behaviors, such as commercial sex workers, injecting drug users, and men who have sex with men. It often requires changes in legislation to allow active prevention and outreach programs to reach these hidden populations, activities rarely provided by traditional public health services. And it also requires active collaboration with law enforcement agencies, as well as nongovernmental organizations.

As the epidemic spreads and generalizes, care, treatment, and support become important elements of HIV/AIDS programming. When many people are living with AIDS, support services are required from a variety of sectors in addition to health, based on the needs of the country and the stage of the epidemic.

It is also important to better understand the role of NGOs, civil society, cultural figures, champions, and key leaders. More analysis of their roles is needed to gain a better understanding of how to improve outcomes.

In addition, there is a need to guard the human rights of individuals at risk of acquiring the virus and those living with the virus. Many people do not have appropriate access to services, prevention messages, care, treatment, or support. Individuals living with the virus face rejection from their family, friends and society. To combat stigma, many governments have responded by passing laws against discrimination and expanding access to treatment. Political commitment to face this issue will be a major key to successful initiatives.

The World Bank has several comparative advantages in working in these arenas in EAP. First, it works broadly across sectors and can bring together all parts of government for policy dialogue, including the ministries of finance, health, planning, and education. It can also play an important role in donor coordination. Although political commitment and multisectorality are key to an effective response, the important sectors and appropriate government involvement vary by the needs of the country, the stage of the epidemic, and the nature of the groups that practice high-risk behaviors.

PUBLIC HEALTH SURVEILLANCE AND MONITORING AND EVALUATION

Although much is known about HIV/AIDS in East Asia and Pacific, more is unknown. To date, there are few good estimates of the size of populations practicing high-risk behaviors, such as commercial sex workers and injecting drug users—essential for estimating the potential growth of the epidemic. It is also necessary to know how these sex workers and drug-using populations overlap. Multiple approaches may be needed to understand the potential for growth of HIV/AIDS in a society and the effectiveness of interventions. These include routine information collection systems, including surveys and qualitative research. More funding is needed for public health surveillance and social science research on sexual and drug using behaviors, along with increased capacity for conducting research in local universities and government agencies. Also important is linking routine information datasets from health, criminal justice, and social services.

The importance of various components of public health surveillance varies with the stage of the epidemic. In low-level epidemics, it is very important to understand the size of high-risk populations and the prevalence of high-risk behavior to determine the potential for growth. This requires national behavioral studies and good sociocultural studies with rapid situational assessments that can be complemented by good sentinel and behavioral surveillance systems.

Surveillance becomes even more important in concentrated epidemics, where there are relatively high rates of HIV/AIDS among populations with high-risk behaviors. In these situations, it is important to standardize the methodology for sentinel surveillance and to link it to behavioral surveillance. China, Indonesia, and Vietnam have sentinel surveillance systems. Though sociocultural studies on risk behavior are limited, there are some good examples. Indonesia recently carried out a multimethod study on the size of at-risk populations, and this could be replicated throughout the region.²⁵

Sentinel surveillance in groups whose members practice high-risk behaviors is also important in generalized epidemics, but surveillance must also be extended to the general population, through regular monitoring of HIV in antenatal clinics, sexually transmitted infection clinics, and the blood supply. It is also useful to have other proxies for the general population. When an epidemic is generalized, sexually transmitted infections and tuberculosis become even more important, and there should be good general surveillance of both in the general population. In late generalized epidemics, as increasing numbers of people develop AIDS, the need arises for a good reporting system, the ability to monitor the blood count of AIDS patients, and the capacity to monitor drug resistance.

Surveillance helps to understand the nature of the problem and to identify solutions. This requires extending surveillance beyond diseases to monitoring and evaluating whether interventions have achieved their desired goals, such as reducing risk behavior and decreasing the incidence of HIV/AIDS, and applying the findings to prevention programs. Achieving a significant decrease in high-risk behavior requires large-scale social programs reaching a substantial proportion of the targeted population. Only if these programs are widespread will they have an impact on the epidemiology of HIV/AIDS. Monitoring must ensure that care, treatment, and support improve life expectancy, reach the poor, and minimize drug resistance. It also requires improving routine health information systems to measure coverage of prevention and treatment programs, health outcomes, and financial costs.

PREVENTION

On the global level, fewer than one in five individuals at risk of HIV infection has access to basic prevention services. In Asia, with combinations of drug use, unprotected sex, and rising rates of sexually transmitted infections, UNAIDS estimates that only 10 percent or fewer of injecting drug users and other vulnerable populations are benefiting from prevention interventions.²⁶ Still, there have been some major successes in this arena within the region. Thailand and Cambodia have demonstrated the cost-effectiveness of HIV prevention among commercial sex workers and their clients through the 100 percent condom policy. But this is not a panacea. UNAIDS notes that the HIV/AIDS epidemic can be slowed if

²⁵ This is an example of international best practice identified by UNAIDS. The study was done with officials from many Ministries including health, social affairs, statistics, tourism, and the police. It used routine information systems from multiple sources complemented by survey data. They reduced the wide variation in estimates of injecting drug users, which ranged from 50,000 to 1 million. This is the first step in developing better estimates; the next step would be to improve routine information systems and use capture/recapture techniques. See Directorate General of Communicable Disease Control and Environmental Health, 2003, and Hickman, et al, 2003.

²⁶ Global HIV Prevention Working Group, 2003.

prevention programs such as these are scaled up and used in combination with other prevention efforts to target groups affected by HIV/AIDS and the diverse routes of transmission.²⁷

Another important public health approach, especially in the EAP region, is to reduce risky behavior among injecting drug users and thus HIV transmission. This has been shown to be possible in many countries with concentrated HIV/AIDS epidemics among injecting drug users, such as Australia, Canada, Germany, Netherlands, Switzerland, and United Kingdom. They applied an inclusive policy, called harm reduction that recognizes drug use as an addiction and uses active social outreach to bring injecting drug users into contact with HIV/AIDS preventive services and drug treatment.

Many countries in the region have large populations of injecting drug users, and HIV prevention programs for this group are often limited or absent. Instead of harm reduction policies, some governments have pursued policies aimed at eliminating drug use, but from a public health standpoint, eradicating HIV/AIDS from the drug using population is probably easier than eliminating drug use.

There is broad scope for improving HIV prevention in injecting drug users. This is clearly an important issue on the HIV prevention agenda for East Asia and Pacific. Drug treatment services are poorly developed and substitution therapy is almost nonexistent.²⁸ But there has been some change. Hong Kong, China, has an internationally recognized drug treatment system. In Indonesia a pilot project for harm reduction in Bali has been adopted by the Ministry of Health as national policy, though it has yet to be implemented.

Because some subgroups, such as youths, engage in several risky behaviors they may be an important entry point for prevention. In 1999 half of the world's 15,000 new daily infections occurred among 15- to 24-year-olds.²⁹ It is also important to educate the general population on HIV/AIDS. Information, education, and communication campaigns and voluntary counseling and testing programs for the general public and high-risk groups are important components of an effective HIV/AIDS prevention strategy. Other groups with high-risk behaviors, such as migrant laborers, prisoners and men having sex with men, also need to be targeted as part of prevention strategies and programs.

CARE, TREATMENT, AND SUPPORT

Care, treatment, and support activities aim to improve the quality of life of individuals and communities affected by HIV/AIDS, while boosting prevention efforts to prevent its further spread. A comprehensive plan of care and support includes diagnosis, treatment, referral and follow-up, nursing care, counseling, and support to meet psychological, spiritual, economic, social, and legal needs. Treatment with pharmaceutical drugs, including antiretroviral therapy, is also key.³⁰

Demand for antiretroviral therapy is growing. To maximize the effectiveness of drug treatment, it should be complemented by care and support and implemented using standardized evidence based clinical protocols. Implementing these protocols requires strengthening health systems, including improving clinical training, laboratory infrastructure, logistical systems to deliver medicines, and sustainable systems for funding clinical services delivering antiretrovirals.

²⁷ Global HIV Prevention Working Group, 2003.

²⁸ China also has harm reduction centers that use Chinese traditional methods, in combination with short-term methadone therapy, but often with high relapse rates.

²⁹ World Bank, 2002a.

³⁰ UNAIDS/WHO/International HIV/AIDS Alliance, 2003

The uptake of antiretroviral therapy varies considerably across the region. Thailand, with its more mature epidemic, has the greatest number of patients on combination therapy. It recently declared its intention to provide universal access to antiretroviral therapy,³¹ and has its own generic drug manufacturing system.³² Cambodia, by contrast, has only about 750 patients in official therapy programs, with drugs provided by NGOs in pilot studies in Phnom Penh and Siem Reap. This is expected to increase to 2,000 patients with the expansion of Médecins Sans Frontières programs into Kompong Cham and Takeo Provinces. In most other countries, there are a limited number of patients on antiretroviral therapy.³³

Antiretroviral therapy is also very important in preventing mother-to-child transmission. Successful prevention programs for mother-to-child transmission require a mixture of prevention, care, treatment, and support, including voluntary counseling and testing, replacement feeding, and antiretroviral therapy.³⁴

Moreover, managing HIV infection requires a range of other services including clinical management of HIV/AIDS-related illnesses, prevention and control of opportunistic infections (e.g., tuberculosis), palliative care, home care, and psychosocial support. Tuberculosis, as the most common opportunistic infection of HIV/AIDS, is an important disease to target. Though fueled by the HIV/AIDS epidemic, tuberculosis does not confine itself to HIV-positive individuals. When targeting tuberculosis, coordination of tuberculosis and HIV services is key.

Support is also necessary for families and dependents of people living with HIV/AIDS. As adults succumb to the disease, more children become orphans. Comprehensive systems of care need to be developed for these orphans, ensuring that they have people to take care of their emotional and financial needs, so that they can continue their educations and receive medical treatment. Programs and policies must be specific to each country's safety nets and varying cultural and social mores.

Voluntary counseling and testing is another component of care and support. Because HIV infection is asymptomatic for many years, people with HIV who might benefit from early drug treatment are often unaware that they are infected. Voluntary counseling and testing helps arrange for early clinical management of HIV infection before it progresses to AIDS.³⁵ Such programs should first be targeted to groups whose behaviors place them at highest risk, unless there is a generalized epidemic.

STRENGTHENING HEALTH SERVICES DELIVERY

Most prevention, care, treatment, and support services can be provided by a combination of public health services and social care systems such as hospitals, clinics, and dispensaries, including the private sector and nongovernmental organizations. While some needs can be met outside the health system, much of the disease burden of HIV/AIDS is borne by health systems—hospital and clinical services, laboratory diagnostic support, delivery of pharmaceuticals, maternal-child health services, voluntary testing and counseling services, and palliative and home-based care.

Most people at risk of HIV infection or already infected live in resource-constrained settings. Many health facilities in these setting lack the resources to provide quality health care to the general population, much less meet the complex demands of HIV/AIDS-related morbidity and mortality. Capacity needs to be built within these health systems if countries are going to scale up prevention, care, support, and treatment.

³¹ This will be supported by a grant from the GFATM. See www.gfatm.org

³² It produces GPO-vir (a combination tablet containing nevirapine, zidovudine and lamivudine).

³³ Gold and Smith, 2003.

³⁴ FHI/USAID, 2001.

³⁵ World Bank, 2000.

Private sector involvement is critical for engaging with HIV/AIDS in EAP. In general, the private sector plays a key role in the delivery of clinical care in the region.³⁶ Much of sexually transmitted infection care is also privately provided, causing significant problems of inappropriate and inadequate care. Scaling-up access to care, treatment, and support requires an innovative approach by and with the private sector. As with prevention, public health services rarely reach socially marginalized groups. It is important to develop and strengthen NGOs and other sectors to reach marginal populations.

At the heart of any health system are resources: where they come from, how and on what they are spent, and how effectively they are used. Accounting for resources in this way is not well developed for health systems in general, but is especially poor for HIV/AIDS. It is, however, similar to the more standardized national health accounts used by the Organisation for Economic Co-operation and Development (OECD), the World Health Organization (WHO), and the World Bank. These accounts need to be developed to track overall domestic public spending in health on public goods such as surveillance and prevention among groups with high-risk behaviors. The national health accounts framework also emphasizes understanding private household spending, which is particularly important for HIV/AIDS, given the high levels of private treatment.

SECTION 4. THE WORLD BANK STRATEGY FOR HIV/AIDS IN EAP

LESSONS FROM THE WORLD BANK OVER THE LAST DECADE

The World Bank is one of the leading financiers of HIV/AIDS prevention and control activities in the world. It has committed \$1.77 billion (and disbursed nearly \$800 million) on more than 70 current and future projects around the world. Between 1992 and 2002 the World Bank financed 11 health projects with HIV/AIDS-related components in nine EAP countries. Cumulative lending in the region for HIV/AIDS stands at \$119 million, making the World Bank the largest single financier of HIV/AIDS projects in the region. Nonetheless, World Bank support for the region's

Box 3. How much will it cost to prevent the spread of HIV/AIDS in EAP?

The short answer? We don't know. UNAIDS and the London School of Hygiene and Tropical Medicine estimated that at least \$9.2 billion annually is required to mount an appropriate response including substantial funding for antiretroviral therapy. This estimate is for a basic program of prevention, care, support, and treatment in all developing countries and does not include the cost of improving the health infrastructure. For EAP, they estimate 10 percent of the total, with the majority of funding allocated for prevention (\$810 million) and \$80 million for care and support.¹ Such a general estimate is not very meaningful at the country level, since it should be based on effective strategies for each country supported by detailed costing.

So how much is currently being spent? Although the data on domestic spending is sparse, it is clear that public funding for HIV/AIDS is not very significant, with a few exceptions like Thailand. Looking at overall public spending on health shows little room for spending on HIV/AIDS. In most countries, it is less than 1 percent of public spending, meaning that the region is far from the estimate of need. Of course, most of the money spent on HIV/AIDS may not come from public expenditures but through private household spending. The spread of AIDS is likely to significantly increase private expenditures as households pay for antiretroviral therapy and care, and as they try to absorb the loss of income due to inability to work.

With low levels of government spending on HIV/AIDS, international development assistance has become a large player in this arena.

1. Schwarlander, et al, 1999.

³⁶ Gold, 2003.

health sector makes up only 5.7 percent of the \$2.1 billion portfolio of World Bank lending in EAP.

Of the 11 projects in the region on HIV/AIDS that the Bank has financed to date, only two have been exclusively for HIV/AIDS: Indonesia HIV/AIDS and STD Prevention and Management Project (\$25 million), closed in 1989, and the Vietnam Blood Supply Management Project (\$38.2 million). The other projects either included HIV/AIDS as part of an infectious disease project, a maternal health project, or a broader health systems project. The most significant financial support has been in China, with a small HIV/AIDS component in Health V (Infectious and Endemic Disease Control) and VII

(Health Promotion) Projects, culminating in \$25.6 million for HIV/AIDS prevention and control in Health IX.

Although the projects differ based on country needs, they share some common elements, particularly the strengthening of national and provincial surveillance systems. All projects include health promotion to the general population and groups whose members practice high-risk behaviors, though earlier projects gave more emphasis to health services capacity. More recent projects tend to be more comprehensive, though issues of care and support for HIV/AIDS are addressed only in China Health IX. All projects attempt to build multisectoral involvement, including NGOs, but effectiveness appears to be mixed.

Table 3. Major EAP projects designed to address HIV/AIDS prevention and control

Country	Year	Project name	Total World Bank Lending (US\$ M)	HIV/AIDS Lending (US\$ M)
China	1996	DISEASE PREVENTION PROJECT	100.0	4.95
Cambodia	1997	DISEASE CONTROL AND HEALTH DEVELOPMENT PROJECT	30.4	6.1
Indonesia	1998	SAFE MOTHERHOOD PROJECT	42.5	0.2
Thailand	1998	SOCIAL INVESTMENT PROJECT	300.0	2.6
China	1999	HEALTH NINE PROJECT	60.0	25.6
Vietnam	2002	REGIONAL BLOOD TRANSFUSION CENTERS PROJECT	38.2	38.2
China	2002	TUBERCULOSIS CONTROL PROJECT	104.0	0.1
Cambodia	2002	HEALTH SECTOR SUPPORT PROJECT	27.0	2.0

Overall, the projects tended to be stronger on technical design than on implementation. The most effective components were related to hardware—improving the laboratory network for HIV/AIDS and sexually transmitted infections in Indonesia or blood safety in China. Limited national and provincial government capacity have impacted implementation effectiveness. Channeling funds and contracting with NGOs were concerns for some of these projects in earlier project designs. Inadequate monitoring and evaluation systems and capacity also affected programming.

Analytic and advisory work within the region is becoming a more important component of the World Bank response to HIV/AIDS. A seminal document on HIV/AIDS, *The Thailand Social Monitor: Thailand's Response to AIDS: Building on Success, Confronting the Future* (2000) fully explains the epidemic in Thailand and identifies areas of strategic priority. There are a number of new pieces of analytic work underway in several countries, including Indonesia, Thailand, and China, and demand appears to be increasing.

Lessons learned

Lessons from the Bank's activities include:

- More analytic and advisory work is needed to support HIV/AIDS programs in the region and to provide the basis for financing/lending activities.
- The Bank needs to pay closer attention to monitoring and evaluation across the health sector, especially in view of the increased emphasis on results.
- Because insufficient capacity may cause even well designed projects to fail, the implementation capacity of national HIV/AIDS programs and NGOs needs to be enhanced. Innovation in project design to support NGOs and local governments, and to channel funds for multisectoral work, would help improve implementation.
- The Bank has the capacity to work across sectors and incorporate HIV/AIDS components into a range of development projects (infrastructure, education projects).
- The Bank is well placed to work across the health sector and to strengthen health services delivery.
- With the increased emphasis on partnerships, different models to support HIV/AIDS work can be developed.

World Bank in relation to other donors

Because the groups involved in the fight against HIV/AIDS have been changing rapidly, it is important to review the sources of support to identify gaps and decrease duplication.

Though the World Bank is the region's largest single financier of HIV/AIDS programs, it will soon be displaced as the largest donor to date by the Global Fund to Fight AIDS, Tuberculosis and Malaria, which has committed \$262 million for the next five years. The role of the Global Fund in funding HIV/AIDS is likely to have implications for World Bank funding choices. Set up in January 2002 to provide complementary financing to existing programs addressing HIV/AIDS, tuberculosis, and malaria, the Global Fund seeks to attract, manage, and disburse additional resources to scale up interventions and treatment through a new public-private partnership. It will, in theory, operate with a light touch, without a country presence. To date the Global Fund has had three rounds of proposals with a total commitment of over \$2.0 billion. (See Annex 3.)

The Global Fund has changed the development context for HIV/AIDS. In the short run, less demand for borrowing for HIV/AIDS programs may result. Perhaps more important is how the funds are used and whether countries have the capacity to implement large scale programs of prevention and treatment and to monitor and evaluate the results.

Another key player is UNAIDS, a secretariat of the United Nations (UN) whose main purpose is to coordinate UN activities on HIV/AIDS and to carry out global advocacy. In its early stage, UNAIDS was the main source of technical information on HIV/AIDS. This changed with the establishment of a division of HIV/AIDS in the World Health Organization (WHO). Increasingly, technical guidance for HIV/AIDS is shifting toward WHO, particularly in areas of core WHO competencies. UNAIDS is playing a greater role in coordination and advocacy, including tracking international development assistance on HIV/AIDS, setting global standards for monitoring and evaluation, and tracking the HIV/AIDS epidemic. At the country level, UNAIDS is the convener of the UN family through the UNAIDS theme group that aims to help countries mount an effective multisectoral response to HIV/AIDS.

Bilateral agencies (e.g., USAID, AusAID, DFID) are in the forefront of interventions among populations whose members practice high-risk behaviors. AusAID is supporting harm reduction in China, Indonesia, Myanmar, and Vietnam, and DFID in China. These programs are generally limited in scope, but serve as models that could be replicated by governments. USAID plays a large role in developing capacity for epidemiological surveillance, particularly behavioral surveillance. The U.S. Centers for Disease Control and Prevention (CDC) have partnered with the Thai CDC for more than a decade and have been instrumental in building capacity in epidemiological surveillance in the United States, China and Vietnam.

There are several regional initiatives working in HIV as well, including the Asian Development Bank's program for the Mekong Delta. Other agencies are also working regionally: USAID is re-opening a regional office in Thailand; and UNAIDS, WHO, UNICEF, and the United Nations Office on Drugs and Crime (UNODC) are major regional players. The Association of Southeast Asian Nations (ASEAN) is working on a five-year plan to combat HIV in mobile populations, including seafarers, truck drivers and migrant workers.

In collaboration with this international partnership of governments, donors, and technical agencies, the World Bank must use its own comparative advantage to have the greatest effect on the HIV/AIDS epidemic.

STRATEGIC DIRECTIONS

A key element of the strategy is to develop country specific HIV/AIDS strategy notes that will be the basis for World Bank engagement. The country strategies will provide specific work plans that incorporate some mix of the following tools: analytic and advisory work, lending, and regional activities. Each of these tools will primarily focus on the five key challenges:

Political commitment and multisectoral support

The experience from Thailand, Cambodia, and other countries successful in tackling HIV/AIDS shows the need for strong leadership and a coordinated multisectoral response. More analytic work is needed to understand how the World Bank can increase political commitment across a broad spectrum of sectors, and with it, public awareness of HIV/AIDS. Analytic work will help identify key stakeholders, their institutional setting, and the barriers to political commitment. It will also help identify the key sectors and help the Bank better integrate multisectoral approaches into work at the country level.

Communications are also necessary for building political understanding and commitment across a broad sectoral spectrum (health, education, transport) and for increasing public support for HIV/AIDS prevention programs. For example, the Europe and Central Asia Region is planning to use public opinion

surveys to understand not only *what* people think, but *why*, and to identify their underlying motivations and biases about HIV/AIDS. Such understanding is critical to ensuring that communication aimed at achieving political commitment, raising awareness and changing attitudes and behaviors is focused and resonates with critical audiences. A similar method could be used in East Asia, providing a resource for country and sectoral teams working on HIV/AIDS issues and for client governments to gain a better understanding of stakeholder perceptions and the environment in which they operate.

Public health surveillance and monitoring and evaluation

Public health surveillance.

All countries in EAP need to improve their public health surveillance systems, a public good that tends to be underfunded. Improved HIV/AIDS surveillance includes HIV sentinel surveillance, behavioral surveillance, and sociocultural studies to determine the size and overlap of high-risk populations. The work can build on good models for surveillance that already exist in the region. In addition, support and resources to implement these systems and build capacity are needed.

Within surveillance, better HIV/AIDS projections are needed. To help governments design and prioritize programs, it is important to understand the future course of the epidemic under various hypotheses. Understanding the socioeconomic consequences of HIV/AIDS requires better data for epidemiological projections. Projections and operations research are also needed to assist governments in planning for the burden of HIV-related diseases, including tuberculosis. For example, the Cambodia tuberculosis program has worked with the National Center for HIV/AIDS, Dermatology, and STDs to project cases of HIV-related tuberculosis and to develop decentralized services to handle the increases in tuberculosis. This requires assessing the increased demand for health spending and then developing actual models of service delivery.

Socioeconomic impact models are also needed to understand the effect of HIV/AIDS on the health care system, household, and macroeconomy. Other models would also help in understanding the links between human development and poverty by analyzing the effects of HIV/AIDS on the household. Such models would combine epidemiological projection models and household survey data on income and consumption.

Monitoring and evaluation.

The World Bank is assisting countries in developing monitoring and evaluation systems for HIV/AIDS. In East Asia and Pacific, monitoring and evaluation is likely to play a central role in the World Bank strategy. This could involve national health accounts for HIV/AIDS and monitoring of the coverage of interventions. To ensure sustainable domestic financing for HIV/AIDS for scaling up interventions, governments first need to better understand the current level of spending. Analytic and advisory work could help governments track public expenditures for HIV/AIDS using a national health accounts framework. This is currently being done in Indonesia and Cambodia and could be expanded across the regions. The analysis should include private spending on HIV/AIDS prevention and treatment. This type of accounting is not well developed for HIV/AIDS, but is similar to that used in standard national health accounts. But tracking public spending on almost any social program in EAP is difficult and related to public sector management and reforms.

Monitoring and evaluation requires more than expenditure tracking—it also requires systems to determine whether interventions are reaching the target population at adequate coverage, especially for the poor. Many of these systems are weak and need to be improved. Where routine information systems are unreliable, techniques such as household surveys and sentinel sites will be needed. The World Bank can work with governments to develop and implement monitoring and evaluation plans to track an effective response.

Prevention

The key to effective prevention programs is reaching high enough coverage levels among high-risk populations to have an epidemiological impact. Though many countries have successful pilot projects, they have very limited coverage. A first step would be to pull together all the epidemiological and financial information into a coherent system.

In some countries, the World Bank might also play a role in improving information on high-risk behavior and building capacity for behavioral research. Understanding sex workers and injecting drug-users and their overlap is important for estimating growth of the epidemic and preparing effective interventions. But in most countries the information on sex workers and injecting drug users needed to design effective prevention programs is limited. In addition, support and ensuring that there are adequate resources for prevention programs are key for addressing the HIV/AIDS epidemic. Again, depending on the country strategy and demand, the World Bank can play an important role.

Care, treatment, and support

Treatment of AIDS with antiretroviral therapy is occurring in almost all countries in EAP and is likely to increase, particularly as donor support for treatment programs increases. Analytic work is needed to understand how to increase treatment in the context of relatively weak systems of service delivery. Options might include using existing platforms of care such as tuberculosis programs to expand treatment with antiretroviral therapy. It is essential to engage with the private sector, since this is often where treatment is already occurring. And treatment must be embedded within a larger system of care and support, including treatment of opportunistic infections, links between treatment and prevention, and care for the dying.

Health services delivery

Many health systems in the region are going through a transition. There is limited capacity in the public and private sectors and an important role for the nongovernmental sector, including the private sector, in service delivery. A better understanding of health system issues, opportunities, and constraints is essential for many HIV/AIDS interventions. While the exact type of work needed can be determined only at the individual country level, some examples could include funding public health interventions and surveillance under decentralization; integrating the private sector and NGOs for HIV/AIDS prevention and treatment; integrating health and social services, particularly for groups whose members practice high-risk behaviors; improving the laboratory infrastructure for testing and treatment of HIV/AIDS; enhancing the safety of the blood supply; and building capacity in general, especially for care, treatment, and support.

Additionally, the World Bank has been playing an important role in health systems development in several countries in the region. In the same way, the World Bank can assist governments in preparing health systems to deal with HIV/AIDS. Also, as many of these interventions require multi-sectoral activities and interventions, assisting with health systems issues in decentralized settings is another important area where, together with the other partners, the World Bank may be able to provide support.

As stated, these key challenges will be addressed through specific work plans that incorporate some mix of the following tools:

ANALYTIC AND ADVISORY WORK

Analytic and advisory work assists the World Bank in carrying on policy dialogue with governments and civil society on an effective response to HIV/AIDS. The focus will vary based on the needs of the country and region, the role of government and other partners, and the stage of the epidemic. Analytic and

advisory work will support all of the key challenges as part of an effective HIV/AIDS strategy in the region.

As countries face various policy options, the World Bank has traditionally played an important role in this arena that can be expanded to include HIV/AIDS. Of course, the range of advisory and analytic work is wide and depends on country needs.

LENDING AND FUNDING FOR HIV/AIDS IN EAP

The International Development Grants (IDA) can provide grants for HIV/AIDS programs in IDA-eligible countries, while in middle-income International Bank for Reconstruction and Development (IBRD) countries, where grant funding is limited, there is an important role for partnerships with other development organizations. The exact demand for World Bank funding is hard to predict since it is a function of many variables, including the availability of domestic funding and grants. But there are clear areas where governments have a role and where there is a general pattern of underinvestment—areas that may represent a priority for World Bank support. For instance, many countries in the region could benefit from improvements in public health surveillance and monitoring and evaluation. These could require a combination of investments in routine information systems and research, hardware, software, and technical assistance.

More important is determining how the World Bank can be more effective in providing financial support for HIV/AIDS programs whether through lending or grants. Some of this may require a different way of doing business. Different options are needed for designing multisectoral projects, for channeling funds and building capacity of NGOs, for including the private sector, and for building monitoring and evaluation systems. With the introduction in recent years of more flexible designs and more options for addressing client needs and demands, there is room for more effective programs—programs that take into account the key lessons from the first cohort of projects.

REGIONAL ACTIVITIES

Where there is value added from cross-country experience or from country-specific interventions and analysis, a regional role for the World Bank might be appropriate, especially in support for public health surveillance and monitoring and evaluation.

Regional tools

A number of areas were identified where sharing experiences and tools could be helpful, such as experiences with implementation of national accounts for HIV/AIDS. Improvements in such areas could be facilitated by the development of new tools that are regional in scope but adapted to each country's needs. Examples include improved projection models for HIV/AIDS, socioeconomic models of the impact of HIV/AIDS, optimization models of public spending, and other similar tools.

Regional dissemination of best practice

The World Bank will work with partners, especially UNAIDS and the World Bank Institute, to disseminate best practice in HIV/AIDS prevention and control throughout the region. Thailand implemented an effective prevention program among commercial sex workers and a strong surveillance system. This is an example of an experience that can be shared more broadly in the region.

A related and important point is that the World Bank, with its ability to work across sectors, can help build support and share knowledge through its convening role. We will work in close partnerships on a

regional level with other donors and agencies. With UNAIDS, we will bring together key sectors of governments and many development partners to forge strategic country and regional responses to HIV/AIDS.

CONCLUSION

Central to the World Bank's work on HIV/AIDS in EAP is the combination of analytic activities to support policy dialogue and analytic and advisory services. In addition, the World Bank will assist with financing gaps in HIV/AIDS interventions. Each country requires a different approach matching the stage of the epidemic and other specific circumstances and needs. Working together with governments, civil society, and other development partners, the World Bank can play a critical role in addressing the risks associated with concentrated HIV/AIDS epidemics in East Asia and Pacific to prevent the region from becoming the future epicentre of HIV/AIDS.

ANNEX 1: COUNTRY OVERVIEWS

The following country overviews provide a snapshot of HIV/AIDS data, programs, and policies in several of the countries in EAP Region. It must be noted that there are many discrepancies in the available data. So in order to provide the greatest level of standardization, all data was first taken from one single source, if possible, and then supplemented with other data when available.

The primary sources of data are:

- Population numbers and prevalence data: UNAIDS Epidemiological Fact Sheets by Country (UNAIDS/WHO, 2002)
- Number of people on antiretroviral therapy: background paper from Julian Gold (Gold and Smith, 2003)
- Tuberculosis data: *WHO Report 2003: Global Tuberculosis Control: Surveillance, Planning, Financing* (WHO, 2003)
- Blood safety: background paper from Julian Gold (Gold and Dax, 2003)
- GNI: *World Development Indicators 2001* (World Bank 2001) (<http://www.worldbank.org/data/wdi2001/>)
- Selected HIV/AIDS donors: Lin, 2002; Asian Development Bank; AusAID; Development Gateway; DFID; Global Fund to Fight AIDS, Tuberculosis and Malaria; JICA; KFW; UNAIDS; UNDP; UNICEF; USAID; World Bank; Morimitsu, 2003, *personal communication*; Gold, 2002
- Modes of Transmission pie chart: UNAIDS Epidemiological Fact Sheets by Country (UNAIDS/WHO, 2002)
- IDU data: Reid and Costigan, 2002

Other information (including those in banners) was provided by numerous sources, including: Huntington, 2003, *personal communication*; Wang, 2003, *personal communication*; USAID website; NASB/MOH, 2003; NASB, 2002; World Bank: *World Development Indicators*; Burrows, 2003, *personal communication*; Khorloo, 2003; Reid and Costigan, 2002; Feng, undated; WHO: HIV/AIDS in Asia and the Pacific Region (WHO, 2001); Global Fund applications.

Cambodia

Generalized Epidemic

Total population: 13,441,000

? The National Center for HIV/AIDS, Dermatology and STD (NCHADS) is situated within the Health Ministry; it is the older of two AIDS bodies that has responsibility for a health response to AIDS. The National AIDS Authority (NAA) has evolved into a cross-cutting body promoting action against AIDS across government. ?

HIV/AIDS Prevalence in:
 Adult population (15-49): 2.7 % (160,000/6,314,000)
 Female Sex Workers (FSWs): 26.3-31%
 Injecting Drug Users: Unknown
 Women in Antenatal clinics: 0.6-5.7 %
 Male STI patients (urban): 8.5%

Number of People on ART: 750

- HIV rapidly increased since 1991, but is now stabilizing.
- Heterosexual transmission appears to dominate, but there is not a lot of data on MSM and IDUs.

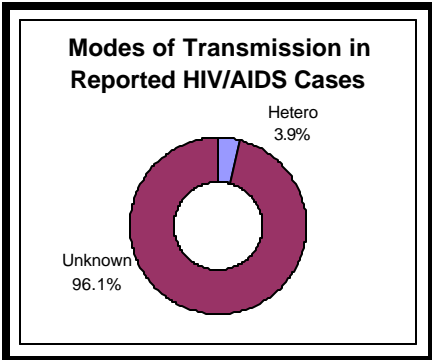
? **Blood Safety:** Policy: Since 1994. 2000 - National blood policy. This policy confirms the MoH has ultimate responsibility for the management of the NBTS. **Strategic Plan:** In draft for 2003-07. Financed by MoH. Aims are to ensure sustainable self-sufficiency in safe blood and blood products. **Present Structure:** Hospital based with a national center (NBTC). **Statistics:** 2 donations per 1,000 population. 70% replacement donors. 27% external blood donors through mobile collection teams. 3% spontaneous regular donors. Quality assessment program for HIV testing from Pasteur Institute. Clinical guidelines available. 90% of blood transfusions are whole blood transfusions ?

Estimated incidence of TB (all cases/100,000 pop): 585

Estimated adult cases of TB that are HIV+ (%): 20

Estimated multi-drug resistance (new cases): 4.2

Per Capita Gross National Income (US\$, 2000): 270



Snapshot of selected other donors

USAID: Reduced transmission of STI's and HIV/AIDS in high-risk populations (1998-02)
 - 2.05 (2000) - 2.50 (2001)

JICA: Equipment supply Program for AIDS Control and Blood Tests (2000)
 - 0.16

DFID: UNAIDS (2001-02)
 - 0.10

DFID: Enhancing the response to HIV/AIDS (2001-06)
 - 14.05

UNDP: Multisectoral Assistance to the HIV/AIDS Program in Cambodia (1996-2000)
 - 0.95

ADB: Technical assistance to Cambodia for capacity building for HIV/AIDS prevention & control (2001-02)
 - 0.07

Global Fund
 Partnerships for going to scale with proven interventions for HIV/AIDS, TB and Malaria
 - 30.8

World Bank Projects with HIV Components

1997: Disease Control and Health Development Project, 30.4 million total, 6.1 million HIV

2002: Health Sector Support Project, 27.0 million total, 2.0 million HIV

Total population: 48,364,000

HIV/AIDS Prevalence in:
 Adult population (15-49): Unknown
 Injecting Drug Users: 37.1-63%
 Female Sex Workers: 26-50%
 Women in Antenatal clinics: 0.0-5.3%
 Male STI patients (urban): 12.1-13.0%
 Number of People on ART: Unknown

- HIV prevalence has increased for FSWs by 22%.
- Myanmar has one of the most severe HIV epidemics in Asia, largely as a result of the high-risk behaviors among the nation's IDUs and CSWs.

Estimated incidence of TB (all cases/100,000 pop): 162
 Estimated adult cases of TB that are HIV+ (%): 11
 Estimated multi-drug resistance (new cases): 1.5

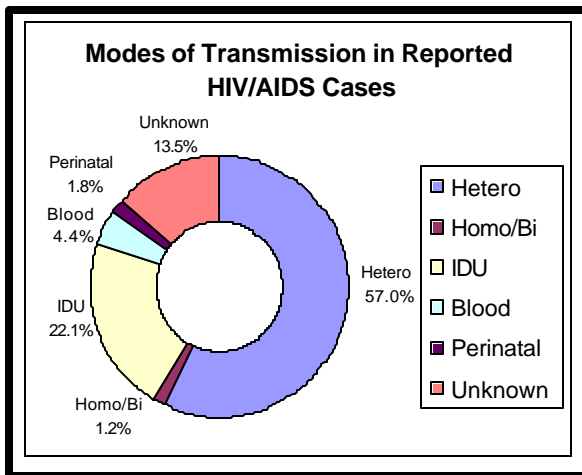
Snapshot of selected other donors

AusAID: UNICEF: Mekong subregional HIV/AIDS Program (1999-2002)
 - 0.77
 AusAID: WVA: Eastern Shan state HIV/AIDS project (1998-2002)
 - 0.19
 AusAID: WVA: Southern Myanmar HIV/AIDS Project (1998-2002)
 - 0.19
 DFID: Community action for HIV/AIDS care & support in the Mekong Subregion (2001-04)
 - 0.34
 JICA: Equipment Supply Program for AIDS Control and Blood Tests (2000-2002)
 - 0.55

Global Fund

Strengthening of Prevention and Control Program on HIV/AIDS and Malaria
 - 54.3

Estimated Number of IDUs: 150,000-250,000
 Status of Interventions for IDUs: No substitution therapy,
 No needle exchange program



Per Capita Gross National Income (US\$, 2000): 390

Total population: 63,584,000

HIV/AIDS Prevalence in:
 Adult population (15-49): 1.8 %
 (650,000/36,600,000)
 Female Sex Workers (FSWs): 6.7-10.5%
 Injecting Drug Users (IDUs): 39.6-50%
 Women in Antenatal clinics: 0.4-5.3%
Male STI patients (urban): 2.5%

 Number of People on ART: 20,000

- The numbers of CSWs have significantly decreased; the numbers of IDUs have increased.
- Close to 30,000 new infections continue to occur each year.

Estimated incidence of TB (all cases/100,000 pop): 135
 Estimated adult cases of TB that are HIV+ (%): 12
 Estimated multi-drug resistance (new cases): 2.1

Snapshot of selected other donors

AusAID: Ambulatory Care Project (2000-01)
 - 0.51

JICA: Project for model development of comprehensive HIV/AIDS prevention & care (1998-2003)
 - 4.72

JICA: Equipment supply Program for AIDS Control and Blood Tests (2002)
 - 0.03

UNDP: HIV/AIDS Prevention and Care (1994-2000)
 - 0.80

UNDP: Prevention and Control of AIDS in Thailand (1989-2000)
 - 0.89

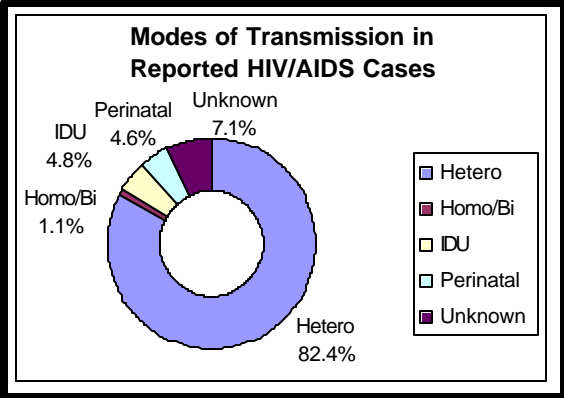
Global Fund

Strengthening National Prevention and Care Programs on HIV/AIDS, Tuberculosis and Malaria in Thailand
 - 109.5

National Prevention and Control Program of HIV/AIDS and Malaria in Thailand
 - 81.3

Preventing HIV/aids and Increasing Care and Support for Injection Drug Users in Thailand
 - 1.37

**Per Capita
 Gross National
 Income (US\$,
 2000): 2,020**



World Bank Projects with HIV Components
 1998: Social Investment Project, 300 million total, 2.6 million HIV

Estimated Number of IDUs: Currently Unknown (In 1994, 100,000-250,000)
 Status of Interventions for IDUs: 1st country to introduce widespread use of methadone as substitution therapy

China



Concentrated Epidemic

HIV/AIDS Prevalence in:
 Adult population (15-49): 0.1%
 (850,000/726,031,000)
 (Female Sex Workers) FSWs: 0-10.3%
 (Injecting Drug Users) IDUs: 0-80%
 Women in Antenatal clinics: 0-0.5%
Male STI patients (urban): 0-1.3%
 Number of People on ART: 3,000

Total population: 1,284,972,000

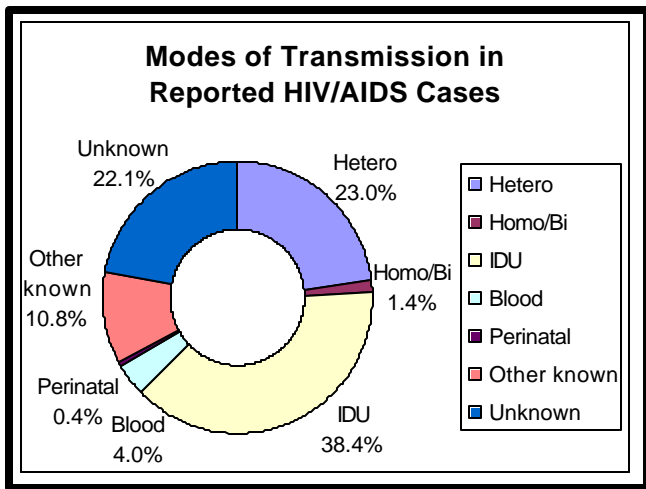
? In May 2001, the State Council issued a five-year action plan (2001-1005), with two priority action areas: (i) health education to develop a basic understanding of HIV prevention in the general population and (ii) behavioral interventions among groups that practice high-risk behaviors.?

- Reported HIV infections rose by 67.4% in the first 6 months of 2001.
- IDUs, patients with STIs, sex workers, migrants, ethnic minorities, and MSM are among the populations most vulnerable in China.
- Faulty plasma collection (farmers selling blood to commercial blood companies) has been a conduit for transmission.

? **Blood Safety: Policy:** BTS are non profit organizations. 1984 non-remunerated, voluntary donor policy became law in 1998. **Strategic Plan:** MoH issued temporary administrative measures 1998. Standards for BTS under development. **Present Structure:** One BTS per province. One central BTS for each municipality. **Statistics:** 53% volunteer donors. ?

Estimated incidence of TB (all cases/100,000 pop): 113
Estimated adult cases of TB that are HIV+ (%): 0.4
Estimated multi-drug resistance (new cases): 5.3

Snapshot of selected other donors
 AusAID: HIV/AIDS Prevention & Care Project (2002-07) - 7.54
 DFID: HIV/AIDS economic impact Study (2001-02) - 0.18
 DFID: HIV/AIDS education project (2001-06) - 0.22
 DFID: Support for HIV/AIDS education for young people (2001-06) - 21.87
 UNDP: Multi-sector Approaches for HIV/AIDS Control and Prevention in China (1997-2000) - 1.90
Global Fund
 China Comprehensive AIDS Response - 97.9



Per Capita Gross National Income (US\$, 2000): 840

World Bank Projects with HIV Components

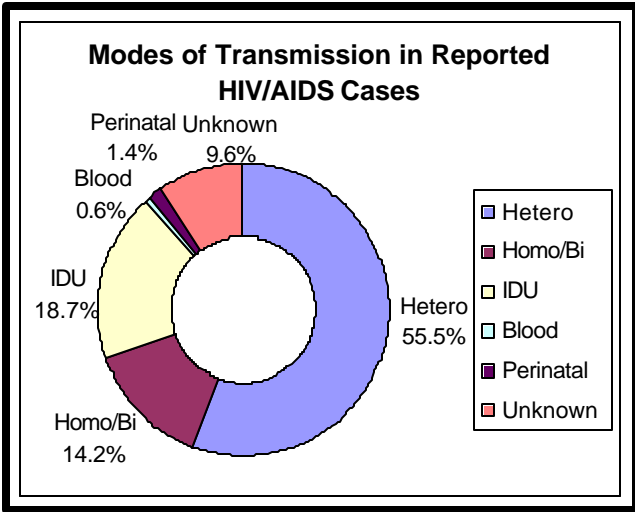
1996: Disease Prevention Project, 100 million total, 4.95 million HIV
 1999: Health Nine Project, 60 million total, 25.6 million HIV
 2002: Tuberculosis Control Project, 104 million total, 0.1 million HIV

Estimated Number of IDUs: 3.5 million
 Status of Interventions for IDUs: Methadone maintenance and needle/syringe social marketing are now being piloted

Indonesia

Concentrated Epidemic

HIV/AIDS Prevalence in:
 Adult population (15-49): 0.1% (120,000/118,000)
 Female Sex Workers (FSWs): 2.0-27%
 Injecting Drug Users (IDUs): 19-48%
 Women in Antenatal clinics: 0.0%
 Male STI patients (urban): Unknown
 Number of People on ART: Unknown



Total population: 214,840,000

- HIV prevalence in prisoners is reported at 25%.
- Drug user and female sex worker infections are regarded as the primary reservoirs for HIV.

Estimated incidence of TB (all cases/100,000 pop): 271
 Estimated adult cases of TB that are HIV+ (%): 0.3
 Estimated multi-drug resistance (new cases): 0.7

? **Blood Safety:** Policy: Has a blood policy but not implemented
Strategic Plan: Two systems - a government and a hospital-based system. **Present Structure:** Province based over the last 3 years. **Statistics:** Very little blood collected for the very large population. ?

Snapshot of selected other donors
 AusAID: HIV/AIDS Prevention & Care Project - Phase 1 (1998-2002) - 21.00
 AusAID: HIV/AIDS Prevention & Care Project - Phase 2 (2002-07) - 30.00
 KFWI: HIV/AIDS prevention & family planning (2000-03) - 9.42
 UNDP: Strengthening GOI/NGO Capacity and Partnership for HIV/AIDS Program Implementation (1997-2000) - 0.88
Global Fund
 Strengthening DOTS expansion in Indonesia (HIV/AIDS) - 15.96

Per Capita Gross National Income (US\$, 2000): 580

World Bank Projects with HIV Components
 1998: Safe Motherhood Project, 42.5 million total, 0.2 million HIV

Estimated Number of IDUs: 150,000
 Status of Interventions for IDUs: Pilot Project on substitution therapy; Pilot Project on needle exchange and outreach

Malaysia

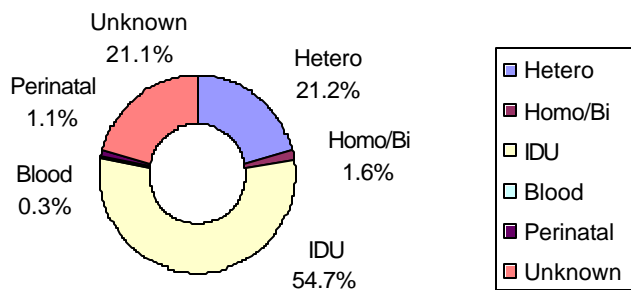
 *Concentrated Epidemic*

Total population: 22,633,000

HIV/AIDS Prevalence in:
 Adult population (15-49): 0.4%
 (41,000/11,800,000)
 Female Sex Workers (FSWs): 2.05-6.3%
 Injecting Drug Users (IDUs): 16.8%
 Women in Antenatal clinics: 0.0-0.7%
Male STI patients (urban): 4.2%
 Number of People on ART: <100

- The HIV epidemic among IDU seems to be still progressing.
- MTCT has been on the rise (4 cases in 1995 to 54 in 2001).
- Nearly half of the general population of males that have visited sex workers do not use condoms in commercial sex.

Modes of Transmission in Reported HIV/AIDS Cases



In 2003, there were 27,119 cases of TB in Malaysia, with a rate of 120/100,000.

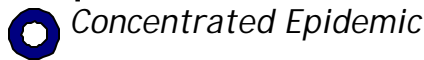
Snapshot of selected other donors

JICA: Equipment supply Program for AIDS Control and Blood Tests (2000)
 - 0.22

? **Blood Safety:** Policy: Detailed policy since ~1999 **Strategic Plan:** Plan documented by MOH. BTS funded by MoH. Move towards centralising BTSs. Central blood service seeking GMP accreditation. **Present Structure:** MoH advised by a Transfusion Committee. BTS often Hospital-based Central services seeking GMP accreditation. ?

Per Capita Gross National Income (US\$, 2000):
 3,250

Papua New Guinea



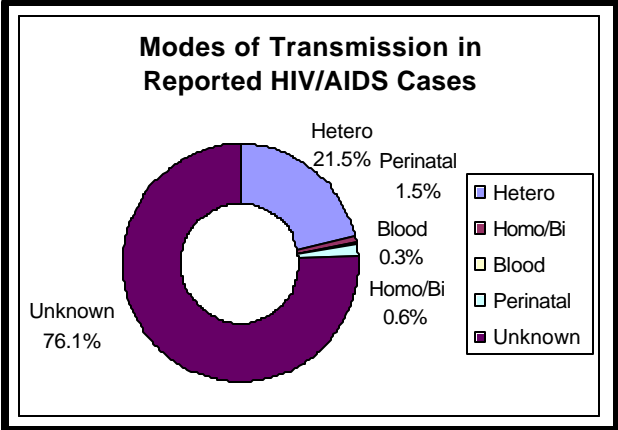
Total population: 4,920,000

HIV/AIDS Prevalence in
 Adult population (15-49): 0.7% (16,000/2,491,000)
 Injecting Drug Users: Unknown
 Female Sex Workers: 16%
 Women in Antenatal clinics: 0-0.2%
 Male STI patients (urban): 7.0%
 People on ART: <100

? 2003: Legislation was designed that should substantially improve the management of and protection from AIDS. The proposal includes human rights; proscribes national policy and practice on HIV testing and medical management; and provides Voluntary Counseling and Testing.?

- The first HIV infections in Papua New Guinea were reported in 1987, with HIV prevalence increasing annually throughout the 1990s.
- Reported cases are equally distributed among men and women, and infection appears to be concentrated in the capital city of Port Moresby.
- There has been an increase in the number of children under two years of age who have been diagnosed with HIV at the Port Moresby pediatric clinic.

? **Blood Safety:** Policy: Papua New Guinea Red Cross does not have a policy document. **Strategic Plan:** BTS operates under a MoU between DoH and Red Cross. Future plan: GOV rebuild HQ BTS laboratory (AusAID funding), retrain all staff (Aus AID funding). BTS - Phenotyping panel cell preparation. Plasmapheresis unit establishment. Red Cross - withdrawal from BTS management after termination of MoU with DoH in 2003 and concentrate on developing donor recruitment only. **Present Structure:** Mo U outlines that DoH is responsible for finance, buildings, staff and equipment and materials. RC is responsible for management of the services. Most of the guidelines are incorporated in the SOP manual and DoH/Red Cross MoU. MoU terminates in 2003. Quality Control exists. Internal controls at each blood bank. BTS headquarters participates in EQAS. **Statistics:** 50% Blood donation voluntary, 49% family/replacement, <1% voluntary regular blood donors. Each hospital collects blood for its own use mainly as red cell concentrate and whole blood. Only BTS HQ produces fresh frozen plasma, cryoprecipitate and platelet concentrates. ?

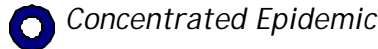


The national incidence of TB has risen from 0.8 per 1000 in 1974 to 10.7 per 1000 in 1984 to 51 per 1000 in 1999. In 2003, there were 11,602 cases, with a rate of 236/100,000.

Snapshot of selected other donors
 AusAID (2000-05): 30.78

Per Capita Gross National Income (US\$, 2000): 670

Vietnam



Total population: 79,175,000

HIV/AIDS Prevalence in
 Adult population (15-49): 0.3%
 (130,000/43,300,000)
 Female Sex Workers (FSWs): 4.2-6.0%
 Injecting Drug Users (IDUs): 26.8-30.4%
 Women in Antenatal clinics: 0.0-0.4%
 Male STI patients (urban): 2.0-3.2%

Number of People on ART: Approximately
 50 in a pilot study

- Although IDUs consistently exhibit the highest level of infection, the prevalence of infection in other groups that practice risky behaviors has grown over time. There is a marked increase in the prevalence among TB patients and military recruits, as well as a steady risk of infection among ANC patients.

? **Blood Safety:** The Regulation for Blood Transfusion issues in 1992 established standards and guidelines for blood safety. By 2000, the blood safety program had reached its objective of 100% blood units screened for HIV. Strategy for blood collection was recently shifted from collecting at district health facilities to provincial or regional facilities. ?

Estimated incidence of TB (all cases/100,000 pop): 179
Estimated adult cases of TB that are HIV+ (%): 1.4
Estimated multi-drug resistance (new cases): 2.3

World Bank Projects with HIV Components
 2002: Regional Blood Transfusion Centers Project, 38.2 million total ,
 38.2 million HIV

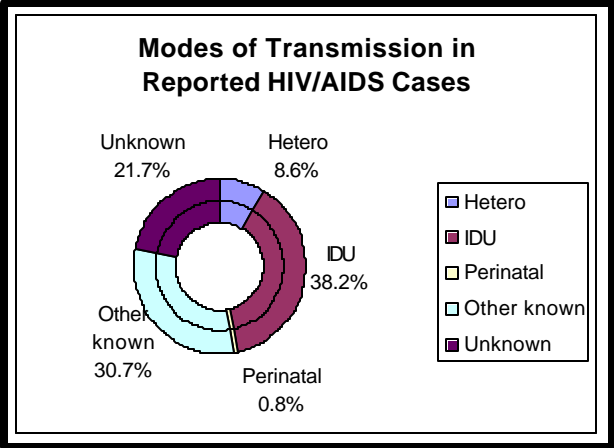
Per Capita Gross National Income (US\$, 2000): 390

Estimated Number of IDUs: In 1997, 69,000

Snapshot of selected other donors

- AusAID: HIV/AIDS Capacity Building Project (2002-04) - 0.82
- AusAID: UNDP HIV/AIDS Youth Awareness Project (2002-05) - 0.71
- AusAID: Care: NOVA2000: Confronting HIV/AIDS, project-NGO window (2000-03) - 0.35
- AusAID: Participatory HIV/AIDS Prevention (1998-2001) - 0.57
- AusAID: UNDP/HIV/AIDS: Awareness raising for youth, cofinancing (2000-03) - 1.14
- UNDP: HIV/AIDS Capacity Building (1999-2001) - 0.75
- UNDP: HIV/AIDS, Environment and Youth (1999-2001) - 0.63
- UNDP: Strengthening the Capacity for Coordination, management and Planning of HIV/AIDS in Vietnam (1994-2000) - 1.04
- DFID: HIV/AIDS Control (2001-02) - 24.59

Global Fund
 Strengthening Care, Counseling, Support to People Living with HIV/AIDS (PLWHAs) and Related Community-Based Activities - 12.00



Lao PDR

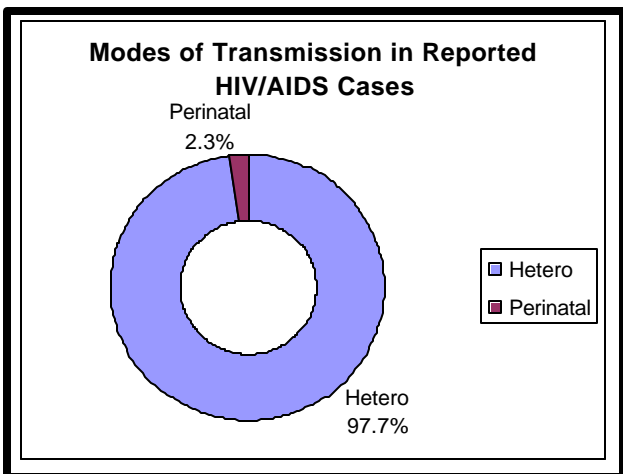
● *Low Level Epidemic*

Total population: 5,403,000

HIV/AIDS Prevalence in:
 Adult population (15-49): <0.1% (1,300/2,500,000)
 Female Sex Workers (FSWs): 1.0%
 Injecting Drug Users (IDUs): 2.0%
 Women in Antenatal clinics: 0.0%
 Male STI patients (urban): Unknown
 Number of People on ART: Unknown

? The Lao PDR developed a National Strategic Plan (NSP) on HIV/AIDS/STD for 2002-2005. Main issues declared as priorities included surveillance, STD prevention and treatment, and prevention of HIV among youth, mobile populations and service women. ?

- Economic expansion has resulted in cross-border population movement, and the numbers of sex workers have been increasing.



The national incidence of TB has risen from 0.8 per 1000 in 1974 to 10.7 per 1000 in 1984 to 51 per 1000 in 1999. In 2003, there were 8,512 cases in Lao with a rate of 158/100,000.

Snapshot of selected other donors

AusAID: Mekong subregional HIV/AIDS care & support project (2000-02)
 - 0.52

USAID: HIV/AIDS (2002-06)
 - \$1.00 (2002) - \$1.00 (2003)

JICA: Equipment supply Program for AIDS Control and Blood Tests (2000)
 - 0.17

UNDP: Lao PDR HIV/AIDS (1998-2000)
 - 0.27

NORA: Laos HIV/AIDS (2000-02)
 - 0.007

Global Fund
 Prevention and Control of HIV/AIDS/STI, TB and Malaria in the Lao PDR
 - 3.4

? **Blood Safety: Policy:**
 In 1991 the MoH transferred BTS to the Lao Red Cross. Quality System is in place but not formal. **Strategic Plan:** Reconsidering the organization system of the BTS and its tasks. **Present Structure:** NBTC plus 8 provinces exist. **Statistics:** 80% blood is collected from mobile sessions ~ 11,000 blood units are annually supplied, 63% is collected from voluntary donors. ?

Per Capita Gross National Income (US\$, 2000): 290

Mongolia

● *Low Level Epidemic*

Total population: 2,559,000

HIV/AIDS Prevalence in
Adult population (15-49): <0.1% (<100/1,400,000)
Female Sex Workers (FSWs): Unknown
Injecting Drug Users (IDUs): No reported cases
Women in Antenatal clinics: Unknown
Male STI patients (urban): 0.0%

Number of People on ART: Unknown

- Mongolia has remained virtually HIV-free over the last two decades.
- Vulnerability to HIV and drug use is high due to, among other reasons, high rates of mobility and rapid increases in IDU and HIV in neighboring countries (Khorloo 2003).

? **Blood Safety: Policy:**
2000 National Blood Policy exists
Strategic Plan: Central BTS. 25 centers in the country.
Present Structure: Areas of the country are very remote and not well planned for.
Statistics: Replacement donation Need for training, quality management and quality assurance on all levels. Number of transfusions difficult to document. ?

In 2003, there were 4,969 TB cases in Mongolia with a rate of 194/100,000.

Snapshot of selected other donors

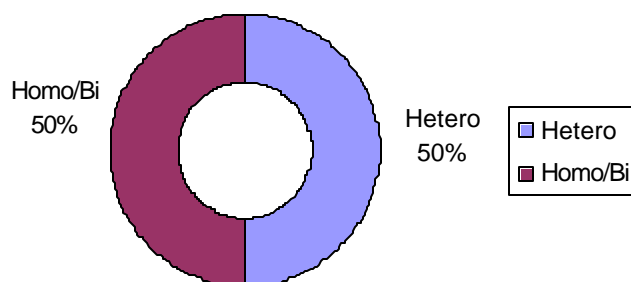
AusAID: STI/HIV education (UNDP), cofinancing (2000-02)
- 249.05

UNDP: HIV/AIDS/STDs in Mongolia (1997-2000)
- 0.30

Global Fund

Strengthening National Prevention and Care Programmes on HIV/AIDS in Mongolia
- 3.0

Modes of Transmission in Reported HIV/AIDS Cases



Per Capita Gross National Income (US\$, 2000): 390

Philippines

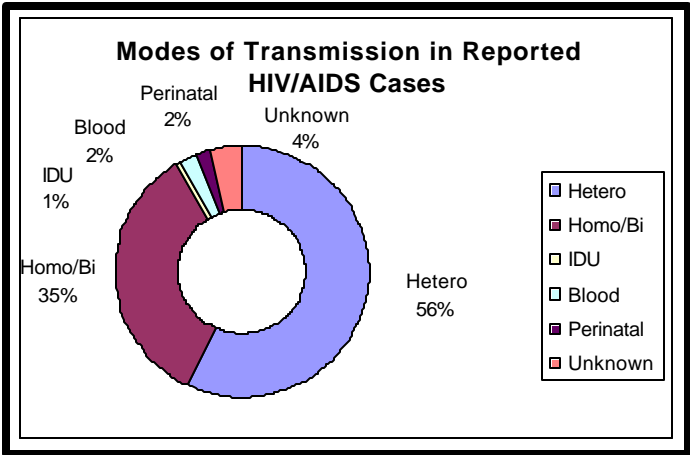
● *Low Level Epidemic*

Total population: 77,131,000

HIV/AIDS Prevalence in Adult population (15-49): <0.1 % (9,400/39,600,000)
 Female Sex Workers (FSWs): 0.3%
 Injecting Drug Users (IDUs): 1.0 %
 Women in Antenatal clinics: Unknown
 Male STI patients (urban): 0.0%
 People on ART: <200

? The AIDS Prevention and Control Act was signed into law in February 1998. It created a legal and policy environment to prevent new infections and protect the human rights and civil liberties of people living with HIV/AIDS.?

- The rate of increase in HIV infections in the Philippines has been termed "low and slow" as the epidemic has been constrained by a number of highly localized factors.



Estimated incidence of TB (all cases/100,000 pop): 297
 Estimated adult cases of TB that are HIV+ (%): 0.4
 Estimated multi-drug resistance (new cases): 3.2

Snapshot of selected other donors
 USAID: The threat of HIV/AIDS & Selected Infectious Diseases is Reduced (1994-2004)
 - 4.40 (2000)
 USAID: The Threat of HIV/AIDS & Selected Infectious Diseases Reduced (1992-2004)
 - 3.50 (2001)
 JICA: Project for Prevention and Control of AIDS (1996-2001)
 - 7.44
 JICA: Equipment Supply Program for AIDS Control and Blood Tests (1996-1998, 2000)
 - 1.11
 UNDP: Promoting Multisectoral & Community-Based Approaches to HIV Prevention and Care in the Philippines (2000)
 - 0.26
 UNDP: Increasing Awareness and Understanding of the development Implications of HIV/AIDS (2000)
 - 0.15
Global Fund
 Accelerating STI and HIV/AIDS Prevention through Intensified Delivery of Services to Vulnerable Groups and People Living with HIV/AIDS in Strategic Areas in the Philippines
 - 5.5

? **Blood Safety: Policy:** Policies and guidelines are well developed but not followed. 1994-National Blood Services Act. **Present Structure:** National Center with regional directors. National Reference Laboratory is designated. **Statistics:** 70% replacement donors (2000) 20% commercial donors (2000) National capital (2001) voluntary donors (53%), paid (2%)?

Per Capita Gross National Income (US\$, 2000): 1,020

Estimated Number of IDUs: 10,000
 Status of Interventions for IDUs: No substitution therapy, No needle exchange program

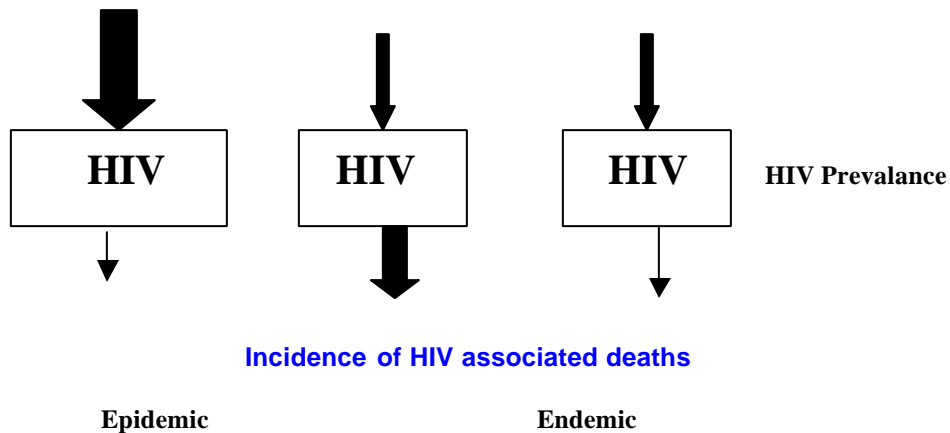
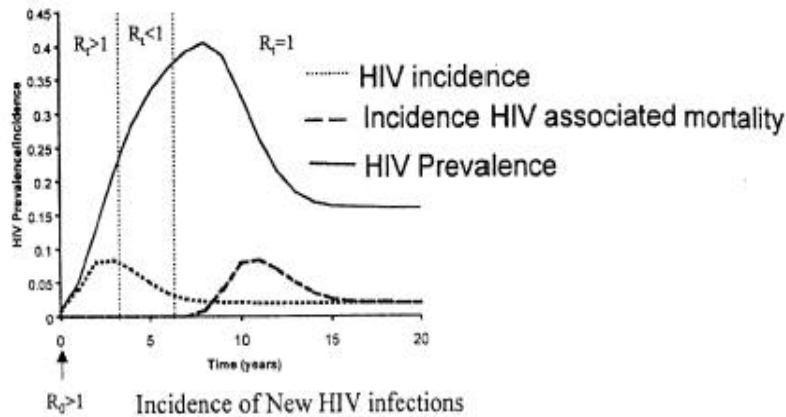
ANNEX 2: INFECTIOUS DISEASE EPIDEMIOLOGY

All socioeconomic models of the impact of HIV/AIDS depend on epidemiological predictions on the future course of the epidemic. Many economic models rely on simplistic assumptions that other parts of the world will follow the trajectory of Sub-Saharan Africa. This analogy reflects a profound misunderstanding of the epidemiology of HIV. To understand this we must develop a theoretical model of the growth of infectious diseases.

Infectious diseases do not grow indefinitely—there must be some natural limit. In fact, when one views an epidemic over time it has an initial phase of growth and then it tapers off and reaches a steady state before it eventually disappears. The classic case of this type of infection is influenza or SARS. HIV/AIDS is similar but the process is much slower because of the long interval between infection with HIV and the development of AIDS. In addition, there is a long period of infectiousness, often years, which makes it very different from classical infectious diseases such as influenza.

The figure on the next page shows the course of an HIV/AIDS infection in a population.³⁷ The key to understanding the dynamics of an infectious disease is the reproductive rate (R_0) common to all organisms.

³⁷ The course of an HIV epidemic. The relationship between the effective reproductive R_t , the incidence of HIV infections, and HIV prevalence is shown. For simplicity it is assumed that all incident cases of HIV die eight years after infection. In this simple case, the incidence of AIDS deaths replicates HIV incidence. On entry to the population, the effective reproductive rate equals the basic reproductive rate and must be greater than one for an epidemic to occur. As the presence of infection increases, the effective reproductive rate decreases as contacts are made with those already infected. The epidemic continues to grow even when each new case generates fewer than one more case, because infections are still occurring. Incidence decreases before prevalence; only when deaths remove those infected from the population will prevalence decrease. The relationship between incident HIV infections and incident HIV-associated mortality is illustrated below the graph. When incident infections match incident deaths, the epidemic will have reached an endemic steady state. Here the average effective reproductive rate must be 1 if the prevalence is to remain constant.



Source: Garnet 1998.

As can be seen, in the initial period of $R_0 > 1$, the prevalence increases exponentially. However, as the number of people susceptible to the disease is “used up” by the epidemic, the reproductive rate begins to fall. If no new susceptible groups enter the population, then the infection will fade away. Given the long duration of HIV/AIDS, there is continuing growth in new susceptible populations, making extinction unlikely.

What determines the value of R_0 ? $R_0 = bcD$

b is the likelihood of transmission when a contact is made between an infected and susceptible;
C the rate of contact in the population;
D is the duration of infectiousness.

Understanding these three simple terms is the key to understanding the epidemic. β represents the transmission probability. In the case of HIV/AIDS, this is the probability that HIV will be spread between two individuals based on their contact. For sexual contact this is the probability of transmission for sex act, which is estimated to be quite low (0.001). Concurrent STIs increase β 50 to 300 fold. The β for transmission by sharing contaminated needles is significantly higher.

The other key variable is C the pattern of contacts. This simple concept is very complex because it depends on the overall sexual networks. There has been a large growth of sexual behavioral studies. Unfortunately, there has been limited growth in Asia and much more work is needed to more fully understand sexual networks in Asia. One of the key differences compared to North America and Western Europe is the common use of commercial sex workers in Asian countries by men from wide range of age groups and social classes. In Thailand, before HIV/AIDS, it was estimated that more than a quarter of the population visited sex workers.

The final variable is D, the duration of effectiveness, which would be affected by treatment.

This simple model can be increased in almost infinite complexity by adding subpopulations with different risk behavior and different mixing patterns with other subpopulations. As the model increases in complexity, more parameter estimates are needed. AEM represents a complex elaboration of the transmission dynamic as does the DFID/Imperial model for transmission in the Russian Federation.

These models play a key role in all that we can say about epidemics. Economic models are only as good as the epidemiological-demographic projections. The models are dynamic and a country's position on the epidemic curve will determine the interventions needed and their relative cost-effectiveness. It is important to emphasize that the cost-effectiveness of interventions changes depending on the state of the epidemic. Therefore, these models are particularly useful for modeling interventions and comparing relative cost-effectiveness. They can be a useful tool for program planning and for determining coverage targets needed to alter the course of the epidemic. They are also an important tool in predicting the trajectory of the HIV epidemic. There is an urgent need to standardize these models and improve data collection for parameters.

ANNEX 3: APPROVED HIV-RELATED PROJECTS UNDER THE GLOBAL FUND FOR EAP REGION

Country	Title	Round / status	2-year approved	5-year approved
Generalized				
Cambodia	Partnership for going to scale with proven interventions for HIV/AIDS, Tuberculosis and Malaria	1 Approved	11,242,538	15,945,803
	Partnership for going to scale with proven interventions for HIV, TB and Malaria.	2 Approved	5,370,564	14,877,295
Myanmar	Strengthening of Prevention and Control Programme on HIV/AIDS and Malaria in Union of Myanmar	3 Approved	19,221,525	54,300,034
Thailand	Strengthening national prevention and care programmes on HIV/AIDS, tuberculosis and malaria in Thailand	1 Approved	30,933,204	109,505,316
	National Prevention and Control Programme of HIV/AIDS and Malaria in Thailand	2 Approved	20,253,183	81,348,535
	Preventing HIV/AIDS and Increasing Care and Support for Injection Drug Users in Thailand	3 Approved	911,542	1,371,348
Concentrated				
China	China CARES (China Comprehensive Aids Response) - A Community-Based HIV Treatment, Care and Prevention Program in Central China	3 Approved	32,122,550	97,888,170
Indonesia	Strengthening Directly Observed Treatment, Short course expansion in Indonesia	1 Approved	6,924,971	15,960,103
Viet Nam	Strengthening care, counseling, support to people living with HIV/AIDS (PLWHAs) and related community-based activities	1 Approved	7,500,000	12,000,000
Low level				
Lao PDR	Prevention and Control of HIV/AIDS/Sexually Transmitted Infections, Tuberculosis and Malaria in the Lao PDR	1 Approved	1,307,664	3,407,664
Mongolia	Strengthening National Prevention and Care Programmes on HIV/AIDS in Mongolia	2 Approved	609,404	2,997,103
Multicountry Western Pacific	Pacific Islands Regional Coordinated Country Project on HIV/AIDS, TB and Malaria (PIRCCP)	2 Approved	3,036,000	6,304,000
Philippines	Accelerating STI and HIV/AIDS Prevention Through Intensified Delivery of Services to Vulnerable Groups and People Living with HIV/AIDS in Strategic Areas in the Philippines	3 Approved	3,496,865	5,528,825
Total			142,930,010	343,546,026

Source: Global Fund to Fight AIDS, Tuberculosis and Malaria, <http://www.globalfundatm.org/>

Annex 4: overview of current blood safety policy status

Country	Policy	Strategic plan	Present structure	Statistics
Generalized				
Cambodia	Since 1994. 2000 – National blood policy. This policy confirms the MoH has ultimate responsibility for the management of the NBTS.	In draft for 2003-07 Financed by MoH. Aims are to ensure sustainable self-sufficiency in safe blood and blood products.	Hospital based with a national center (NBTC).	2 donations per 1,000 population. 70% replacement donors. 27% external blood donors through mobile collection teams. 3% spontaneous regular donors. Quality assessment program for HIV testing from Pasteur Institute. Clinical guidelines available. 90% of blood transfusions are whole blood transfusions.
Concentrated				
China	BTS are nonprofit organizations 1984 non-remunerated, voluntary donor policy became law in 1998 blood donor law.	MoH issued temporary administrative measures 1998. Standards for BTS under development.	One BTS per province. One central BTS for each municipality central BTS	53% volunteer donors.
Indonesia	Has a blood policy but not implemented.	Two systems – a government and a hospital-based system have grown up.	Structure is province based over the last 3 years. Has resulted in fewer resources reaching the services themselves.	Very little blood collected for the very large population. Highly disorganised, under-resourced and training is at a low level. There are exceptions such as Bali and Surabaya.
Malaysia	Detailed policy since ~1999	Plan documented by MOH. BTS funded by MoH. Move towards centralising BTSs. Central blood service seeking GMP accreditation.	MoH advised by a Transfusion Committee. BTS often Hospital-based Central services seeking GMP accreditation.	
Papua New Guinea	Papua New Guinea Red Cross does not have a	BTS operates under a MoU between DoH and Red Cross.	Mo U outlines that DoH is responsible for finance,	50% Blood donation voluntary, 49% family/replacement <1%

Country	Policy	Strategic plan	Present structure	Statistics
	policy document.	<p>Future plan:</p> <p>Government – rebuild HQ BTS laboratory (AusAID funding), retrain all staff (Aus AID funding)</p> <p>BTS – Phenotyping panel cell preparation. Plasmapheresis unit establishment</p> <p>Red Cross – withdrawal from BTS management after termination of MoU with DoH in 2003-04-17 concentrate on developing donor recruitment only.</p>	<p>buildings, staff and equipment and materials RC is responsible for management of the services. Most of the guidelines are incorporated in the SOP manual and DoH/Red Cross MoU. MoU terminates in 2003. Quality Control exists. Internal controls at each blood bank. BTS headquarters participates in EQAS.</p>	<p>voluntary regular blood donors.</p> <p>Each hospital collects blood for its own use mainly as red cell concentrate and whole blood.</p> <p>Only BTS HQ produces fresh frozen plasma, cryoprecipitate and platelet concentrates. (it is possible these are flown to other centers).</p>
Low level				
Lao PDR	<p>BTS started in 1975 under MoH. In 1991 the MoH transferred BTS to the Lao Red Cross. Quality System is in place but not formal.</p>	<p>Future plans will be reconsidering the organization system of the BTS and its tasks</p>	<p>1995 National Blood Policy established. National Blood Transfusion Committee headed by MoH and president Lao Red Cross set up to supervise NBP. Currently NBTC plus 8 provinces exist. Lao Red Cross governs NBC and partly governs networks in provinces. Provinces are hospital based.</p>	<p>Goal is 100% voluntary unpaid donors in the next few years.</p> <p>Mobile units are the most effective way to reach donors.</p> <p>80% blood is collected from mobile sessions</p> <p>Since 1995 the number of voluntary donors has increased</p> <p>~ 11,000 blood units are annually supplied, 63% is collected from voluntary donors.</p>
Mongolia	<p>Low of donors – 2000</p> <p>National Blood Policy exists</p>	<p>Central BTS</p> <p>25 centers in the country.</p> <p>Financed by MoH – severe financial constraints</p>	<p>Areas of the country are very remote and not well planned for.</p>	<p>Replacement donation</p> <p>Need for training, quality management and quality assurance on all levels.</p> <p>Number of transfusions difficult to document.</p>
Philippines	<p>Policies and guidelines are well developed but not followed</p> <p>1994-National Blood Services Act.</p>	<p>National policy being implemented</p> <p>commercial blood banks still operate.</p> <p>Financed by DoH additional funds as required</p>	<p>National Center with regional directors</p> <p>National Reference Laboratory is designated.</p>	<p>70% commercial donors (1994)</p> <p>70% replacement donors (2000)</p> <p>20% commercial donors (2000)</p> <p>National capital (2001)</p>

Country	Policy	Strategic plan	Present structure	Statistics
				voluntary donors (53%), paid (2%). 110,000 donations annually. Clinical use of blood is not under guidelines.

Source: Gold and Dax 2003.

ANNEX 5: SNAPSHOT OF ESTIMATED NUMBER AND RISK BEHAVIORS OF INJECTING DRUG USERS AND COMMERCIAL SEX WORKERS IN EAP

The information in both of these tables was compiled using data from numerous sources, and is therefore not standardized. This is only to be used as an example of the variety and size of risk behaviors in the region.

Country	Estimated number of IDUs	Risk behaviors	Drug used	HIV prevalence among IDUs
Generalized				
Cambodia	Unknown	Little evidence of injecting drug use	Heroin, blackwater opium	Unknown
Myanmar	150,000- 250,000	Widespread high-risk behaviors in “shooting galleries”, sharing of needles and syringes	Heroin	37.1-63%, in some states as high as 90%, among the highest in the world
Thailand	Unknown (In 1994; 100,000- 250,000)	Frequency of injecting, widespread sharing of needles	Heroin, opium, methamphetamines	39.6-50% (2000/2001)
Concentrated				
China	3.5 million	Sharing of needles and syringes, mixing heroin with blood and passing it around to other drug users	Heroin, methamphetamine, diazepam mixed with heroin, cooked opium juice, ketamine	0-20.5% (2000); up to 80% according to the region
Indonesia	150,000	Sharing of injecting equipment, inadequate or no cleaning of the equipment	Heroin, methamphetamine, benzodiazapines	19-48% (2001/2002)
Malaysia	200,000	Sharing of injecting equipment, inadequate cleaning of the equipment, professional injectors using the same un-sterile injecting equipment to multiple customers	Heroin	16.8% (1996), up to 76.3%
Viet Nam	69,000	Sharing of injecting equipment, condom use among IDUs low,	Heroin, blackwater opium, morphine, pethidine, promethazine, diazepam, phenobarbital	26.8-30.4% (2003), up to 89.9%
Low level				
Lao PDR	Unknown, but considered low	...	Blackwater opium, amphetamines, some heroin	2%
Mongolia	No official estimates	Growing tendency toward use of drugs for recreational purposes, clear signs of linkages between IDUs and CSWs	Cannabis, diazepam, dimedrol	No reported cases
Philippines	10,000	Sharing of needles and syringes	Nubain, drug cocktails	1%, but WHO estimates to be higher

Blank cells: Information not available.

Source: UNAIDS: Epidemiological Fact Sheets by Country – 2002 Updates (UNAIDS & WHO); UNAIDS report on the global HIV/AIDS epidemic 2002; Reid and Costigan, 2002; Khorloo, 2003; Feng, undated; National AIDS Standing Bureau, Ministry of Health, 2003; NASB, 2002; World Bank, 2003b; Pisani, Prihutomo, and others 2003.

Country	Estimated number of CSWs	Risk behaviors	Risk clients	HIV prevalence
Generalized				
Cambodia	12,290 (high est.)	Unprotected sexual intercourse, partner exchange pattern is one of the highest in the region	Age group (15-49), Average rate (33.0); Mean number of clients in the previous night was 3.2 per CSW	26.3-31% (2001/02)
Myanmar	...	Link between IDUs and CSW, unsafe sexual practices	Age group (18-49), rate (7.77)	26-50% (2000)
Thailand	...	...	The % of adult men visiting CSW has fallen from almost 25% to roughly 10%	6.7% (major urban), 10.5% (outside major urban) (2000)
Concentrated				
China	More than 3 million	Increasing involvement of female IDUs in prostitution, very large proportion of FSW never use condoms (more than 49%)	...	0-10.3% (major urban), 0-2.9% (outside major urban) (2000)
Indonesia	Between 200,000-270,000	Low use of condom in commercial encounters: virtually unchanged since surveillance began	About 32,000 clients infected with HIV, average number of clients per week (7.8). Sailors and truckers report much higher level of contact with CSW than any other groups	2.0-27% (2002)
Malaysia	50,000	...	...	6.3% (major urban), 2.05% (outside major urban) (1996)
Papua New Guinea	...	Low level of condom use in casual partnership	Average number of clients per CSW (3-5 per week)	16% (2002)
Viet Nam	...	Prevalence of IDU ranges from 10-50%, Consistent use of condoms is lowest in Ho Chi Minh City (avg. 40%)	Frequency of contact is around 60times/month/SW	4.2-6.0% (2002/2003)
Low level				
Lao PDR ^a	Average number of service women : 15-19 (35.7), 20-24 (40.3), 25-29 (16.7), >=30 (7.4)	Increasing number of sex workers, cross-border population movement	About a third of truck drivers and a quarter of police reported paying for sex, 32% of truck drivers and 24% of police reported 3 or more partners in the past year	1.0% (2000)
Mongolia	...	...	...	...
Philippines	...	...	Average low number of clients (2.2-3.5 per week, 1999)	0.3% (1994)

a. Formal sex work is rare in Lao PDR, and prostitution is illegal. However, 68% of service women reported having either a commercial or nonregular sex partner in the past year.

Blank cells: Information not available.

Source: UNAIDS: Epidemiological Fact Sheets by Country – 2002 Updates (UNAIDS & WHO); UNAIDS report on the global HIV/AIDS epidemic 2002; National AIDS Standing Bureau, Ministry of Health, 2003; NASB, 2002; World Bank, 2003b; Pisani, Prihutomo, and others 2003.

ANNEX 6: EPIDEMIOLOGICAL PROJECTIONS OF HIV/AIDS IN EAST ASIA

Although there are limited data, many observers have made predictions concerning the course of the EAP epidemic. These range from rates similar to Sub-Saharan Africa to a prediction that most Asian epidemics will never reach 1 percent prevalence.

The predictions of large-scale growth of Asian epidemics are based on the experience from Sub-Saharan Africa where concentrated epidemics in groups that practice high-risk behaviors spread to the general population and became, primarily, a sexually transmitted disease. Under this scenario, Asia is at great risk for becoming the epicenter of the HIV epidemic in the next decade.

This was the approach adopted by the US Central Intelligence Agency³⁸ in its scenario planning and reinforced by Eberstadt's model,³⁹ which presumes the epidemic will become a sexually transmitted disease in the general population. According to Eberstadt, Eurasia (considered to be the continent of Asia, plus Russia) could soon house the largest number of AIDS victims, driven by the spread of HIV in China, India and Russia. Even under the assumption of a mild epidemic, Eberstadt suggests that the total number of HIV cases in China, India and Russia from 2000 through 2025 would equal 66 million. With high rates, China would alone account for 70 million new cases.

Projections based on the Eberstadt model for China for 2025

China	Mild epidemic (1.5%)	Intermediate epidemic (3.5%)	Severe epidemic (5%)
Cumulative new HIV cases	32 million	70 million	100 million
Cumulative AIDS deaths	19 million	40 million	58 million

Eberstadt predicts that even a mild epidemic would have dire economic effects leading to a decrease in economic growth by half.

There is a countervailing view from some epidemiologists that Asian epidemics are constrained by low sexual risk behavior in the general population.⁴⁰ Some analysts believe that the Asian HIV epidemics will never become generalized sexual epidemics similar to Sub-Saharan Africa. According to them, there are not multiple, overlapping partners and high rates of sexually transmitted diseases which drive the African epidemics. They believe that since risk behavior in the general population is low in Asia, HIV will not become a sexually transmitted disease and spread rapidly through the general, heterosexual population.

³⁸ NCI estimated that China currently has 1-2 million HIV cases compared to official estimates of 800,000. They expect prevalence to rise to between 1.3-2 percent leading to an estimate of 10 to 15 million HIV cases by 2010.

³⁹ Nicholas Eberstadt, at the American Enterprise Institute, based his predictions on U.S. Bureau of the Census data analyzed using the spectrum software package developed by the Futures Group International for USAID. His model assumes: (1) each epidemic began around 1985, (2) the median incubation period for HIV carriers between infection with HIV and the onset of AIDS is nine years, (3) life expectancy after the onset of AIDS averages two years, and (4) HIV epidemics in China, India and Russia have 'standard heterosexual' distribution between sexes and age groups witnessed in other low-income countries (especially SSA).

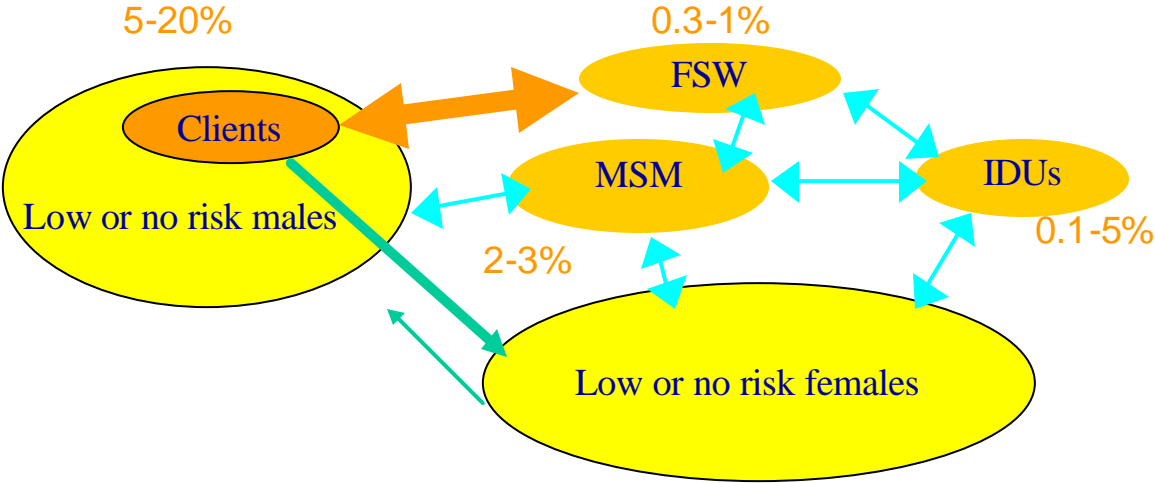
⁴⁰ James Chin is formerly from the WHO Global Program for AIDS and currently a professor of epidemiology at the University of California, Berkeley. As he wrote: "HIV prevalence in the total sexually active population of most Asian Pacific Countries will not, in our opinion, ever reach 0.5% because we believe that the general prevalence and intensity of heterosexual risk behaviors in the general populations of most countries are insufficient to fuel extensive HIV epidemics."

Under the scenario of low-risk behavior in the general population, they predict that concentrated epidemics will remain concentrated and they will not spread to the general population.

Such views suggest that the potential for growth in the concentrated epidemics in the region (China, Indonesia, Vietnam, and Malaysia) is low because of the lower rate of high-risk sexual behavior in the general population and the low underlying prevalence of sexually transmitted diseases. Even repeating the pattern of growth similar to Thailand and Cambodia is unlikely for these countries because of the lower level of commercial sex work with fewer men visiting CSWs, less often. According to this theory, Asian epidemics are fundamentally different from the epidemics in Sub-Saharan Africa and none will become generalized epidemics in the heterosexual population. There is one country, Papua New Guinea, where the preconditions exist for the epidemic to follow a trajectory similar to Sub-Saharan Africa.

USAID, intrigued by this hypothesis for HIV in Asia, commissioned a consortium led by Tim Brown and Wiwat Peerapatinapokin from the East-West Center to develop a transmission dynamic model of HIV/AIDS which would attempt to understand the dynamics of HIV/AIDS in Asia. The Asian Epidemic Model (AEM) has been used extensively in Thailand and Cambodia (see Annex 2 for a fuller description of epidemiological modeling). The model captures the interaction between groups including CSWs, their clients, IDUs, and the general population. The model requires extensive data and Thailand is one of the few countries with adequate data to test empirically the model by comparing its projections to actual prevalence data. However, the model is actually fit to the existing data.

Interactions between groups that practice high-risk behaviors and the general population



Source: Tim Brown, East-West Center.

AEM does not predict that the growth of the epidemic would be constrained. Without interventions, the epidemic in Thailand would have continued to grow toward 10 percent by 2010. What drives the growth is the high rate of high-risk behavior among the population, with over 25 percent of men reporting having sex outside of long-term partnerships.

The AEM is a sophisticated model, which requires a large amount of data, not available in most countries. UNAIDS has developed a simpler model, fairly conservative in approach, for predicting the future of the epidemic. The main consideration underlying their approach is a practical understanding of the level and quality of data for HIV/AIDS at the country level. Also, the method should be able to be used by country programs using local capacity.

The estimates are usually produced through a multimethod process using local experts with locally available data supplemented by targeted survey data. The UNAIDS projections are based on determining the size of the at-risk populations, projecting growth until HIV saturates in the high-risk population, and factoring in the transmission from groups that practice high-risk behaviors to their partners.

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