

Chapter 2

The Effect on the Poor

Economic growth is vital to the poor, but shocks such as war or environmental or health impacts can reverse economic gains. This chapter focuses on the effect of HIV/AIDS—one of the most serious shocks to hit the world’s poor in the past century. We start by examining the relationship between AIDS and poverty. We then examine why the poor are at greater risk of HIV infection, and whether they suffer disproportionately from AIDS when they are infected. We examine the effects that are being seen, first at a global level and then within Asia. Finally, we present new research on Cambodia as an example of the effects of HIV/AIDS on the poor and on poverty reduction efforts.

Links between HIV/AIDS and Poverty

The nature of the relationship between AIDS and poverty remains a contentious issue. South African president Thabo Mbeki in 2000 famously and controversially claimed that the problem of AIDS was essentially a problem of extreme poverty. Earlier still, Jonathan Mann, the founding director of the World Health Organization’s (WHO) Global Program on AIDS claimed that, “[the] marginalized, stigmatized and discriminated against . . . have later become, over time, those at highest risk of HIV infection.”⁴⁹

The links between poverty to HIV/AIDS can be investigated at two levels. First, are poorer countries more vulnerable to the epidemic than wealthier ones? And second, are poorer households and individuals within a particular society more vulnerable to the epidemic than those who are better off?

49 Hawa Rahab, “Africa: Poverty and the AIDS virus,” quoted in *Third World Network Online*, (<http://www.twinside.org.sg/title/poverty.htm>).

In answer to the first question, it is often mentioned that 95% of people with HIV/AIDS live in developing or transition countries, which make up 85% of the world's population. Also, none of the developed countries has population prevalence rates above 0.5%. These figures suggest that aggregate socioeconomic development has a protective effect. But the relationship can be subtler at lower levels of aggregation. The global correlation between national poverty and AIDS is strongly driven by Africa, home to 13% of the world's population but 72% of those living with AIDS. Asia, on the other hand, whose people make up 60% of the global total, is host to just 18% of HIV infections. Indeed, while data commissioned for this chapter suggest a link from poverty to AIDS at the global level, within Asia there is, so far at least, no correlation between levels of national socioeconomic development and HIV disease prevalence.

With respect to the second question, while early indications suggested that the better off were more vulnerable to HIV since they could more easily afford to pay for sex and drugs, this situation may reverse itself over time. As information about the causes and behaviors that increase risk diffuse through the population, it is likely that the wealthier and better educated will be better able to adjust behaviours to reduce their risk. For example, the better educated are likely to come to a better understanding of the efficacy of certain kinds of protective behavior such as condom use and the avoidance of prostitutes. They are also less likely to be bound by the financial constraints that make some high-risk activities attractive (such as commercial sex work, having sugar daddies, supplying migrant labor, or donating blood). In general, health shocks, including many infectious diseases—tuberculosis (TB), cholera, malaria, and flu, as well as HIV/AIDS—tend to hit the poor harder than the rich, for reasons discussed in the following section.

In the absence of strong macro-level data on links between AIDS and poverty, policymakers are forced to rely on intuitive reasoning backed up by small-scale studies. Some evidence, albeit scattered, supports the view that the rich learn to protect themselves against AIDS more quickly than the poor. Because of this, and the fact that AIDS arrived in Asia after it had hit Africa, the character of Asia's epidemic is likely to be different from that in Africa. The virus hit Africa's rich before knowledge of its dangers and means of transmission was widespread, while the wealthier segments of Asian societies were forewarned of the risks and had time to protect themselves.⁵⁰

50 David E. Bloom and Jeffrey Sachs, "Geography, Demography, and Economic Growth in Africa," *Brookings Papers on Economic Activity* 2 (1998): 207–295.

The connection between AIDS and poverty is complex and far from clear-cut. Some risk factors for HIV are more prevalent among the poor but others are found more often among richer sections of society. Combinations of factors, of which poverty is one (and mobility, multiple-partnering, and use of sex workers others) put some people at greater risk of HIV infection than others.

The question of the links from AIDS to poverty also remains largely unresolved. Inter-continental poverty differences predate the AIDS epidemic, and there are little accurate time series data on AIDS. It is therefore difficult to test whether variations in AIDS prevalence rates over time are associated with variations in poverty rates over time. Moreover, Africa, which dominates the global scene in terms of both poverty and HIV, is so beset by other problems, that disentangling the specific role played by AIDS is extremely complex. However, local studies point to a strong immiserizing impact at the household level. With fewer savings and fewer assets to dispose of, this impact is felt more keenly by the poor. In many cases, AIDS is likely to cause vicious spirals, where it infects a member of a poor family, the family disposes of its assets, and other family members are forced into high-risk activities to help cope with the disease. HIV/AIDS is likely to hinder the economic growth that is vital to the poor. Analyzing the links between the disease and poverty is therefore important for achieving the reduction in poverty that is a central goal of development policy.

Potential Impacts

The poor are the most vulnerable to poor health and are the least able to deal with health shocks. Those living on less than 1 dollar a day are estimated to be five times more likely to die before the age of 5, and 2.5 times more likely to die between the ages of 15 and 59 than those who are not poor.⁵¹

Asia's poor are no exception. Life expectancy at birth in the region's developing countries ranges from 61 years for those countries with a per capita income of less than US\$2,000 to 77.2 years for those with incomes above US\$10,000.⁵² Infant mortality rates range from 61 to 4.5 per 1,000 live births respectively in the two country groups.⁵³

51 WHO, *World Health Report 1999* (Geneva: WHO, 1999).

52 Andrew Mason, "Population and Human Resource Trends and Challenges," in *Key Indicators of Developing Asian and Pacific Countries 2002 Volume XXXIII*. (Manila: Asian Development Bank, 2002).

53 Ibid.

Good health is particularly important to those attempting to escape from poverty. In the unskilled work of many poor people, the body is often the principal asset,⁵⁴ and a health crisis can quickly reverse any progress a family has made in moving out of subsistence. A study in Uganda, for example, found that 80% of TB patients had lost their job or closed their businesses, and in Bangladesh, 8 out of 21 TB patients had been forced to sell assets to pay for treatment and make up for lost income.⁵⁵ The World Bank reports that illness, injury, and death are the most common causes of household impoverishment.⁵⁶

There are many intuitive reasons why the poor are likely to end up bearing the brunt of HIV/AIDS. The poor are less able to protect themselves. They have less access to information about health risks⁵⁷ and, even when information on HIV does get through to poor communities, they may still fail to take preventive measures if they do not understand the messages or if they do not perceive the risk to be more significant than the other problems they face on a day-to-day basis.⁵⁸ As Alex de Waal, commenting on the long-term nature of the disease, has said, "If AIDS is the only disaster that threatens, it is likely that individuals and communities will take action against it. But when AIDS is only one disaster among many, it is not the highest priority."⁵⁹

Health services, too, are often out of reach of the poor. Along with physical obstacles such as an absence of clinics, bad roads, and limited access to transport, the poor frequently have a difficult relationship with

54 World Bank, *Voices of the Poor* (Washington DC: World Bank, 2000).

55 R.A. Croft and R. P. Croft, "Expenditure and loss of income incurred by tuberculosis patients before reaching effective treatment in Bangladesh," *International Journal of Tubercular Lung Diseases* 2, no. 3 (1988): 252–254; P. R. Saunderson, "An Economic Evaluation of Alternative Programme Designs for Tuberculosis Control in Rural Uganda" *Social Science and Medicine* 40, no. 9 (1995): 1203–1212.

56 World Bank, *Voices of the Poor* (Washington DC: World Bank, 2000). See also, David E. Bloom and D. Canning, "The Health and Poverty of Nations: From Theory to Practice" *Journal of Human Development* 4, no. 1 (2003): 47–71.

57 M. van Landingham, et. al., (1997), in a study in northern Thailand, have shown that poverty and illiteracy make people unaware of the benefits of safe sex and condom use. M. van Landingham, N. Grandjean, S. Suprasert, and W. Sittitrai, "Dimensions of AIDS knowledge and risky sexual practices: a study of northern Thai males," *Archives of Sexual Behavior* 26, no. 3 (1997): 269–293.

58 Lau and Thomas (2001) show how less-educated men among those who travel from Hong Kong, China, to the PRC are more likely to have sex with commercial sex workers. J. Lau and J. Thomas, 2001. Risk behaviors of Hong Kong male residents travelling to mainland China: a potential bridge population for HIV infection," *Aids Cure* 13, no. 1 (2001): 71–81.

59 Alex de Waal, "AIDS: Africa's Greatest Leadership Challenge," <http://www.justiceafrica.org> (2001).

health officials, many of whom are poorly paid themselves and attempt to extract supplemental payments from their most vulnerable patients.⁶⁰ Consequently, even where they can access health services, the poor may be reluctant to use them, and may prefer to turn to alternative, less effective forms of medicine. The problem of health access for the poor can exacerbate the spread of HIV. If people who may be vulnerable to HIV infection do not present for testing, a valuable opportunity is missed to deliver prevention messages and condoms. STIs, a key factor in the spread of the virus, may go untreated. And those who are HIV-positive will be unaware that they are continuing to spread the disease.

The poor are also more likely to be forced by hardship and marginalization into activities that put them at high risk of HIV infection.⁶¹ The clearest direct link from poverty to AIDS, not shared by other major infectious diseases, is that poor women are more likely to turn to sex work than rich women,⁶² and poor sex workers can more easily be forced, by the threat of competition, into unprotected sex.⁶³ Other professions at higher risk due to their mobility and proximity to sex workers, such as long-distance truck drivers, soldiers, and migrant industrial workers, are also likely to be entered into by lower-skilled individuals. And poor communities, where social breakdown is often rife, are less able than wealthier, more cohesive groups to mobilize against the threat of AIDS. As noted earlier, there was recently an alarming outbreak of HIV in the PRC's Henan province as poor farmers sold blood to local health authorities. The often-contaminated blood was pooled and, once the plasma had been extracted, injected back into the sellers, who proceeded to spread the virus to their communities. As early as 2001, some villages in the province had HIV prevalence rates of over 60%.⁶⁴

60 Paul Farmer, *Infections and inequalities* (University of California Press, 1999); Deepa Narayan, with Raj Patel, Kai Schafft, Anne Rademacher, and Sarah Koch-Schulte, "Can anyone hear us?" in *Voices of the Poor* (Washington DC: Poverty Group PREM, World Bank, 1999).

61 World Bank, "Confronting AIDS: Public Priorities in a Global Epidemic," *World Bank Policy Research Report* (New York: Oxford University Press, 1997) Chapter 4, 173–233.

62 This connection, however, is countered by the fact that poor men are less likely to be able to afford to visit sex workers than rich men. But when they do go to a sex worker, they are less likely to spend scant resources on condoms (even though the cost, compared with going to a sex worker, is small). In any case, the sex workers that serve the poor are more likely to have more partners, a risk factor in itself and a situation that may imply more open lesions due to sex trauma. On the other hand, the rich are more likely to have lengthier sessions with sex workers, which implies more trauma and possibility of transmission of bodily fluids.

63 R. Hanenberg and W. Rojanapithayakorn, "Changes in prostitution and the AIDS epidemic in Thailand" *AIDS Care* 10, no. 1 (1998): 69–79.

64 "Bad blood spreads AIDS in China," *BBC News*, May 30, 2001; "Chinese AIDS sufferers in mass protest," *Financial Times*, November 23, 2001.

The poor, therefore, face potentially greater risks of HIV infection and are also likely to suffer disproportionately from AIDS when they are infected. Caring for someone with AIDS places a sometimes unbearable burden on poor households. People with AIDS who cannot get adequate palliative treatment (which is the case in most developing countries) are subjected to a long and ultimately hopeless illness, in which they will be unable to work for protracted periods of time. Patients frequently are not provided with diagnosis or prognosis, and many spend large sums on treatment of marginal or no worth. The effects of one illness can be widespread, as a family, for example, sells its land, removes one or more children from school, and diverts expenditure away from other essential areas. A cycle of impoverishment is also common, as a family member leaves home to find work, becomes infected, and returns home when sick, thus further draining the family's assets and encouraging another family member to migrate. The effects of AIDS are especially pronounced in that it disproportionately affects adult wage earners, is responsible for creating large numbers of orphans, and still attracts considerable stigma and discrimination.

Finally, the increase in TB rates caused by AIDS presents another threat to the poor. People with HIV are extremely vulnerable to TB infection, which causes the death of a third of people with AIDS worldwide.⁶⁵ UNAIDS has attributed one third of the increase in TB cases over the last five years to HIV. However, with HIV pushing the spread of TB, TB infection rates are increasing even among HIV-negative people. The World Bank has estimated that “about one out of four TB deaths among HIV-negative people would not have occurred in the absence of the HIV epidemic.”⁶⁶ TB affects the poor to a much greater extent than the rich (and, like AIDS, it is a long-term, costly disease), so AIDS, by pushing up TB rates, has an adverse equity impact on the health status of the poor—an impact that has the potential to increase over time. Other opportunistic infections may show a similar pattern.

Actual Impacts—Worldwide

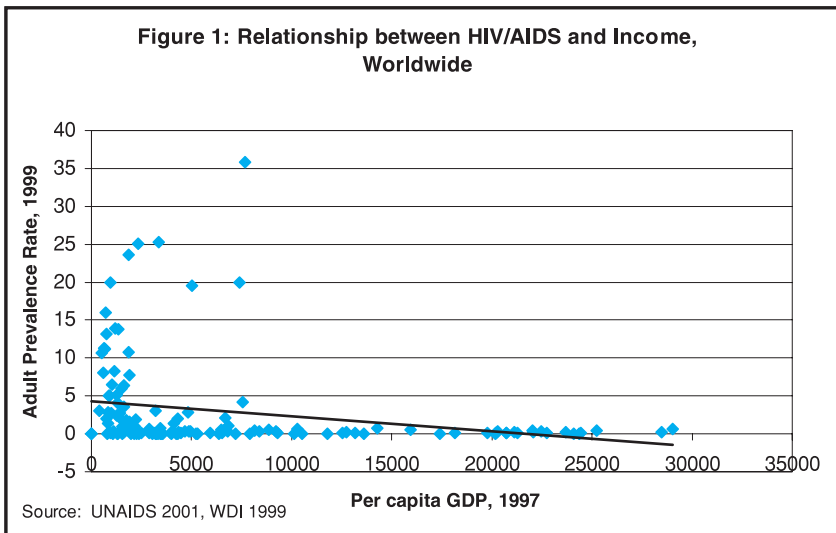
We have seen in the previous sections that the poor are at higher risk of getting HIV/AIDS. They are also less able to cope with its consequences, struggling as they must to afford treatment or meet the financial expenses

65 Centers for Disease Prevention and Control, 2001. “The deadly interaction between TB and HIV,” <http://www.cdc.gov>.

66 World Bank, “Confronting AIDS: Public Priorities in a Global Epidemic,” *World Bank Policy Research Report* (New York: Oxford University Press, 1997) Chapter 4, 173–233.

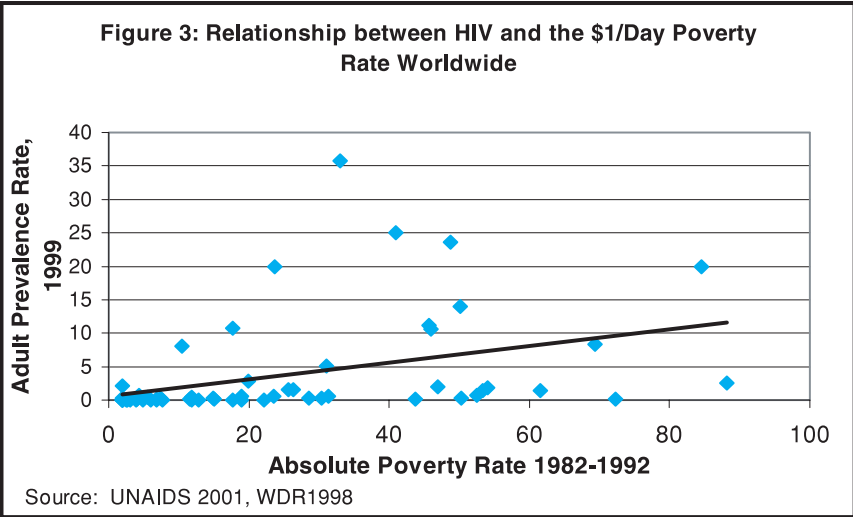
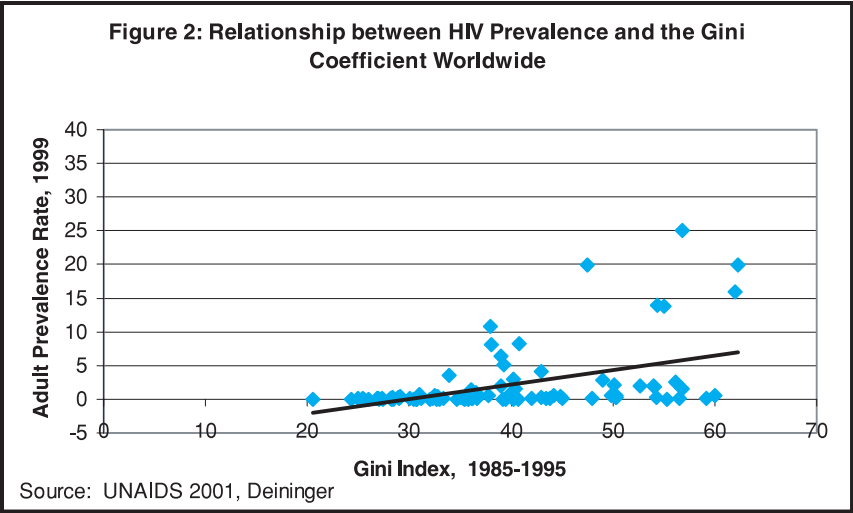
associated with illness and death. Various aspects of household well-being, such as levels of consumption and savings, investment in the education of children, and ability to support the elderly, are therefore more likely to deteriorate in poorer households with infected members than in wealthier ones. So far, however, the empirical literature is inconclusive regarding many of the intuitively appealing hypotheses that examine the link between AIDS and poverty. This section shows that although the pattern across countries suggests a link between the two, there are as yet insufficient data to provide conclusive proof, particularly as to the nature and direction of causality.

Can we be confident of any elements in the relationship between poverty and HIV? There are two indisputable facts, both based on national level data for a cross-section of countries. The first is a strong negative correlation between per capita gross domestic product and adult HIV prevalence across countries (Figure 1). No wealthy industrialized nation has an adult HIV prevalence rate even close to 1%, and almost all countries with prevalence rates greater than 1% have per capita incomes below US\$10,000 (a few small Caribbean countries are exceptions). This is also supported by the observation stated in the Introduction, that 95% of those currently infected with HIV live in less developed and transition countries.

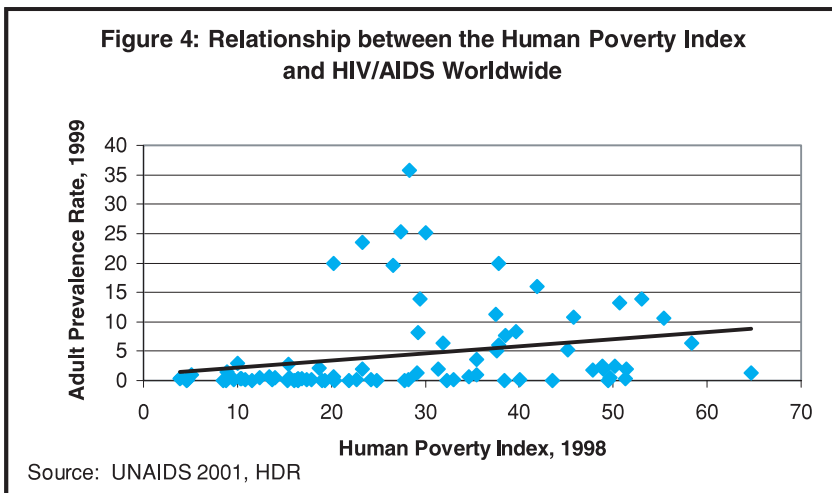


An inverse relationship between income per capita (an average) and adult HIV prevalence does not directly translate into a positive correlation between poverty and adult HIV prevalence. This is because the relationship between average income levels and poverty is intermediated by economic

inequality. For instance, an economy with a higher average level of income than another may have a greater proportion of its population living below the poverty line if it also happens to have a suitably greater degree of inequality in the distribution of income. However, both the degree of inequality in the distribution of income and the proportion of the population living below the poverty line are positively correlated with adult HIV prevalence (Figures 2 and 3). Figure 2 shows the relationship between the Gini coefficient for income (a measure of income inequality) and adult HIV prevalence for a cross-section of countries. Figure 3 indicates the relationship between the poverty ratio, based on the US\$1 a day definition of poverty, and adult HIV prevalence.



In the same vein, Figure 4 suggests that measures of poverty that go beyond being purely income/consumption based are likely to be positively related to HIV prevalence in cross-country data. Thus, high values (i.e., high poverty) on the United Nations Development Programme (UNDP) Human Poverty Index, which takes into account mortality, literacy, malnutrition and access to water, sanitation, and health services, are correlated with high rates of adult HIV prevalence.



In sum, these correlations indicate that the socioeconomic well-being of a country is broadly protective against HIV/AIDS. The very wealthiest countries are relatively well-protected from the epidemic, while low to middle income countries are the most severely affected. In this sense, AIDS is a problem of poverty.

The second indisputable fact is that even after controlling for the level of socioeconomic development, Africa remains especially vulnerable. Some countries outside Africa are equally poor, but they have considerably lower prevalence rates. On average, African countries have prevalence rates that are 8.5 percentage points higher than non-African countries with similar income levels (see Appendix 1 for regression analysis). Further support for this conclusion is that all but one of the countries with prevalence rates above 5% are in Africa (the exception is Haiti). Therefore, poverty is not entirely to blame for high prevalence rates.

Apart from the relationships between macro-variables of the kind noted above, several smaller-scale studies have examined the links between economic status and AIDS. Most support the intuitive link between

knowledge and reduced HIV transmission, and therefore support the existence of causal links from low socioeconomic status to an increased risk of HIV infection. School enrolment rates and literacy rates in the majority of the developing world are substantially lower than those in richer countries, and the poor within countries are least likely to receive education.⁶⁷ The poor are therefore less likely to be aware of the dangers of HIV/AIDS than the rich and so take less preventive action:

- Analysis of household data from Cambodia, Nicaragua, Tanzania, and Viet Nam (Appendix 2) shows a strong correlation between both wealth and education and: knowledge that condoms prevent AIDS; knowledge of where condoms can be obtained; and self-reported usage of condoms.⁶⁸
- Recent research in Cambodia, the country with the most advanced epidemic in Asia, demonstrates that the poorest segments of society have much less knowledge of how AIDS is transmitted and prevented; are more likely to have sex at a younger age; use condoms less frequently; and, in the case of young women, are more likely to turn to sex work as a means of supporting themselves and their families.⁶⁹
- A study in Brazil showed that three-quarters of people newly diagnosed with HIV in the early 1980s had a secondary or university education, but by the early 1990s this share had fallen to one-third.⁷⁰
- A study in Uganda shows that the better educated were hit hardest in the early stages of the epidemic (Figure 5), but that HIV infection rates are now falling most quickly among those with more education.⁷¹

While the micro data suggest a causal link from poverty to AIDS, most of the small-scale studies mentioned above analysed non-representative samples in the hardest-hit areas. As mentioned earlier, the risk of AIDS is determined not only by a number of factors in isolation, but also by the

67 See Third World Institute, *The World Guide 1997/98—A View from the South* (Oxford: New Internationalist Publications Ltd., 1997).

68 Macro International, "Cambodia Demographic & Health Survey" (2001). Analysis conducted by the authors.

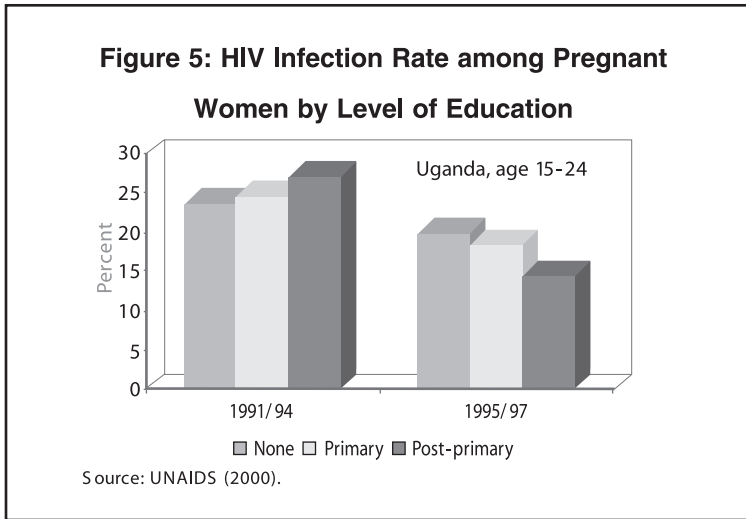
69 David E. Bloom, River Path Associates, and Jaypee Sevilla. "Health, wealth, AIDS and poverty—the case of Cambodia," (ADB/UNAIDS, 2001).

70 R.G. Parker, *Historic Overview of Brazil's AIDS Programmes and Review of the World Bank AIDS Project* (Arlington, VA: Family Health International/AIDSCAP, 1998 [Processed]); M. Ainsworth and I. Semali, "Who is most likely to die of AIDS? Socioeconomic correlates of adult deaths in Kagera Region, Tanzania," cited in *Confronting AIDS: Evidence from the Developing World*, ed. Martha Ainsworth, Lieve Fransen, and Mead Over (Brussels, 1997).

71 UNAIDS, *AIDS Epidemic Update 2000* (Geneva: UNAIDS, 2000).

interaction between them. These factors include lack of knowledge about HIV transmission, unprotected sex, multi-partnering, sharing of injecting equipment, and HIV levels of partners.

In conclusion, the available macro-level evidence, such as a rapidly increasing share of poor and developing nations in HIV infections in recent years and the large numbers of HIV infections in developed countries in earlier years, together with some of the micro-evidence, would suggest the following. Richer individuals and societies, by virtue of higher education and better access to information, appear increasingly to be less vulnerable to HIV infection than their poorer counterparts.



Moreover, as an epidemic progresses, the poor are increasingly at risk due to lack of education and other economic exigencies. We might, therefore, expect HIV epidemics to be increasingly embedded in poor communities. Although not established with any rigor, this picture is broadly consistent with patterns of HIV transmission seen in Africa and other regions, including wealthy industrial countries such as the United States.

What evidence is there regarding the reverse link, the impact of HIV/AIDS on poverty? Although there are few large-scale analyses of the impact of HIV/AIDS on poverty, there is little doubt that HIV/AIDS will worsen poverty among households affected by it. This is because HIV and the opportunistic infections associated with it are expensive to treat, they lead to premature mortality among adults and so lost incomes (and opportunities), and there are hardly any social safety nets in developing countries to ameliorate these impacts. Data from several studies conducted

in Asian countries clearly indicate that even in the pre-anti-retroviral-therapy phase in the early- to mid-1990s, the annual cost of treating AIDS was nearly double the per-capita income and that, in many of these countries, the cost of treatment and the economic burden of early adult mortality would have to be borne by the affected households.⁷²

Actual Impacts—Asia

The epidemics in most Asian countries, with the exceptions of Cambodia, Thailand, and Myanmar, are comparatively underdeveloped compared with those in Africa. However, new groups are becoming more vulnerable to infection, even as the initial vulnerable groups (principally commercial sex workers and their clients) learn to protect themselves.

Though poverty data that are comparable across countries are scarce, it is clear that Asia contains a large share of the world's poor as well as of its population. Existing data for the late 1980s and early 1990s show that the two most populous nations in the world, the PRC and India, have 22% and 53% of their respective populations living on incomes of less than a dollar a day. The population shares living on incomes of under two dollars a day are 58% in the PRC and 89% in India. The record for other poor countries in the region is not much better. Nepal, Indonesia, and Pakistan have 87%, 59%, and 57% of their populations below the two-dollar poverty line. Even middle-income countries in the region such as Malaysia and Thailand have about a quarter of their populations under the two-dollar poverty line. These numbers predate the East Asian financial crisis and the global economic slowdown of the late 1990s, so they potentially understate the magnitude of existing poverty in the region.

Although so far no comprehensive national study has examined whether AIDS disproportionately affects the poor within a country, smaller-scale studies back up the notion that the link is strengthening in Asia. A household study in Thailand found that people from the poorest and least educated households were most likely to be infected with HIV.⁷³ A study in India found that a household's socio-economic status was a significant

72 David E. Bloom and Joyce Lyons, eds., *Economic Implications of AIDS in Asia* (New Delhi: Oxford University Press, 1993).

73 Sumalee Pitanyon, Sukontha Kongsin, and Wattana Janjareon, "The economic impact of HIV/AIDS mortality on households in Thailand," in *The economics of HIV and AIDS—the case of South and South East Asia*, ed. David E. Bloom and Peter Godwin, (New Delhi: Oxford University Press, 1997).

contributing factor to its likelihood of being infected with HIV.⁷⁴ Ethnic and marginalized groups in Southeast Asia have been shown in one study to be most vulnerable to HIV/AIDS.⁷⁵ And low income has been linked to heightened risk of infection in Sri Lanka—people on low incomes were less aware about the risks of the epidemic, and low-class Sri Lankan sex workers were less likely to use condoms than higher-class ones.⁷⁶

As we have seen, data surveying adult women in Cambodia, the country with the most advanced epidemic in Asia, emphasizes the extent to which Asia's poor are potentially at greater risk of HIV infection than better off sections of society⁷⁷ (Appendix 3). Wealthier and more educated groups are likely to know more about AIDS and practice less risky behavior. Data from Viet Nam show similar links between wealth and education on the one hand, and sexual behavior and knowledge about HIV/AIDS on the other (Appendix 3). And data from Bangladesh, Nepal, Indonesia, and Viet Nam suggest that the least educated are increasingly at risk, with knowledge that condoms prevented transmission markedly lower among women with no education than among those with primary education. The latter, in turn, knew less than those with secondary education or higher.⁷⁸ Education is clearly a vital factor for the prevention of HIV transmission: a study of Thai males showed that men with a good understanding of the inefficacy of inappropriate prevention strategies and the mechanics of contagion patronize commercial sex workers significantly less frequently than men who have a poor understanding of these areas. Those with a weaker understanding were mainly men of low socioeconomic status.

Wealth and education may also have independent effects, so one is not simply a proxy for the other (Appendix 3). In other words, a well-educated but poor population will be able to protect itself against AIDS in a similar way to a richer group. For example, Kerala in India has a notably well-educated population, and much lower HIV prevalence rates than neighboring states

74 Alaka Basu, Devendra Gupta, and Geetanjali Krishna, "The household impact of adult morbidity and mortality: some implications of the potential epidemic of AIDS in India," in *The economics of HIV and AIDS—the case of South and South East Asia*, ed. David Bloom and Peter Godwin, (New Delhi: Oxford University Press, 1997).

75 Myo Thant, The economic implications of AIDS in Southeast Asia: Equity considerations in *Economic implications of AIDS in Asia*, ed. David Bloom and J. Lyons, (New York: UNDP Regional Program Division, Regional Bureau for Asia and Pacific, 1993).

76 David E. Bloom, et al., "Socioeconomic dimensions of the HIV/AIDS epidemic in Sri Lanka," in *The economics of HIV and AIDS—the case of South and South East Asia*, ed. David E. Bloom and Peter Godwin, (New Delhi: Oxford University Press, 1997).

77 Macro International, "Cambodia Demographic & Health Survey" (2001).

78 Ibid.

with similar or higher per capita income such as Andhra Pradesh, Karnataka, and Tamil Nadu. Therefore, even if a country is not experiencing short-term economic growth, investment in education can provide health improvements that act as a long-term driver of development.

The Case of Cambodia

Cambodia, which has the most advanced HIV/AIDS epidemic in Asia, has recently begun to make inroads into tackling the virus and has gone from being the most at-risk country in Asia to one of its success stories. The number of reported infections dropped by nearly 20% from 1997 to 2000. As in the rest of Asia, however, Cambodia's poor are the most difficult section of society to reach, and a look at the problems posed by HIV/AIDS to poverty reduction programs is instructive for policy makers across the region.

This section explores the nature of the HIV/AIDS epidemic in Cambodia, and its effect on the country's development and on the 40% of Cambodians who live below the poverty line. It views AIDS within a wider health context, and explores the socioeconomic factors that underlie both the epidemic's development and the shape of the country's response. Finally, it examines Cambodia's options going forward, arguing that future responses will be needed along three tracks—those specific to AIDS, those specific to health, and those with a broad development focus.

Health in Cambodia

Health standards in Cambodia are poor, as might be expected from its low standards of human development. It ranks 121st in the human development index, ahead of only Bangladesh and Lao People's Democratic Republic within Asia. It has a life expectancy at birth of only 56.4 years (of which only 85% are likely to be healthy⁷⁹) and unexceptional levels of educational attainment, with an adult literacy rate of only 71%. Arguably, Cambodia's economic indicators are even worse than its human development ones. Gross domestic product (GDP) is only US\$1,361 per capita, ranking thirteen places below its human development index.⁸⁰

79 WHO, *World Health Report 2000* (Geneva: WHO, 2000).

80 United Nations Development Programme, *Human Development Report 2000* (New York: United Nations, 2000); Ministry of Planning, *Cambodia Human Development Report* (Cambodia: Ministry of Planning, 1999).

Like many of its other problems, Cambodia's poor health is a reflection of a history of conflict, which stretches back for half a century. Over this period, Cambodia has, at times, been exceptionally open to outside influence; at others, it has existed in almost total isolation. The health system was largely disassembled by the Khmer Rouge, with Cambodians having, at best, access to facilities run by untrained staff.⁸¹ During the period 1975–1979, when there was also a serious famine, around 1 in 4 children died before reaching the age of 5, while malnourishment and overwork were among the primary causes of death of the large numbers of adults who died prematurely.

Rapid health improvements followed the ousting of the Khmer Rouge by the Vietnamese army in January 1979. Infant mortality dropped back to its pre-war rate of around 130 per 1,000 live births, and currently stands at 73 per 1,000 live births.⁸²

Despite the significant progress, however, much work remains to be done. Cambodians privately spend US\$25–US\$30 per head per year on health, compared to government expenditure of around US\$3.⁸³ This situation has two main causes. First, access to the health system is severely limited, especially outside urban areas. Although coverage has increased dramatically since the demise of the Khmer Rouge, half the population is still thought to lack access to health care services, with the average village 3 km from the nearest public health care clinic.⁸⁴ As a result, most Cambodians look in three directions for front-line medical care. All involve expense for treatment that is seldom effective:

81 According to a study of the village Prasath, in the Kompong Speu province: “the Khmer Rouge set up a ‘hospital’ at the Pongro pagoda building a few km away staffed by inexperienced and untrained doctors. Villagers had many jokes to tell about the medicines offered there. They were of the opinions that these medicines were prepared by the doctors themselves using coconut water and palm sugar, among other things. People referred to these medicines as *thnam arch tonsay* (rabbit-dropping medicine) because of their appearance.” The study also points out that villagers were afraid to admit they were sick, in case they were killed by the Khmer Rouge for faking illness. V. Krishnamurthy, *The Impact of Armed Conflict on Social Capital—A Study of Two Villages in Cambodia* (Cambodia: Social Services of Cambodia March 1999).

82 United Nations, *World Population Prospects: The 2000 Revision* (New York: United Nations Publications, 2000).

83 WHO, *WHO Country Cooperation Strategy: Cambodia* (Cambodia: WHO, 2000). The WHO Country Cooperation Strategy (CCS) defines the broad framework for WHO's work with the Royal Government of Cambodia for 2001–2005. Cambodia.

84 Royal Government of Cambodia, *Interim Poverty Reduction Strategy Paper 2000* (Phnom Penh: Royal Government of Cambodia, 2000).

- Legal and illegal pharmacies are probably the main source of health care in Cambodia. They offer widespread access to drugs, many of which are unavailable “over-the-counter” in developed health systems. Drugs are often prescribed without diagnosis and the patient often (if not usually) leaves with the wrong medication, the wrong dosage, the wrong usage instruction—or all three.
- Traditional healers appear to be the next most important providers of health services. These services can be expensive, especially due to the belief that different treatments should be tried until a cure is finally achieved, although many traditional practitioners do charge according to the patient’s perceived ability to pay.⁸⁵ For serious illnesses, traditional medicines are unlikely to have more than a marginal impact on the eventual outcome.
- Private medical practitioners and facilities are also thought to rarely offer a cost-effective service. According to the WHO, efforts to tackle the problem of poor quality and exploitative health care have so far been limited. Although legislation has been passed, there is no capacity for implementation.⁸⁶

The second cause of high levels of private expenditure on health is that supposedly free public health services are seldom what they seem. Cambodian public servants—including health workers—are paid a wage that is below subsistence levels. Unofficial charges are therefore levied throughout the system. One hospital, funded by an overseas NGO, prides itself on being free of unofficial payments. It has only achieved this, however, by paying its staff what they would earn in salaries and unofficial payments if they worked at a public hospital.⁸⁷ Widespread corruption is a major reason why public levels of trust in the public health system (and in state action more generally) are low.⁸⁸ It is also the result of a seldom-mentioned link between poverty and health, as the poverty of those providing health care results in a degradation of the health system. As well as depending on

85 William Collins, *Medical Practitioners and Traditional Healers—A Study of Health Seeking Behavior in Kampong Chhang, Cambodia* (Phnom Penh: Centre for Advanced Study, January 2000).

86 WHO, *WHO Country Cooperation Strategy: Cambodia* (Cambodia: WHO, 2000).

87 Robert Colebunders, “Anti-retroviral Therapy in Resource Poor Settings” (in *Meet the Professor*, Sunway Hotel, Phnom Penh, Cambodia, Saturday, April 7, 2001).

88 USAID/Cambodia 2001, for example, reports that sick children are not taken to receive medical advice from health centres on account of the poor standard of treatment available, while *Voices of the Poor* provides an international perspective on how strong a disincentive corruption is to the use of health systems by poor people.

unofficial payments, many full-time health workers also work full-time in private practice, or have jobs that are unrelated to their professional qualification.

Economic hardship and poor quality health systems interact with each other, of course. Poor health increases poverty:⁸⁹ a study in 2000 commissioned by Oxfam found that 45% of the landless in Cambodia had lost their land due to serious illness of a single family member.⁹⁰ Such family illness forces many people from the labor market, and has an especially severe impact on arduous pursuits such as rice farming. It also results in children, especially girls, being withdrawn from school to act as carers or to help with income generation. The poverty-health interaction is even stronger in the reverse direction. Medical costs can consume sizeable portions of household income,⁹¹ effectively denying access to health care among many poor families. In order to meet health expenses, families are forced to borrow and, ultimately, to sell their assets. The sale of major assets often comes at the end of a cycle of increasing indebtedness, with families borrowing at high rates of interest in order to buy drugs. Finally, economic hardship encourages short- or long-term migration. This has long increased vulnerability to malaria, as people move from areas with little malaria to those where it is common.⁹² However, it is with the advent of HIV/AIDS that the potential for interaction between disease and migration has been most fully realized in Cambodia.

AIDS in Cambodia

HIV was first detected in Cambodia in 1991, and 2.7% of Cambodians are now HIV positive, the highest prevalence rate in Asia.⁹³ The genesis of the epidemic reflects the strengths and weaknesses of Cambodia's rapidly developing society. As Cambodians have attempted to respond, meanwhile, the interaction between epidemic and society has become two-way and increasingly complex.⁹⁴

89 For a full discussion of this link, see David E. Bloom and David Canning, "The Health and Poverty of Nations: From Theory to Practice," *Journal of Human Development* 4, no. 1 (2003): 47–71.

90 Oxfam GB, *Cambodia Land Study Project* (Phnom Penh: Oxfam & Ministry of Health, 26 July 2000).

91 WHO, *WHO Country Cooperation Strategy: Cambodia* (Cambodia: WHO, 2000).

92 Veena Krishnamurthy, *The Impact of Armed Conflict on Social Capital—A Study of Two Villages in Cambodia* (Phnom Penh: Social Services of Cambodia, 1999).

93 UNAIDS, *AIDS Epidemic Update 2000* (Geneva: UNAIDS, 2000).

94 For a full discussion, see David E. Bloom, River Path Associates, and Karen Fang, "Social Technology and Human Health" (concept paper for the *Human Development Report 2001* "Channelling technology for Human Development," <http://www.un.org/Depts/DPKO/Missions/untac.htm> [2001]).

The roots of the Cambodian HIV/AIDS epidemic can be found in the country's emergence from the relative isolation of the Vietnamese-backed Heng Samrin government. The United Nations Transitional Authority in Cambodia (UNTAC) arrived in the country in March 1992 to ensure the implementation of the Agreements on the Comprehensive Political Settlement of the Cambodia Conflict, signed in Paris on 23 October 1991. It was granted full authority by the Cambodian Supreme Court to govern the country and continued in this role until the end of its mandate in September 1993, when it handed over authority to the new democratically elected government, operating under a new constitution.⁹⁵

The United Nations operation involved approximately 22,000 military and civilian observers. During this period, large numbers of refugees were resettled, the Cambodian economy (especially in Phnom Penh) experienced a boom, and there was significant (and ongoing) market liberalization through an IMF-inspired Structural Adjustment Program.⁹⁶ The sex industry also grew explosively, fuelled partly by foreign peacekeepers (a high percentage of whom admitted contact with sex workers) and also by newly-prosperous Cambodians with money to spend. Economic development was uneven, however, with uneducated rural women benefiting least. As a result of this, a plentiful source of supply was created to meet the growing demand for commercial sex.⁹⁷

The Cambodian HIV epidemic is fuelled primarily by heterosexual sex, with injecting drug use and sex between men relatively minor factors. In 2001 there were 74,000 adult women and 86,000 adult men living with HIV, with prevalence rates among different groups showing wide variations: 31.1% of direct commercial sex workers (those who work in brothels) were found to be infected in the latest sentinel survey, compared to 16.1% of indirect sex workers (who usually have other jobs, but also sell sex) while 3.1% of police officers, and 2.3% of pregnant women at antenatal clinics were also reported to be living with the disease.

However, prevalence rates are currently falling, largely due to the success of the country's prevention campaign. There were 210,000 people living with HIV in 1997, compared to 170,000 in 2001, indicating that more

95 Cambodia–UNTAC Department of Public Information, United Nations, 31 August 1996.

96 Kasumi Nishigaya, *Poverty, Urban Migration and Risks in Urban Life Labour Seminar: Empowerment of Garment Factory Workers* (Tokyo: Japan International Cooperation Agency, 1999).

97 Peter Godwin, Suth Wantha Seng, and Chhi Vun Mean, "The HIV/AIDS Epidemic in Cambodia: the Contribution of the Health Sector" *Espace, Populations, Societes*, no. 2 (2000).

people are now dying of the disease each year than are becoming infected. Rates have fallen among almost all sentinel groups and most rapidly among the most vulnerable groups. This is probably the result of information campaigns on the dangers of AIDS and the growing use of condoms, especially the socially marketed “No. 1” condom, of which over 1.3 million are now sold each month.⁹⁸ The “100% Condom Use” campaign, which has been piloted in two provinces, will soon be launched nationally. It is a reprise of the pioneering Thai campaign and aims to ensure that condom use is universal in brothels. It can be expected to continue to drive down prevalence rates in both the direct and indirect commercial sex industries. Cambodia has shown what can be done to combat AIDS, even in a country faced with a soaring epidemic and with very little money or resources to spend on health.

The rapid progress of the Cambodian HIV epidemic—seemingly from first case to maturity in only 10 years—poses difficult challenges for those working to combat it. However, successful efforts are being made to further drive down rates of new infection, even though a certain level of infection will almost certainly persist in the absence of a vaccine or a rapid, cheap cure with few side effects. In addition, even as HIV prevalence declines, the number of AIDS cases will continue to increase, as people who have been infected for a while begin to develop AIDS. As Peter Godwin, Seng Suth Wantha, and Mean Chhi Vun predicted in 1999: “At some time in the next decade the incidence of HIV will start to decrease; that means fewer and fewer people will become infected: the epidemic will stop spreading. This will partly be due to the success of programs to prevent the spread of HIV, partly due to the natural epidemiology of the disease, and partly due to changing socioeconomic conditions. Soon after this the prevalence of HIV will first plateau, and then start to decrease; there will slowly be fewer and fewer infected people. By this time the focus of the national response will have to change: it will no longer be focused only on preventing the spread, because this will have been achieved. It will be focused on mitigating the impact; for this will be the next challenge.”⁹⁹

98 UNAIDS, *Country Profile—The Situation and the Response in Cambodia* (Geneva: UNAIDS, 2001) 4th Edition.

99 Peter Godwin, Suth Wantha Seng, and Chhi Vun Mean, “The HIV/AIDS Epidemic in Cambodia: the Contribution of the Health Sector” *Espace, Populations, Societes*, no. 2 (2000).

The Poverty-AIDS Link in Cambodia

Recent data from the Demographic & Health Survey (DHS) in Cambodia clarify the extent to which Asia's poor are at greater risk of HIV infection.¹⁰⁰ The DHS surveys a nationally representative sample of women of child-bearing age and the households to which they belong about demographic characteristics, household structure, educational attainments, and many aspects of reproductive health, including histories, behaviors, and knowledge. It also contains a survey module of questions about AIDS and other sexually transmitted diseases. It therefore provides a wealth of valuable information on these women's behavior and knowledge that bear on their possible risk and exposure to the epidemic. An analysis of systematic variations in survey responses by socioeconomic status reveals that

- though most women know about condoms and have access to them, women from the wealthiest households are twice as likely to practice safe sex and almost twice as likely to know of the AIDS-preventive benefits of condom use than those from the poorest;
- although 30% of all surveyed women want to be tested for AIDS, women from the wealthiest quintile are almost four times more likely to know where to get tested than women from the poorest quintile;
- wealthier women are more exposed to the media (TV, radio, and press) than poorer women, and are therefore more likely to be exposed to national public health campaigns;
- wealthier women are less likely to move or to travel from one place to another than poorer women; and
- married women from the wealthiest households are more than 50% more likely to have spoken to their spouses about trying to avoid AIDS than their counterparts from the poorest households.

As well as wealth, education is also positively correlated with better knowledge and less risky behavior. Analysis of DHS data from Viet Nam shows similar correlations between wealth and education on the one hand, and sexual behavior and knowledge about HIV/AIDS on the other. Both the Cambodian and the Vietnamese data broadly suggest that wealth and education are positively correlated with reduced risk factors for AIDS, in

100 Macro International, "Cambodia Demographic & Health Survey" (2001).

particular through higher condom use and greater knowledge of its AIDS-preventive benefits. Accordingly, once HIV penetrates a society, the poor and uneducated are likely to be at highest risk.

The poor, therefore, do appear to be at greater risk of HIV infection than wealthier segments of Cambodian society. While there is at present little evidence that this risk is translating into higher HIV rates (more detailed studies are required to substantiate the link), studies from elsewhere in Asia, as we have seen, suggest that the disease is likely to end up hitting the poor hardest. Poverty reduction efforts will increasingly have to take into account the potential impact of AIDS. In the next section, we discuss whether the impact of AIDS will affect the development prospects of Cambodia as a whole.

The Impact of AIDS

An analysis of the current and future impact of AIDS on Cambodia is made difficult by a paucity of data. This does not, of course, mean that the impact of the epidemic will be negligible. First, AIDS will continue to contribute to Cambodia's generally poor health, while diverting resources away from other pressing health problems. The interactions between health and economic growth are significant, with Cambodia desperately needing to complete its demographic transition from high to low fertility and mortality if it is to prosper in the modern global economy.¹⁰¹ Large families in Cambodia are significantly more likely to be poor than small ones, and their children are more likely to experience poor health and to receive comparatively little education—critical factors both for their own and for the country's future prosperity. Evidence of significant unmet demand for contraception from Cambodian women—and very recent efforts to meet this demand—suggests that family sizes will probably continue to fall rapidly.¹⁰² However, the experience of other countries suggests that perceptions of general improvements in health influence parents to choose smaller family sizes. A growing number of people sick with AIDS in the general population will do little to aid such a perception.

101 For the boost that favorable demographic conditions gave development in some Asian countries, see David E. Bloom, David Canning, and Pia Malaney, "Demographic Change and Economic Growth in East Asia," *Population and Development Review* 26 (2000): 257–290. For a full discussion of the interactions between health and development, see David E. Bloom and David Canning, "The Health and Wealth of Nations," *Science* 287 (February 2000): 1207, 1209.

102 W. Rojanapithayakorn, "National Policy on 100% Condom Use in the Kingdom of Cambodia" (Phnom Penh: Ministry of Health, 1998).

Second, poverty is certain to increase in households with a family member suffering from AIDS, with the disease having the potential to condemn even relatively comfortable households to abject poverty. The connection between ill health and landlessness has already been discussed and there is evidence that this connection is particularly strong when ill health is caused by AIDS (because of the combination of treatment costs, lost productivity, and social stigma). People with AIDS are frequently not tested for HIV. As a result, families make ruinous expenditure on health care, which they fund by selling assets or borrowing at high rates of interest, using assets as security. In one study of eight families in the province of Banteay Meanchey, only one patient was initially diagnosed with the disease, with most believing that the illness could be cured.

In fieldwork conducted for this book, a 38-year-old woman we interviewed had spent considerable sums of money on traditional medicine, suffering side effects that she believed had nearly killed her. She commented “AIDS is about being poor forever—about resources that are gone forever.” A 37-year-old female had spent US\$25 on the services of a traditional healer who advertises in the Phnom Penh media. She was forced to sell her house and now rents it from the person she sold it to. She is US\$26 in debt, roughly a month’s income. Such serious levels of poverty have a marked impact on the prospects of all members of the household.

It is hard to estimate the cumulative cost of this burden of care. Mike Merrigan has reported that some families spend US\$50–US\$88 per dose of traditional medicine and US\$28–US\$75 for a single dose of Western medicine.¹⁰³ According to WHO, 12,000 people are likely to seek care and support annually, with dramatically higher numbers of AIDS patients needing treatment within the health system over the next ten years. Clearly, the impact of such a number of people needing to spend so much money and therefore further impoverishing themselves will be great. However, Cambodia is already making efforts to provide cheap home care and there is potential for further effective response, with improvements in diagnosis and prognosis, combined with education for carers as to appropriate responses, helping to ensure that available resources are spent more widely. The possibility of attempting to ensure wide access to sophisticated drugs such

103 Monthly incomes ranged from US\$20–US\$75. Mike Merrigan, “HIV/AIDS and landlessness in Cambodia,” (dissertation, Edith Cowan University, 2000).

as anti-retrovirals (ARVs) further complicates the situation.¹⁰⁴ Currently, ARVs are available in Phnom Penh pharmacies, though it is likely that they are rarely taken in anything that even approximates the recommended fashion (a failure that increases the risk of drug-resistant strains of the virus developing). Again, however, wider, but more carefully controlled, access to these drugs could have a positive impact, as the availability of effective treatment helps boost the country's inadequate medical infrastructure.¹⁰⁵

The third way that AIDS could adversely affect Cambodia's prospects is if it becomes a disincentive to general development efforts or if it makes some development measures less favorable to the poor. Cambodia's Second Socio-Economic Development Plan notes that, while it is important to invest in rural areas where the majority of poor people live, urban investment to create productive employment for surplus rural labor must form part of any poverty reduction strategy.¹⁰⁶ At present, however, insufficient new jobs in urban areas are being generated to meet the needs of the many young people joining the labor market, with the result that more people are competing over the same amount of agricultural land. The government therefore strongly favors further urbanization but will need to successfully increase urban investment.

Currently, AIDS is raising doubts about this policy. Economic migrants are among the most vulnerable to HIV. Away from their families, men are more likely to visit sex workers, while men and women are more likely to have sweethearts. Many are forced to return home if they become sick, further impoverishing the families they left home to support. Major infrastructure projects, funded by overseas donors, are open to similar criticism. Already, the Asian Highway (Route 5) is regarded as having the potential to increase the risk of AIDS as it is improved and resurfaced. However, without improved infrastructure, it seems impossible that Cambodia will solve the many other problems it faces. National health authorities and international organizations will need to closely monitor and educate the populations that will be at greater risk as a result of the new road.

104 For a discussion of the issues surrounding access to AIDS treatment and care, see David E. Bloom and River Path Associates, "Something To Be Done: Treating HIV/AIDS," *Science* 288 (June 23, 2000): 2171–2173.

105 Sihanouk Hospital Centre of Hope, *Newsletter*, no. 45 (Phnom Penh: Sihanouk Hospital Centre of Hope, 2001) March–April.

106 <http://www.bigpond.com.kh/users/ngoforum/sedp2prs.htm>

Looking Ahead

The Cambodian HIV/AIDS epidemic is now maturing and seems to be plateauing, at least in part because of a relatively successful response from Cambodian society. However, the epidemic does not stand alone, either in its action or its impact. It must be viewed as part of Cambodia's wider health problems, taking into account the interaction between health and development. The health of a people is a reflection of the strengths and weaknesses of the society they live in, and HIV/AIDS is one problem that Cambodians must face as their society and economy struggle to overcome the problems of the present, as well as of the past.

Action against the epidemic, therefore, must continue along three tracks: AIDS-specific, health-specific, and general development actions that include a far greater level of health awareness than has traditionally been displayed. Balanced development should be a priority for Cambodia, as current encouraging economic signs are unlikely to be sustained in the long run unless significant effort is put into investing in human development for the future. Populations do not become healthy and educated by chance. Certainly, health and education are in demand in societies rich and poor. But their supply requires heroic effort from all sections of society.

The major impact of AIDS is likely to fall on Cambodia's poor. If vicious spirals are to be avoided—whereby a person is infected with HIV and the costs of care and lost labor push the family into, or further into poverty, forcing other family members to take actions that expose them to AIDS—the poor need better and deeper knowledge of the risk factors and prevention methods. Policymakers should aim for a virtuous spiral, with education improving knowledge of health, which in turn improves health and makes families more productive. Currently, AIDS threatens poverty reduction efforts in Cambodia, but concerted and sustained efforts to involve the poor and give them the tools to improve their health in the long term will have far-reaching positive effects on development efforts.

Conclusion

Nearly one third of Asia and the Pacific's population live in poverty and, although some areas are well on their way to meeting the UN's target of reducing extreme poverty by half by 2015 (in the PRC the number of poor fell from 360 million to 210 million between 1990 and 1998), others have seen increases in poverty rates in recent years. East Asia saw the impressive declines in its poverty rate between 1987 and 1996 reverse by 1998 as a result of the area's economic crisis; and, while the percentage of poor in South

Asia fell, this decline was not enough to keep absolute numbers from rising. With a poverty rate of 40%, South Asia is only 6 percentage points behind Sub-Saharan Africa, the world region most ravaged by AIDS.

Although AIDS is unlikely to have a sizeable effect on Asia's poverty rates (HIV infection rates are low and, even if individuals are forced to withdraw from the workplace, the effect of this will be balanced by their being replaced by people who would otherwise be unemployed), it will have a broad range of effects on a society's health. From pushing up TB levels to increasing the number of orphans, AIDS presents a challenge to development efforts. If it goes unchecked, it may also pose a threat to governance and institutional capacity, creating conditions that abet corruption and political instability—and, therefore, for further indirect negative impacts on the poor.

Policy, therefore, should focus on AIDS as part of a wider challenge to societies. All levels of society—governments, donors, NGOs, the private sector and poor communities themselves—should be brought on board in an effort to reform health systems to make them responsive to people's needs. Good governance and strong institutions are essential for successful poverty reduction efforts, action to improve health in general, and programs to tackle AIDS. Addressing AIDS has the potential to act as a trigger for wider health improvements, which in turn can trigger development.