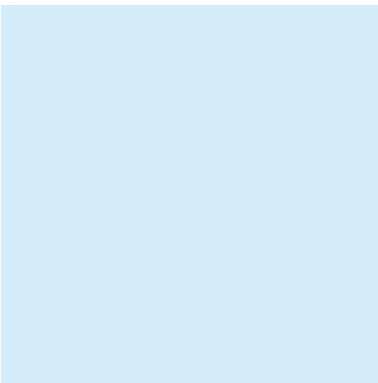
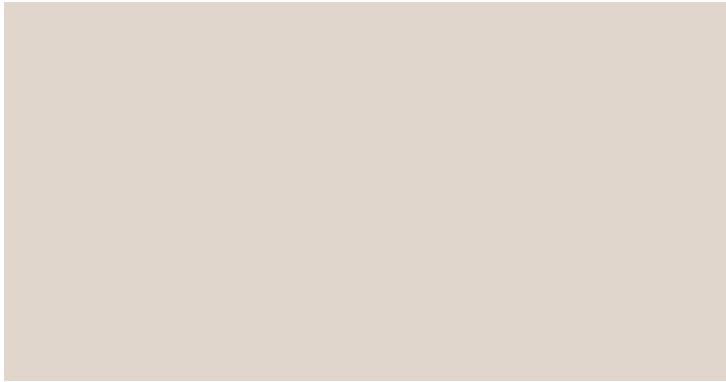


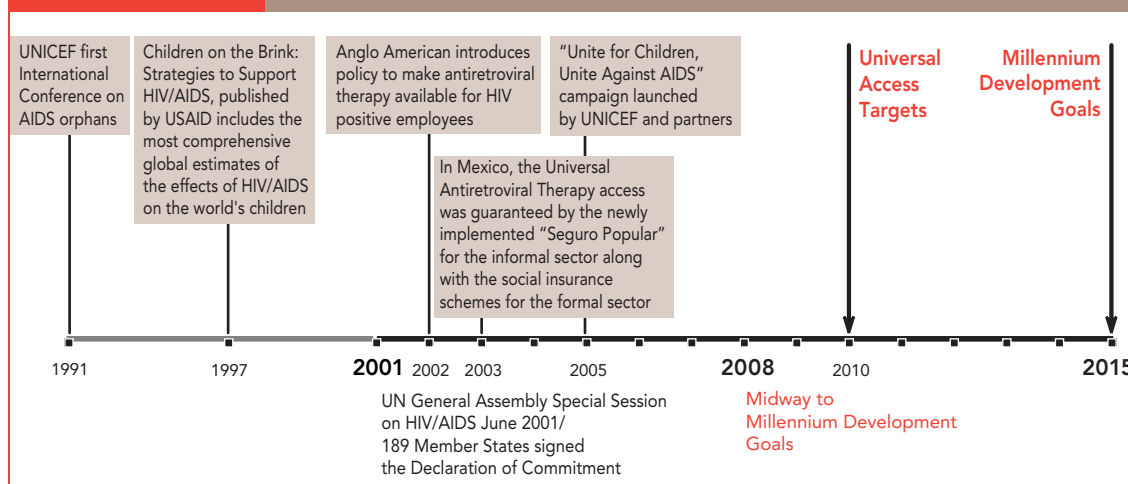
Mitigating the epidemic's impact on households, communities and societies



Chapter 6



FIGURE 6.1 Selected events related to mitigating the impact of AIDS



Key findings

- The HIV epidemic continues to inflict significant damage on affected households, particularly on women and children.
- Social protection programmes that provide cash assistance to HIV-affected households have the proven potential to alleviate the epidemic's impact and should immediately be brought to scale in the most heavily-affected countries.
- Legal reform, coupled with community awareness campaigns, legal aid, and support for law enforcement, can strengthen protection for widows and children orphaned through HIV.
- Although most high-prevalence countries have strategies in place to support children orphaned or made vulnerable by HIV, few national programmes reach more than a small minority of such children.
- The epidemic is having particularly harsh effects on women, and scaled-up measures to increase women's independent income-generating potential should be implemented.
- Although the epidemic's macroeconomic effects are less severe than earlier feared, HIV is nevertheless having profound negative effects in certain industries and agricultural sectors of high-prevalence countries.
- To address the continuing deterioration of government capacity in high-prevalence countries, strategic, scaled-up approaches are needed to preserve and build capacity in the public sector; such approaches should include innovative strategies to extend limited capacity as far as possible.
- Antiretroviral treatment programmes are critical to mitigating the epidemic's impact but should be complemented by initiatives that specifically address the households, communities, and sectors most heavily affected by HIV.

The HIV epidemic has resulted in history's single sharpest reversal in human development (UNDP, 2005). In the most heavily affected countries, HIV has reduced life expectancy, deepened poverty among vulnerable households and communities, skewed the size of populations, undermined national systems, and weakened institutional structures.

The epidemic's effects have been more muted, although still considerable, in regions where HIV prevalence is lower than in sub-Saharan Africa. In Asia, for example, HIV has lowered life expectancy by 3 years in Cambodia and by 1.7 years in Myanmar (Commission on AIDS in Asia, 2008).

Understanding the impact of the AIDS epidemic and how to mitigate it has proven to be far more complicated and nuanced than first believed, as is the case with most other aspects of the epidemic. A modest but important body of research has focused on the epidemic's impact; however, there has been comparatively little rigorous study and documentation of the most promising strategies for mitigating the epidemic's detrimental effects. This chapter summarizes the latest evidence regarding what is known, and still unknown, about the epidemic's multi-faceted impact, with a particular focus on high-burden settings. A comprehensive discussion of the many different impacts of HIV is beyond the scope of a single chapter; the discussion here is thus limited to the epidemic's effects on households (with particular attention to the needs of women and children), on national economies and their subsidiary components, and on public sectors and national institutions.

This chapter pays particular attention to potential avenues for minimizing the epidemic's impact, often highlighting areas where additional research is urgently required. As the chapter explains, the introduction in recent years of anti-retroviral drugs in resource-limited settings often offers the greatest promise for curtailing the epidemic's most harmful effects. However, just as antiretroviral drugs are not a cure for HIV itself,

treatment access alone will not resolve the social and economic damage caused by the epidemic. Improving the scale and scope of prevention programmes is absolutely critical to long-term efforts to minimize the epidemic's impact. In addition, policy and programmatic initiatives are needed that specifically address the epidemic's impact on households, women and children, and national sectors and institutions.

Assessing the epidemic's impact: challenges and obstacles

Efforts to characterize the impact of HIV often seek to compare the situation now with projections of how households, communities, and societies would be faring had the epidemic never occurred. However, as HIV infection has expanded and its impact deepened, the communities and countries most heavily affected by the epidemic have also undergone profound changes unrelated to HIV, making it difficult to isolate the epidemic's precise effects (Bhorat & Kanbur, 2005). In many countries—for example, South Africa and Zimbabwe—it is difficult to disentangle the epidemic's effects from other major social and economic changes that have occurred over the last two to three decades.

The epidemic has revealed a high degree of resourcefulness and resilience in the societies most heavily affected by HIV, thereby avoiding or muting certain anticipated consequences of the epidemic. Yet such resilience can also mask profound individual or collective trauma, the effects of which are poorly understood.

HIV is sometimes referred to as a “long-wave” event, with many of its ramifications occurring far into the future, at uncertain intervals (Gillespie et al., 2007). Conventional economic and social science tools are poorly equipped to project the potential future of the epidemic. Thus, while it is possible to measure school attendance and other physical attributes of well-being among children orphaned by HIV, it is more difficult to quantify the cost of losing one or both parents, or to project the future societal

impact of such a large cohort of young adults having come of age without parental anchors. It has been suggested that the epidemic, by causing the premature death of millions of mothers and fathers, is severing traditional mechanisms for transferring knowledge and values (Bell, Devarajan & Gersbach, 2004), yet the available tools do not adequately assess this phenomenon or its likely impact.

Certain initial assumptions about the epidemic's macro-level impacts have not been borne out. The epidemic has not shattered national economies or threatened the viability of any national government. However, the appearance of societies functioning 'normally' may conceal severe social stresses and strains because the modest nature of macro-level effects masks both severe burdens in subpopulations, and sharp increases in inequality caused by the epidemic.

Mitigating the impact on households, women, and children

While poor individuals and households are not necessarily more likely to become infected with HIV (Dinkelman, Lam & Leibbrandt, 2007; Mishra et al., 2007), the impact of HIV infection is often magnified in conditions of poverty. For example, the financial burden associated with HIV for the poorest households in India represents 82% of annual income, while the comparable burden for the wealthiest families is slightly more than 20% (Asia Development Bank & UNAIDS, 2004a). Studies in the United Republic of Tanzania found that people living with HIV typically experience more than a dozen episodes of illness before dying, with an average of 12 months of deteriorating health in the year before death (Bollinger, Stover & Riwa, 1999; Beegle, 2003). An analysis of data from Botswana found that HIV results in a decline in per capita household income of 10%, with average income losses almost twice as high for households in the lowest income level (Greener, 2005).

HIV infection also results in significant additional expenses, which poor households are least capable of bearing. Even where HIV treatment services are ostensibly free, patients often remain liable for considerable out-of-pocket costs in the form of co-payments, user fees, transport costs, and uncovered items (e.g. medications for opportunistic infections) (International Treatment Preparedness Coalition, 2007). In South Africa, where funerals can cost up to 7 months of income, 61% of households lack funeral insurance (Collins & Leibbrandt, 2007). To cover these costs, affected households are often required to reduce spending on other items, such as food or education.

Scaling up antiretroviral drugs and the effect on productivity

In addition to prolonging life and alleviating suffering due to illness, antiretroviral therapy represents a critical means of alleviating the epidemic's economic effects on households. Among tea workers in Kenya, rapid improvements in productivity were seen in the first year after starting antiretroviral therapy (Simon et al., 2007). However, recovery of health and productivity are not certain nor immediate, which has led some employers to permit workers to delay returning to work until 3–6 months after initiation of antiretroviral drugs.

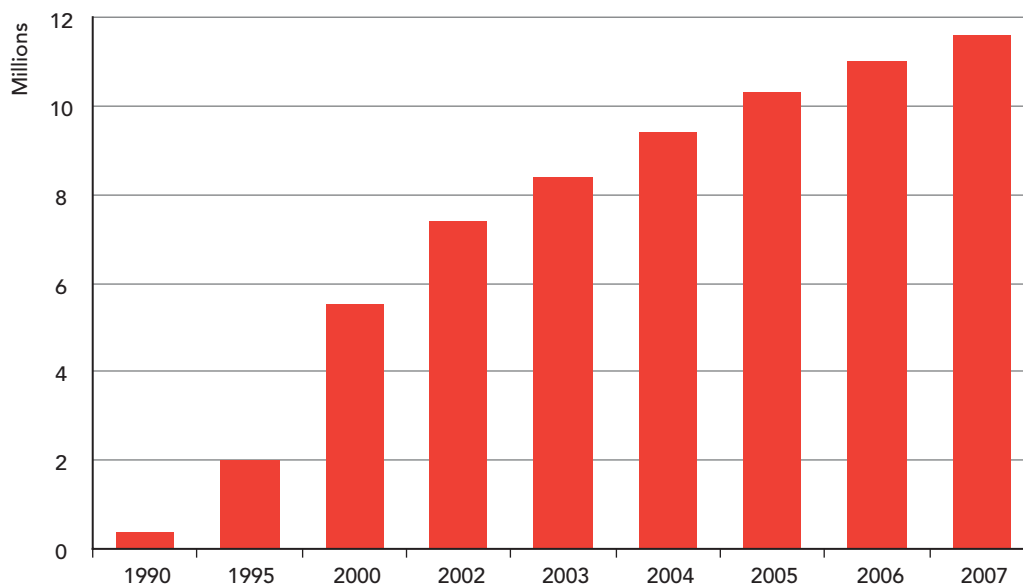
Social protection

Studies of public sector cash assistance schemes in southern Africa found that 50% of households in South Africa were reached by such programmes, and that 70% of local households reached by district-level pilot schemes in Malawi and Zambia were HIV-affected. UNICEF estimates that well-designed social cash transfer programmes¹ could reach 80% of HIV-affected households in need of assistance in low- and middle-income countries with high HIV prevalence (UNICEF, 2007a).

¹ In industrialized countries, "social cash transfer programmes" might be referred to as welfare or social insurance, i.e., cash payments to needy households.

FIGURE 6.2

Estimated number of children under 18 orphaned by AIDS in sub-Saharan Africa (1990–2007)



Source: UNAIDS/WHO, 2008.

With the exception of households in which one or more members are on antiretroviral drugs, it is not recommended that HIV serostatus serve as an eligibility criterion for social cash transfer schemes, due to the possibility of stigmatizing recipient households (UNICEF, 2007a). Schemes gearing eligibility to a low income level reach a large share of HIV-affected households, which tend to be poorer than non-affected households due to the economic consequences of infection. Similarly, eligibility criteria targeting households that include one or more orphans, or are labour-constrained, also reach many HIV-affected households (UNICEF, 2007a).

Minimizing administrative hurdles is essential for maximizing uptake of social cash transfer programmes. In South Africa, comparatively slow uptake of social cash transfer programmes appeared to stem from the administrative complexity of application procedures, as well as delays associated with the country's overburdened welfare administration (UNICEF, 2007a). It is also important to improve ease of access in both urban and rural settings.

While cash transfer schemes represent a rational policy response to the challenge that HIV poses to poor households, some have asked whether this approach is affordable in the low-income countries most heavily affected by HIV. According to a costing exercise undertaken by the International Labour Organization, a national poverty-targeted cash transfer scheme need cost no more than 0.5% of gross domestic product (Pal et al., 2005)—a finding supported by a similar UNICEF analysis in Mozambique (Webb, 2007).

Orphans and other children made vulnerable by HIV

The needs of HIV-affected households include those of the children living in these households. In sub-Saharan Africa, nearly 12 million children under age 18 have lost one or both parents to HIV (UNAIDS & WHO 2008). In Botswana and Zambia, an estimated 20% of children under 17 are orphans, with most orphaned as a result of HIV (Haacker, 2004a). Zimbabwe reports that 24% of its children (ages 0–17) have lost one or both parents to HIV (Figure 6.2).



Achieving universal access to HIV treatment would prevent up to 5 million children from becoming orphans.

In addition to the trauma of losing one or both parents, being orphaned as a result of HIV can increase vulnerability in many ways. Loss of a parent may result in a significant decline in standard of living; it also potentially increases the likelihood of exploitation. Especially where both parents have died, a child may become head of the household, assuming enormous burdens at an early age. The impact of orphanhood may be especially severe for girls, who are generally more likely than boys not to be in school (see UNDP, 2007).

Much of the burden of caring for children orphaned as a result of HIV falls on the elderly, especially grandmothers who step in when one or both parents have died. Surveys in rural South Africa have detected an increase in the number of households headed by individuals over 50 (Preston-Whyte et al., 2007). In Namibia, the United Republic of Tanzania, and Zimbabwe, 40%–60% of orphaned children are cared for by grandmothers (UNICEF, 2007b).

Mitigating the impact on orphans and vulnerable children

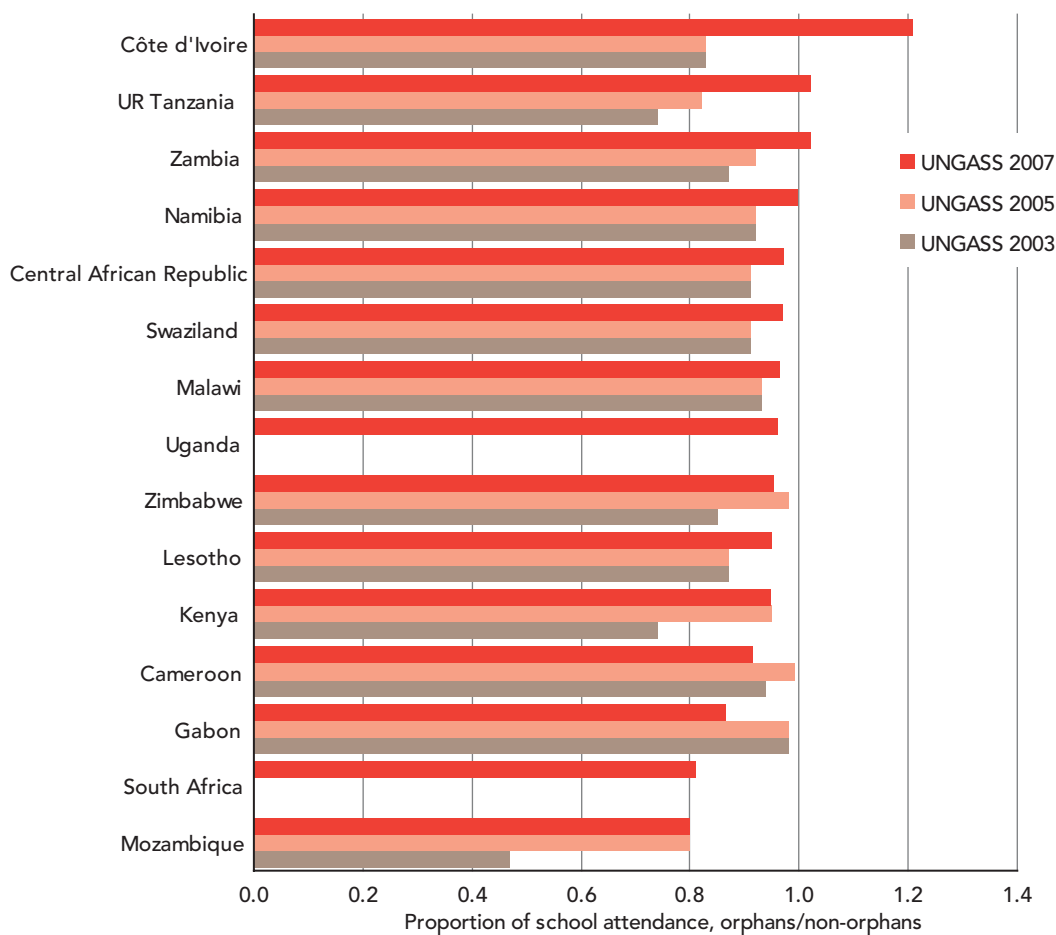
The policy response to children orphaned and made vulnerable by HIV has significantly expanded since 1991, when UNICEF hosted the

first international meeting on the issue (Webb, 2007). From the early focus on “AIDS orphans”, programme responses have increasingly recognized the many different ways that HIV may increase the vulnerability of children, including parental illness and loss of household income. Rights-based programming has increased the sensitivities of policy-makers and programme implementers to discrimination against HIV-affected children, and thus helped them to avoid such discrimination.

Among 33 countries with generalized epidemics reporting these data, 91% of national governments report having a specific policy or strategy to address the HIV-related needs of children orphaned or made vulnerable by HIV (UNGASS Country Progress Reports 2008). The 15 countries with the highest HIV prevalence have operational definitions for this population, an operational plan, and estimates of the number of children currently being reached by support programmes. The degree to which such plans have been costed, budgeted, and implemented cannot currently be gauged, although national governments in nearly 73% of countries with generalized epidemics regarded their national efforts to address the needs of orphans and vulnerable children as above average. Government reports on these policy

FIGURE 6.3

Ratio of school attendance among orphans to non-orphans in countries with HIV prevalence greater than 5%



Source: UNGASS Country Progress Reports 2008.

issues were largely confirmed by reports from nongovernmental sources in these countries (UNGASS Country Progress Reports 2008).

In recent years, donor support for children-focused care and support initiatives has increased. As of September 2007, PEPFAR had provided care and support to 2.7 million children orphaned or made vulnerable by HIV; the programme had also provided training or re-training for 143 000 caregivers (PEPFAR, 2007). In Swaziland, the Global Fund is financing care and support services for 100 000

children orphaned as a result of HIV (Global Fund, 2008).

Education

Education is critical to children's future potential and sense of self-esteem, and to the generational transmission of knowledge and values within societies. Studies present conflicting findings on the impact of HIV-related orphanhood on rates of schooling, with some indication that effects may be specific to context and findings subject to methodological variations. In 56 countries

where recent household survey data are available, orphans who had lost both parents were, on average, 12% less likely to attend school than non-orphans. In countries with HIV prevalence greater than 5%, orphans were only 4% less likely to be in school than non-orphans, suggesting that heavily affected countries are closing some of the educational disparities seen earlier in the epidemic.²

School attendance by orphans was consistently higher in 2007 than in 2005 in high-prevalence countries, except in Cameroon and Zimbabwe (Figure 6.3). Several of these countries have benefited from orphan-focused external assistance from the PEPFAR initiative or other sources. Of particular note are the efforts of such countries as Côte d'Ivoire, Gabon, the United Republic of Tanzania, and Zambia, where school attendance rates are actually higher among orphans than among non-orphans.

Some experts have suggested that monitoring whether children are in school at a particular time is a less useful measure of HIV's impact on children than studying eventual educational attainment. In Uganda and Zambia, for example, while educational attainment progressively rose for five-year birth cohorts until 1977, educational levels began falling as the epidemic began reducing life expectancy (Birdsall & Hamoudi, 2004). As a result of the epidemic, children as a whole are becoming less educated in the most heavily affected countries, potentially diminishing national capacity to accumulate human capital for future growth, prosperity, and development (Birdsall & Hamoudi, 2004).

Social protection

In eastern and southern Africa, national governments, civil society, and other stakeholders are increasingly focused on the provision of

a minimum package of social protection to vulnerable children, including those affected by HIV (Webb, 2007). Such minimum packages vary considerably among countries. In Botswana, the country's Orphan Care Programme was supporting more than 53 000 children orphaned by HIV as of December 2007, providing food baskets, psychological counselling, and educational assistance (e.g. waiver of school fees). Zimbabwe's National Orphan Care Policy takes a sectoral approach, working to strengthen community care capacity through extended families. Namibian's Ministry of Gender Equality and Child Welfare administers foster-care grants that were supporting 65 000 children in 2007, while South Africa has reached more than one million orphans and vulnerable children with support services, mostly in the form of child support grants.

Among 10 countries in which 5% or more of adults are HIV-infected and where recent household surveys have been conducted, a population-adjusted average of 15% of orphans live in households receiving some form of assistance, such as medical care, school assistance, financial support, or psychosocial services. In some high-burden countries, programme utilization data suggest somewhat higher coverage than has been found in household surveys. South Africa and the United Republic of Tanzania, for example, report reaching 67% and 50%, respectively, of households that include one or more children orphaned or made vulnerable by HIV (Table 6.1).³

Targeting cash support to HIV-affected households would significantly increase assistance to children, who represent a significant share of households. In a pilot project in the Kalomo district of Zambia, 68% of children reached by social cash transfers were orphans, including 35% who had lost both parents (UNICEF, 2007a).

² This indicator pertains to orphans generally, rather than just to children orphaned specifically as a result of HIV.

³ Programme data should be interpreted with caution due to the possibility of duplicative counting as a result of reporting by multiple organizations in the same locality, or receipt by the same household of multiple services.

TABLE 6.1Support to orphans and vulnerable children as reported by countries with adult HIV prevalence $\geq 5\%$ (2005 estimates)

Country	OVC supported	OVC total ¹	Coverage in 2007 (n=10)
Population based survey data			
Botswana	Not reported	Not reported	Not reported
Cameroon	412	4,431	9%
Central African Republic	Not reported	Not reported	7%
Gabon	259	2,637	10%
Kenya	Not reported	Not reported	17% ²
Lesotho	Not reported	Not reported	Not reported
Malawi	Not reported	Not reported	19%
Namibia	882	5,343	17%
Swaziland	1,472	3,576	41%
Uganda	569	5,321	11%
Zambia	578	3,671	16%
Zimbabwe	1,972	6,322	31%
Population adjusted average	34,161	4,970	15%
Programme based data			
Côte d'Ivoire	37,250	420,943	9%
South Africa	1,057,900	1,577,200	67%
United Republic of Tanzania	471,315	930,000	51%
Population adjusted average	2,928,143	1,566,465	53%

¹ Total number of OVC as reported by countries.² Information based on survey implemented by PEPFAR in Kenya on OVC support in 2007, source: Kenya UNGASS country report 2008.

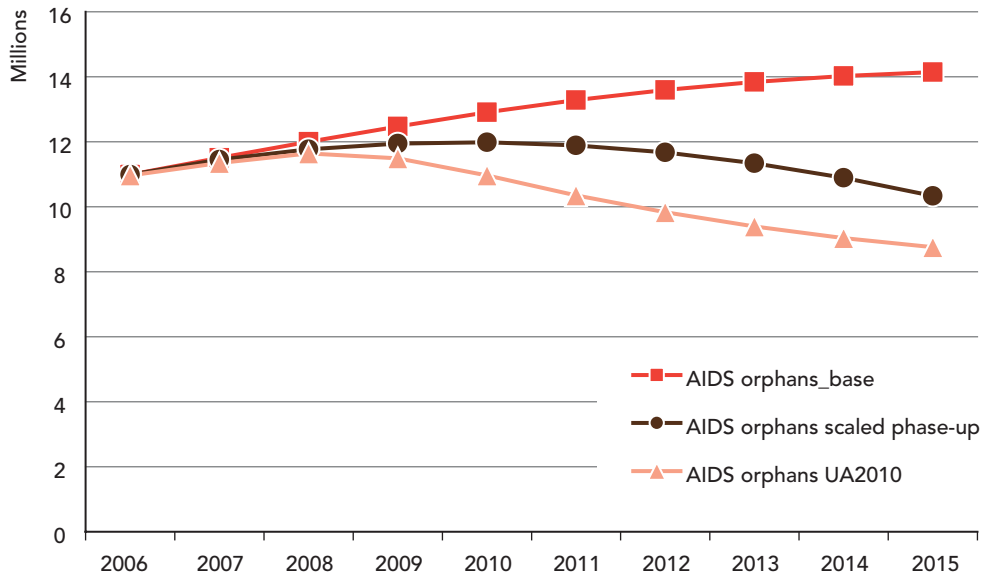
Source: UNGASS Country Progress Reports 2008.

Orphan-support initiatives confront a host of challenges in high-prevalence countries. In 2007, the percentage of children orphaned or made vulnerable by HIV who were reached by orphan support services declined in Zimbabwe due to the impact of hyperinflation on national budgets, according to the country's report to UNAIDS on core indicators. Coverage for orphan support services is sometimes markedly higher in urban areas than in rural communities. Stigma may discourage households from registering affected children in national support programmes. In some countries, support for children affected by the epidemic is largely shouldered by underfinanced civil society groups, with little government support.

Scaling up antiretroviral drugs and the impact on children in the household

Antiretroviral treatment for HIV-infected adults also yields clear benefits for children living in affected households. Longitudinal household data from Kenya indicate that the number of hours children are in school each week increases by 20% within six months of initiation of antiretroviral drugs for an adult household member. Similarly, children living in such households experience sharp improvements in their nutritional status—as measured by quantitative assessments—once an adult household member starts on antiretroviral drugs (Thirumurthy, Zivin & Goldstein, 2007). A recent study in Uganda

FIGURE 6.4 Orphans due to AIDS in sub-Saharan Africa, from 2006 projected to 2015



Source: UNICEF, UNAIDS, WHO, 2008.

found an 81% reduction in child mortality among uninfected children of adults on anti-retroviral drugs, as well as a 93% reduction in orphanhood (Mermin, 2008).

Improved antiretroviral access also offers the prospect of significantly reducing the number of children who will be orphaned as a result of HIV in the future. As Figure 6.4 indicates, the number of children under age 18 orphaned as a result of HIV is expected to grow to more than 14 million by 2015 if the current pace of antiretroviral scale-up continues. Achieving universal treatment access by 2010, however, would reduce the number of orphans in 2015 by more than five million. A scaled phase-up to universal access by 2015 would result in a number of orphans that is approximately four million below current projections.

Addressing the epidemic's disproportionate impact on women

In addition to being more physiologically and socially vulnerable to infection, women also disproportionately suffer the epidemic's negative effects. As the primary caregivers in Africa and other regions, women have seen their household and community burdens grow as a result of HIV, often compromising their health, their ability to generate income, and other markers of well-being. Women account for two thirds of all caregivers for people living with HIV in Africa (Secretary-General's Task Force, 2004).

Women who are widowed as a result of HIV are at high risk of becoming destitute as a result of legal regimes that fail to recognize or protect women's right to inherit property. In Zambia, one study found that the amount of land under

the control of a widow-headed household fell by 35% within three years of the death of the husband (Chapoto, Jayne & Mason, 2007).

Measures to expand women's economic opportunities

Among low-income women in Africa, those having some type of formal or informal work are less likely to die than those who lack work (Chapoto & Jayne, 2005). Accordingly, increasing women's financial options helps to mitigate some of the epidemic's most harmful effects. Microfinance initiatives are frequently cited as a possible means to empower women by increasing their economic independence. A randomized controlled trial of a microfinance initiative in the Philippines recently found that access to a microsavings account improved women's decision-making within the household, enhanced their self-perception of savings behaviour, and positively affected actual consumption of durable goods (Karlan, Ashraf & Yin, 2007). In another study, 90% of women participating in microfinance initiatives reported significant improvement in their lives, including improved sense of community solidarity in crises and reductions in partner violence (Pronyk, 2006).

In one of the most extensive studies of women-focused microfinance initiatives, researchers examined the impact of an intervention that combined microfinance with participatory training on HIV infection, gender norms, domestic violence, and sexuality. Although no impact on HIV incidence was observed, the combined microfinance initiative was associated with a reduction of more than half of physical and sexual violence by an intimate partner. The study also found significant improvements across a broad range of qualitative indicators of empowerment (Kim et al., 2007).

To make microfinance feasible, initiatives should address transport and literacy barriers that many women confront in accessing financial assistance. In addition, microfinance programmes should

include community-based work with men, to address traditional gender norms and the resistance of some men to women-focused financial assistance.

Support for caregivers

In Kenya, Mozambique, Viet Nam, and other countries, community networks ease caregivers' burdens and provide emotional and practical support for those caring for people living with HIV (Global Coalition on Women and AIDS, 2006). Swaziland provides a small allowance to HIV caregivers (IRIN News, 2006), while a Global Fund-supported project in South Africa trains caregivers and provides financial and other support to households that include children orphaned by HIV (Global Fund Partnership Forum, 2006). In Kenya, Grassroots Organizations Operating Together in Sisterhood (GROOTS) is a network of self-help groups that aid women responsible for home-based care and supporting community capacity to address HIV-related care needs (International Center for Research on Women, 2007).

Legal reform

As Chapter 3 explained, enactment of laws protecting women's property and inheritance rights would increase women's economic independence. In addition to reducing women's risk and vulnerability to HIV, such laws would also help mitigate the epidemic's impact on women by expanding their economic opportunities. Although progress has been slow in the implementation and enforcement of such laws in many countries, civil society groups are mobilizing to promote such legal reforms. In Zambia, for example, the Justice for Widows and Orphans Project serves as a referral point for widows who need assistance with inheritance and property rights (ICRW, 2007). Positive Women's Network—based in Chennai, India—and other south Asian organizations provide legal assistance to help women to secure their property rights (Swaminathan, Bhatla & Chakraborty, 2007).

Mitigating the macroeconomic impact of the epidemic

The epidemic continues to exact a toll on national and subnational economies, and on individual economic sectors. As the discussion below indicates, the long-term ramifications of the epidemic in different regions remain somewhat uncertain and subject to debate among economists.

The epidemic's economic impact

Estimating the epidemic's macroeconomic effects is complicated by the fact that high-burden countries have been undergoing important changes at the same time that they have been experiencing HIV. These changes include globalization, fluctuations in prices for commodities, political upheaval, civil and international conflict, and other humanitarian crises. As both national epidemics and the many ancillary factors that may affect economic growth often differ sharply from one setting to the next, it is challenging to reach generalized conclusions about HIV's impact on economic growth.

With one of the highest HIV burdens in the world, Botswana nevertheless experienced average economic growth of 4.8% between 1990 and 2005 (UNDP, 2007). Likewise, economic growth in heavily affected Uganda in 1990–2005 actually increased over rates reported for 1975–1990, even as HIV was responsible for more than 100 000 deaths per year (WHO, UNICEF & UNAIDS, 2006). South Africa, home to the largest population of people living with HIV, has enjoyed robust economic growth since 1999 (Gillespie et al., 2007). Certain heavily affected countries—including Kenya, Zambia, and Zimbabwe—experienced negative economic

growth in 1990–2005, but it is difficult to link this weak negative performance to HIV.

Using standard economic models, the best available evidence suggests that HIV is likely to reduce economic growth in high-prevalence countries by 0.5% to 1.5% over 10–20 years (Piot, Greener & Russell, 2007)—an impact that is notable but not catastrophic.⁴ However, while the macroeconomic impact may be manageable, it is clear that the epidemic is deepening poverty, even in less-affected countries outside Africa. Even within economies that are steadily growing, HIV can create a “poverty trap” that ensnares the most vulnerable (Bell, 2004). Given the heavier burdens borne by poor households, HIV also widens inequality within societies, which may increase vulnerability to HIV in the future, as discussed in Chapter 2. Ironically, the sickness and death of skilled workers may also increase inequality by reducing overall labour demand and leading to a fall in the wages of unskilled workers (Dorward & Mwale, 2004).

In Botswana, modelling indicates that HIV has increased the share of households below the poverty line by 6%, and increased the percentage of individuals living in poor households by 4%. As a result of HIV, every income earner in the lowest income level can expect to support an additional eight dependents (Greener, 2004). Outside Africa, economic analyses by the Asia Development Bank and UNAIDS indicate that HIV will slow the annual rate of poverty reduction by 60% in Cambodia, 38% in Thailand, and 23% in India between 2003 and 2015 (ADB & UNAIDS, 2004). It is estimated that HIV imposes an additional US\$ 2 billion in costs each year on affected households in Asia (Commission on AIDS in Asia, 2008).

⁴ Such estimates are notably lower than projections developed earlier in the epidemic. In 2001, for example, economists estimated that HIV was likely to cause economic growth in Botswana to plummet from roughly 5.5% per year to between 1.5% and 2.5% (MacFarlan, 2001). In the intervening years, however, economic growth in Botswana has remained robust, notwithstanding extremely high levels of HIV infection.

Recent suggestions that the epidemic's long-term impact on national economies will not be as severe as previously predicted are not universally shared. A 2006 economic analysis suggested that the lower projections of macroeconomic impact are based on assumptions that heavily-affected countries have excess supplies of unskilled labour. Questioning the validity of such assumptions in light of the long-term mortality toll from HIV, this analysis argued that a “broader and longer-term perspective” suggests that “AIDS could cause the outright collapse of many economies, particularly in sub-Saharan Africa” (TD Bank Financial Group, 2006).

TABLE 6.2 HIV-Related Labour Costs

Sector	Country	Number of Workers in Sector	Estimated HIV Prevalence (% of Adult Population)	Cost per AIDS Death or Retirement (Multiple of Annual Compensation)	Aggregate Annual Costs (% of Labour Cost)
Retail	South Africa	500	10.50	0.7	0.50
Agribusiness	South Africa	700	23.70	1.1	0.70
	Uganda	500	5.60	1.9	1.20
	Kenya	22,000	10.00	1.1	1.00
	Zambia	1,200	28.50	0.9	1.30
Manufacturing	South Africa	1,300	14.00	1.2	1.10
	Uganda	300	14.40	1.2	1.90
	Ethiopia	1,500	5.30	0.9	0.60
	Ethiopia	1,300	6.20	0.8	0.60
Media	South Africa	3,600	10.20	1.3	1.30
Utility	South Africa	>25,000	11.70	4.7	2.20
Mining	South Africa	600	23.60	1.4	2.40
	Botswana	500	29.00	4.4	8.40
Tourism	Zambia	350	36.80	3.6	10.80

Source: Piot P et al. (2007). Squaring the Circle: AIDS, Poverty, and Human Development.

The epidemic's relatively modest macro-economic impact also obscures much more severe effects on individual industries. Costs to companies as a result of HIV include lost productivity (due to absenteeism or death of a worker), medical costs, and death-related benefits (Haacker, 2004b). In Africa, company costs associated with HIV vary from 0.5% to 10% of total labour costs (Simon, unpublished data, in Piot, Greener & Russell, 2007) (Table 6.2). At the upper reaches of this range, the impact on profits is likely to be considerable. For example, among mining companies in southern Africa, future costs associated with HIV are projected to equal 8% (gold mining) and 3.6% (platinum mining) of total labour costs, reflecting a notable loss of company profits (Fourie, 2005).

A number of potential strategies are available to mitigate the epidemic's impact on economic growth, poverty, and inequality. As noted, increased access to antiretroviral therapy may help preserve the labour productivity and

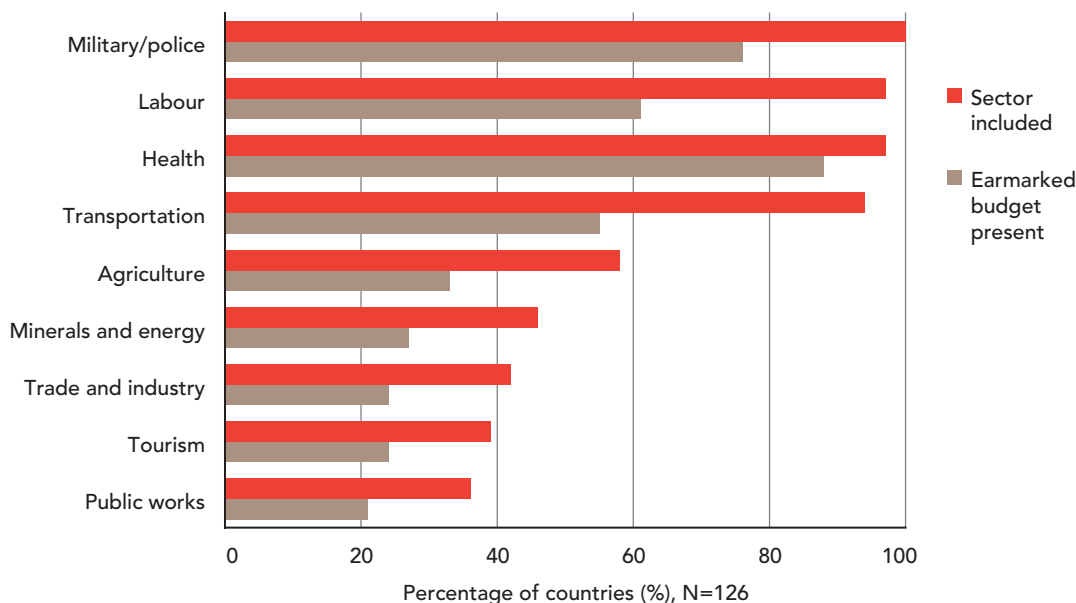
viability of HIV-infected households, although minimization or elimination of out-of-pocket costs associated with treatment is necessary to avert potential increases in economic inequality.

Workplace programmes

Workplace HIV prevention programmes have been effective, and a growing (although still insufficient) number of companies are now offering their employees coverage for antiretroviral drugs (see Chapter 5). When asked to state whether workplace services were available in all or most districts in need, fewer than one in four (24%) governments (and nongovernmental informants in only 12% of countries) said that prevention services are widely available, but only 9% of countries with generalized epidemics indicate widespread availability of treatment or treatment referrals through the workplace (UNGASS Country Progress Reports 2008). In addition, because many people in sub-Saharan Africa work

FIGURE 6.5

Percentage of countries with sectors included in the national AIDS strategy and earmarked budgets



Source: UNGASS Country Progress Reports 2008.

in agriculture or the informal sector, traditional workplace programmes fail to reach a sizeable share of the workforce.

The 33 countries with generalized epidemics reporting these data generally include labour (97%), military and police (100%), and transport (94%) in their national HIV strategies. Other areas are included less frequently in national HIV strategies; agriculture is addressed in 58% of strategic plans in countries with generalized epidemics, trade and industry in 42%, minerals and energy in 46%, tourism in 39%, and public works in 36%. Even when they are included in national HIV strategies, many non-health sectors do not receive budget support to address the epidemic's sectoral impact, according

to government reports (UNGASS Country Progress Reports 2008) (Figure 6.7).

Poverty-sensitive macroeconomic policies

Poverty-sensitive pro-growth strategies can potentially help to ensure sufficiently high economic growth to compensate for the epidemic's drag on the economy. Yet certain kinds of economic growth—for example, those that encourage population mobility or contribute to greater away-from-home work—may potentially worsen national epidemics. Access to a trading centre and a higher proportion of short-term residents were among the factors found to be highly associated with HIV risk in a study in Limpopo, South Africa (Pronyk, 2007).

Workers against HIV

Alan Leather is Deputy General Secretary of Public Services International, the global public sector union federation, and chairs the management committee of the Global Unions AIDS Programme.



"The majority of people who are HIV-positive are at work, so the workplace is the ideal place to respond to HIV and AIDS", says veteran trade unionist Alan Leather. "Throughout their history, trade unions have campaigned for the rights of workers to live and work in decent conditions. Trade unions realize that this is something their members wish them to be active in."

Leather chairs the Global Unions AIDS Programme (GUAP), which aims to make HIV a priority for all trade unions and workers. GUAP represents the 12 major global trade union organizations, which in turn represent 200 million workers.

Many trade unions around the world have been able to negotiate HIV workplace policies with employers. Tackling stigma and discrimination against HIV-positive workers has been particularly important, and has challenged trade unionists themselves. "We have to get leaders to openly address HIV and AIDS, to talk about it as something normal for a trade union to address", says Leather. "If we're going to really challenge stigma and discrimination in the workplace, we have to talk about the normality of this disease."

Leather says that although employers are now much more responsive to HIV issues than previously, workplace policies are not always implemented. "Some employers are responding, but others are not", says Leather. "They believe it is not their responsibility, they believe it is the responsibility of the health system or somebody else."

GUAP has two major areas of work: advocacy at the international level and project work, mainly in the high-prevalence countries of sub-Saharan Africa. Some of their projects have been innovative and successful. For example, the International Transport Federation has been active in Africa and other parts of the world, implementing programmes to protect long-distance drivers in transport corridors. They have concentrated on setting up education and treatment centres on transport routes to make sure that transport workers are aware of their vulnerability. Another example is the work of Education International, the global union federation that represents 30 million teachers worldwide, which runs HIV awareness programmes in schools and colleges throughout the world. Last World AIDS Day, they campaigned for all teachers to give one hour to teaching about HIV and AIDS.

Although there has been progress in strengthening the response to HIV in work settings, Leather feels that there is still a long way to go. "From my side, I'd like to see more involvement from labour so that I could have more of a back seat role to young trade unionists, who are going to take responsibilities in the future."



Many HIV-affected households depend on agriculture for their livelihood. Especially in the most affected countries, HIV often reduces agricultural productivity and threatens food security.

The epidemic's impact on agricultural sectors

As agriculture is a primary livelihood base for many people living with, or affected by, HIV, the epidemic has had major effects on food security in high-prevalence countries. The weight of the limited but growing body of evidence indicates that HIV-affected households experience a loss of agricultural production, although some of the radical HIV-related effects feared earlier in the epidemic, such as a widespread shift toward subsistence crops, have not been documented in the few rigorous studies that have been undertaken in rural African settings (Jayne et al., 2004). Average bean production in death-affected households in Rwanda, for example, is 18% lower than the national average (Donovan, 2004). The tendency of urban-dwelling, underemployed household members to return to rural communities when the household becomes affected by HIV sometimes compensates for productivity losses. However, it is unclear how long the surplus of workers in the informal sector will persist if the epidemic's burden continues to mount (Jayne et al., 2004).

Mitigating the impact on agriculture

Few scaled-up interventions have been implemented, much less evaluated, to mitigate the epidemic's impact on agricultural sectors and food security (Barnett, 2004). A four-pronged approach is recommended to mitigate the epidemic's effects on agriculture and food security. The approach consists of: initiatives to protect and improve the livelihoods of rural households (through both farm and non-farm avenues); social protection policies to provide financial and nutritional assistance where appropriate; focused nutrition programmes for key populations at higher risk (e.g. girls and women); and improvements in the development, implementation, and accountability of policy-making in the agricultural sector (Gillespie & Kadiyala, 2005).

Of the 33 countries with generalized epidemics reporting these data, 58% report including the agricultural sector in national HIV strategies, although one in three (33%) governments report that there is no earmarked budget to address HIV in the agricultural sector (UNGASS Country Progress Reports 2008).

Mitigating the epidemic's impact on national systems and institutions

The responsibilities of governments to act on their nation's behalf, include formulating and implementing an effective strategic response to HIV. The epidemic itself, however, is undermining public sectors in many countries, impeding governments' abilities to lead efforts to address HIV. Not only does the epidemic often erode government finances—reducing tax receipts while generating new revenue needs—it also robs the public sector of essential human resources (Haacker, 2004b).

Impact on the capacity to govern

Preliminary evidence from a study of the epidemic's impact on governance in seven African countries indicates that the epidemic is undermining parliamentary capacity, resulting in substantial additional governmental expense. In Zimbabwe, the number of by-elections in national parliaments more than doubled between 2000 and 2007, with more than two thirds of by-elections resulting from the death of parliament members due to undisclosed illness. In addition to the potential impact on the quality of representation provided to the constituents of deceased representatives, such vacancies take a toll on the public purse, e.g. each by-election in Malawi costs an average of almost US\$ 79 000 (Chirambo, 2007).

HIV has additional, less direct effects on governance. The same seven-country study in Africa found that the stigma associated with HIV deters candidates for public office or elected parliamentary members from leading a strong national AIDS response. The perceived HIV status of candidates is frequently used as a political weapon to cast doubt on the suitability of another party's candidate. In the seven African countries studied, including some with HIV prevalence exceeding 20%, researchers identified no member of parliament or cabinet minister who was openly living with HIV (Chirambo, 2007).

Impact on health and other social sectors

A few years ago studies in Africa documented substantial human resource losses to public health sectors due to HIV-related absenteeism and death. (Zambia Central Board of Health & Center for International Health and Development, 2004). More recently, a serosurvey in two public hospitals in South Africa found that 11.5% of health-care workers were HIV-positive, including nearly 14% of nurses. Almost one in five infected health-care workers had a CD4 count below 200, with almost half having CD4 counts under 350 (Connelly et al., 2007), suggesting a high likelihood of additional deaths among workers in the near future.

The epidemic's impact on the public sector extends well beyond health systems. For example, the damage inflicted by the epidemic on national education systems—primarily through the absenteeism and premature mortality of teachers living with HIV—has been well documented (Birdsall & Hamoudi, 2004). In 2005, HIV-related mortality reduced the service delivery capacity of the Zambian Wildlife Authority by 6.2% and increased labour costs almost 10%, constraining the government's ability to protect the country's wildlife and parks (Rosen et al., 2006).

Improving government capacity by scaling up antiretroviral drugs

A number of strategies have been tried or suggested to mitigate the epidemic's impact on governance. As noted with respect to other working contexts, increasing access to antiretroviral drugs can significantly improve productivity, reduce absenteeism, prolong life, and improve quality of life. Because of the critical need for health-care workers and other public servants, it has sometimes been suggested that key workers should be prioritized for HIV prevention and treatment services, although concerns have been raised regarding the potential inequities of such an approach. In January 2008, the government of Malawi announced plans to offer income

Impact of HIV on national militaries and global security

At a landmark meeting in 2000, AIDS became the first health issue ever formally discussed by the United Nations Security Council, which subsequently enacted a series of resolutions acknowledging the epidemic's global security dimensions. There are a number of ways the epidemic might affect global security; for example, by causing state failure or by weakening national militaries, thereby inviting aggressive action by a neighbouring country or weakening national readiness to contribute troops for international peacekeeping missions.

There is little evidence that HIV is likely to lead to state failure. However, many national militaries, especially in the most heavily-affected countries, are struggling to manage the administrative, practical and operational issues associated with high levels of HIV infection among military personnel. Although it is often difficult to obtain reliable information on the health status of national militaries, international data indicate that HIV prevalence in national militaries is typically equal to or greater than infection levels in the general population (Garrett, 2005).

A total of 85% of countries said that their national HIV strategic frameworks in 2007 address the needs of national militaries. Of countries with such policies, 66% earmarked budget allocations to support HIV activities in the military, according to national governments (UNGASS Country Progress Reports 2008). International donors have stepped in to provide financial and technical support for these efforts, including the United States Department of Defense HIV/AIDS Prevention Programme.

Many countries have demonstrated the feasibility of implementing HIV prevention services throughout military structures, including peer education, condom promotion, treatment for sexually transmitted infections, and antiretroviral treatments. In Kenya, for example, the national armed forces provided antiretroviral drugs in 2007 to an estimated 90% of military personnel in need and has provided voluntary counselling and testing to thousands of civilians who live near the military's 17 designated testing sites. Of the 109 countries reporting the existence of a national strategy for HIV among national uniformed services, most reported reaching a significant proportion of this population with condom provision (86%), services for sexually transmitted infections (89%), HIV voluntary testing and counselling (89%), and HIV treatment (77%) (UNGASS Country Progress Reports, 2008). The United Nations Department of Peacekeeping Operations, which oversees more than 100 000 personnel serving in 18 UN peacekeeping missions, provides HIV orientation and basic prevention services for all peacekeepers.

supplements of US\$ 35 per month (over and above the average monthly salary of US\$ 200) to HIV-positive public servants, with the aim of improving their nutritional intake and quality of life (Reuters, 2008).

Enhancing HIV prevention in the public sector

Especially in high-prevalence settings, workplaces should be regarded as high-priority venues for HIV prevention activities. In the case of health-care workers, all employees should be trained and monitored with respect

to effective infection control and the implementation of universal precautions, and health-care facilities should ensure ready access to essential prevention technologies including gloves, gowns, and other protective gear, as well as kits to facilitate the timely initiation of antiretroviral prophylaxis in the event of a significant blood exposure.

Innovative measures to expand human resource capacity

As described in Chapter 5, countries are innovating, to expand limited human resource capacity to address the HIV epidemic. An example is the “Treat, Train, Retain” strategy, which aims to shore up human capacity in health sectors, and to task-shift from more to less specialized staff members, to stretch available capacity as far as possible. While most such innovation has focused on health systems, such approaches have potential applicability to other public sectors affected by HIV.

Moving forward: action to mitigate impact

National governments, donors, and other stakeholders should prioritize impact mitigation as a key component of the HIV response and strengthen efforts to mitigate the epidemic's impact on households and communities. Understanding the epidemic's effects in individual countries and subnational units is a necessary step toward greater strategic action to mitigate impact. As of December 2007, 60% of countries with generalized epidemics said they had evaluated the epidemic's socioeconomic impact, although only 6 of 33 countries with HIV prevalence greater than 1% indicated that such estimates had effectively informed decisions on resource allocations.

Mainstreaming HIV in development instruments and processes—in poverty reduction strategy papers, planning for the Millennium Development Goals, and mid-term expenditure frameworks—provides a potentially important means of increasing attention to the many ways that the epidemic may deepen poverty, increase

inequality, and undermine economic growth and social development. All low-income countries and all countries with generalized epidemics report having integrated HIV into their general development plans by the end of 2007. Addressing the epidemic's impact should also be prioritized in sectoral planning processes.

International donors should devote increased financial and technical resources to efforts to mitigate the epidemic's impact. In addition to project-specific activities, such as food distribution or psychosocial support to HIV-affected families, donors should deliver the budgetary support required to implement strong social cash transfer regimes. Governments, donors and nongovernmental organizations should pay increased attention to strategies focused on supporting kinship and community networks that are struggling to care for the large and growing number of children orphaned or made vulnerable by HIV.

Strong national capacity for data collection and analysis, and multidisciplinary policy development is required to ensure the soundness of national approaches to impact mitigation. As noted, many of the policy reforms proposed to alleviate the epidemic's effects may inadvertently exacerbate other problems, such as HIV risk and vulnerability, economic inequality, and HIV stigma. The traditional “silo” approach to decision-making—whereby decision-making jurisdiction for individual ministries is sharply delineated and ministerial ‘turf’ is carefully guarded—does not promote the long-term effectiveness and sustainability of impact mitigation strategies. Agriculture ministries, for example, may have impressive expertise on crop distribution, agricultural productivity and the like, but they may lack an understanding of the ramifications of particular policies on rural wages, population migration, or subgroups of HIV-affected households. Similarly, finance ministries, while rightly focused on balancing budgets in the short term, may be poorly equipped to assess the long-term financial wisdom of immediate investments in impact mitigation.

Evidence for action

Are the right actions being taken?

- Among 33 countries with generalized epidemics, government respondents in 91% report having policies or strategies to address the needs of children orphaned or made vulnerable by HIV.
- All national governments in countries with generalized epidemics reporting having national strategies to address HIV among workers and uniformed service personnel, and most have policies to address HIV in the transportation (94%) and agricultural (58%) sectors.
- Governments in 60% of countries with generalized epidemics report having evaluated the epidemic's socioeconomic impact.

Are the right actions being undertaken in the right manner?

- In countries with HIV prevalence greater than 5%, orphans were only 4% less likely to attend school than non-orphans.
- Where non-health sectors are addressed in national HIV strategies, they often do not receive budget support to address the epidemic's sectoral impact.
- National governments in only 6 of 33 countries with generalized epidemics say that an evaluation of the epidemic's socioeconomic impact has influenced budget allocations.

Have these actions been sufficiently scaled up to make a difference?

- In 11 countries with HIV prevalence of 5% or greater, only 15% of households with orphans received any form of assistance in 2007.
- HIV treatment or referral for treatment is available in workplaces in all districts in need in only 9% of countries with generalized epidemics.

Mobilizing sufficient financial resources for the HIV response

Financial resources for the HIV response have significantly increased in recent years. The US\$ 10 billion made available for HIV programmes in 2007 from all sources, including domestic public funds and out-of-pocket spending, represented a 12% increase over expenditures in 2006 and a seven-fold increase in this decade (Figure A). However, substantial additional resources will be required to support a robust and sustainable HIV response in the coming years.

Mobilizing domestic resources

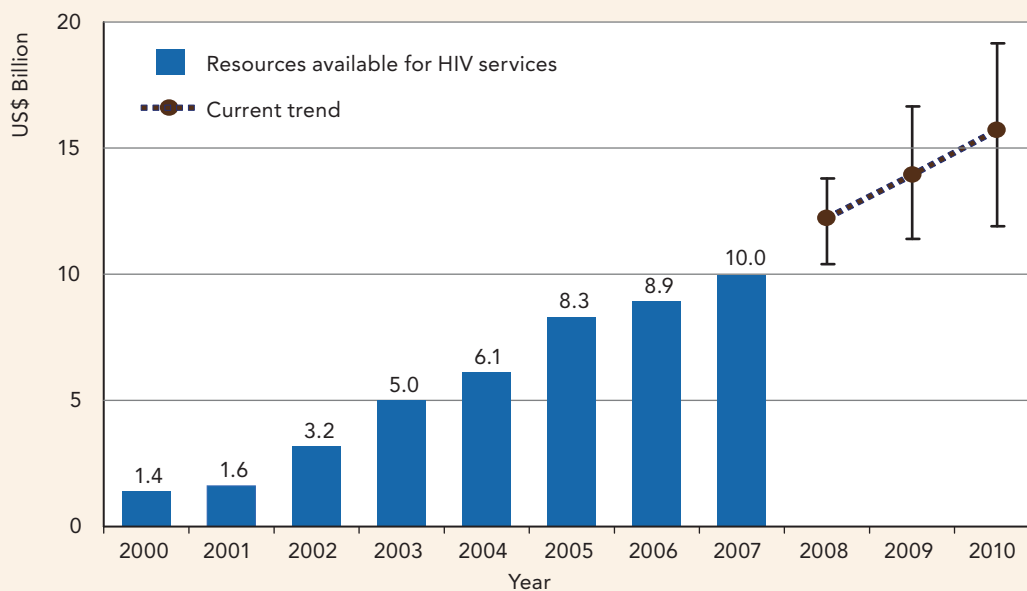
Increased domestic spending on HIV is not only important to help finance essential HIV activities in low- and middle-income countries, but it also serves as a concrete sign of national commitment in the HIV response. To meet future global resource needs for the HIV response, UNAIDS projects that

low- and middle-income countries collectively will need to cover roughly one third of HIV-related costs in the coming years. However, the domestic financial burden for the HIV response will vary considerably among countries, depending in large measure on national financial capacity. While it is anticipated that upper-middle-income countries should cover domestic HIV-related costs on their own, external support will be required for the bulk of future HIV-related costs on least-developed countries.

Too often, national HIV expenditures do not match national needs. This is especially the case with many countries with low-level or concentrated epidemics. Within the category of HIV prevention spending in concentrated epidemics, countries often opt for broad prevention programmes for the general population rather than for the more cost-effective interventions focused on populations most at risk.

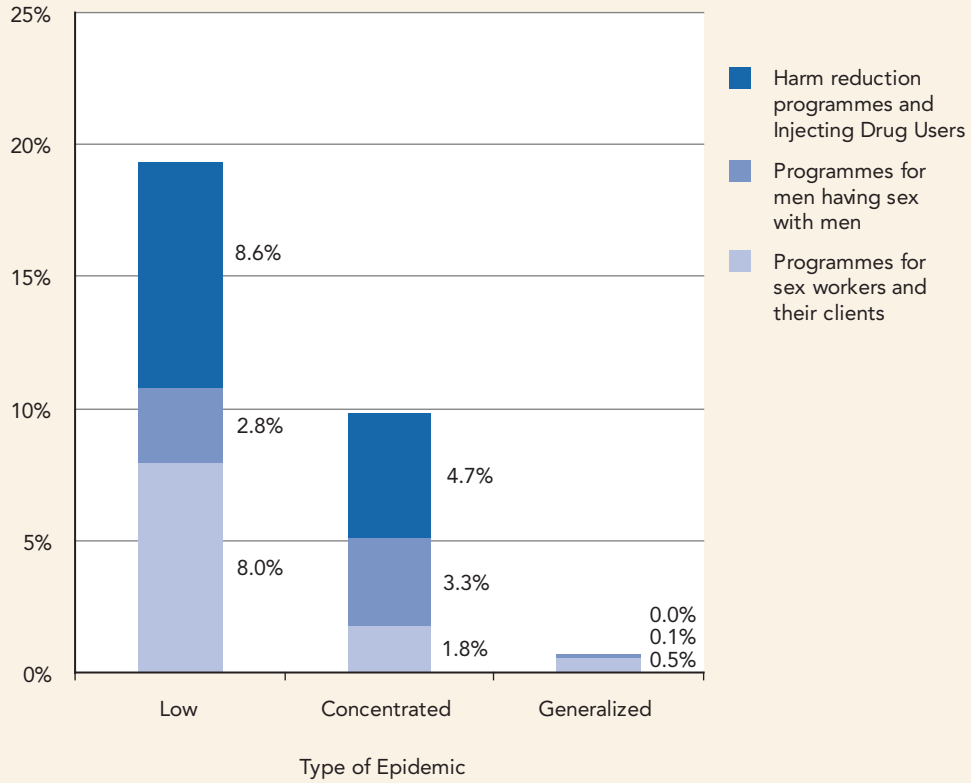
FIGURE A

Estimated total annual resources available for HIV, 2000–2007, and projected financial resources required by 2010 if current scale up continues (US\$ billion)*



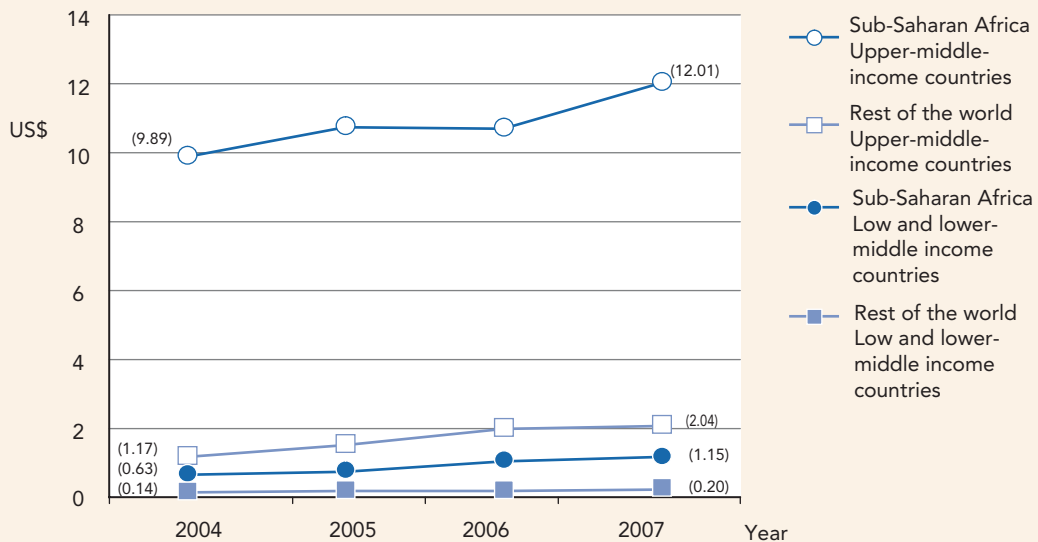
* This represents the projected trend in resource needs if the current rate of scale-up of services is maintained constant

FIGURE B Spending in programmes specifically directed to the populations most at risk for HIV as a percentage of total prevention spending by type of epidemic—public and international Funds, 2006



Source: UNGASS Country Progress Reports, 2008

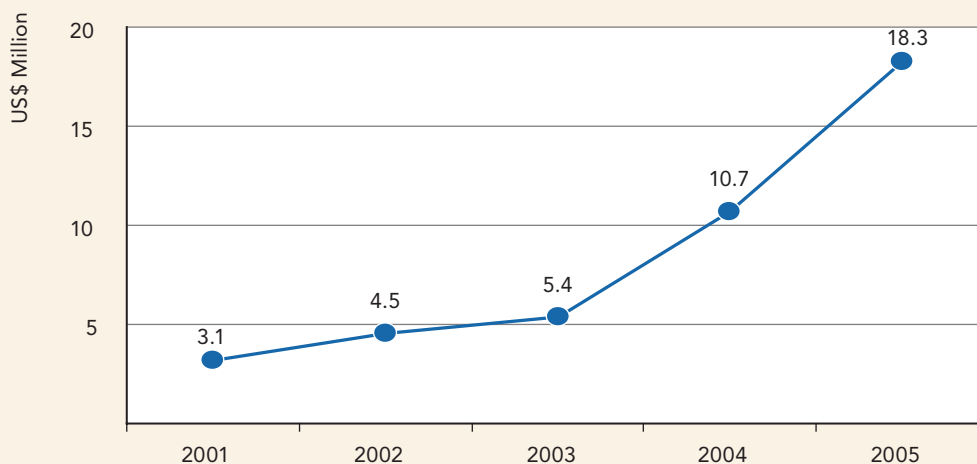
FIGURE C Per capita HIV expenditures from domestic public sources in low- and middle-income countries, 2004-2007



Source: UNGASS Country Progress Reports, 2008

FIGURE D

Public domestic expenditures, Malawi (US\$ millions)



For concentrated epidemics generally, risk-reduction programmes focused on populations most at risk represent only 10% of overall HIV-prevention spending (Figure B).

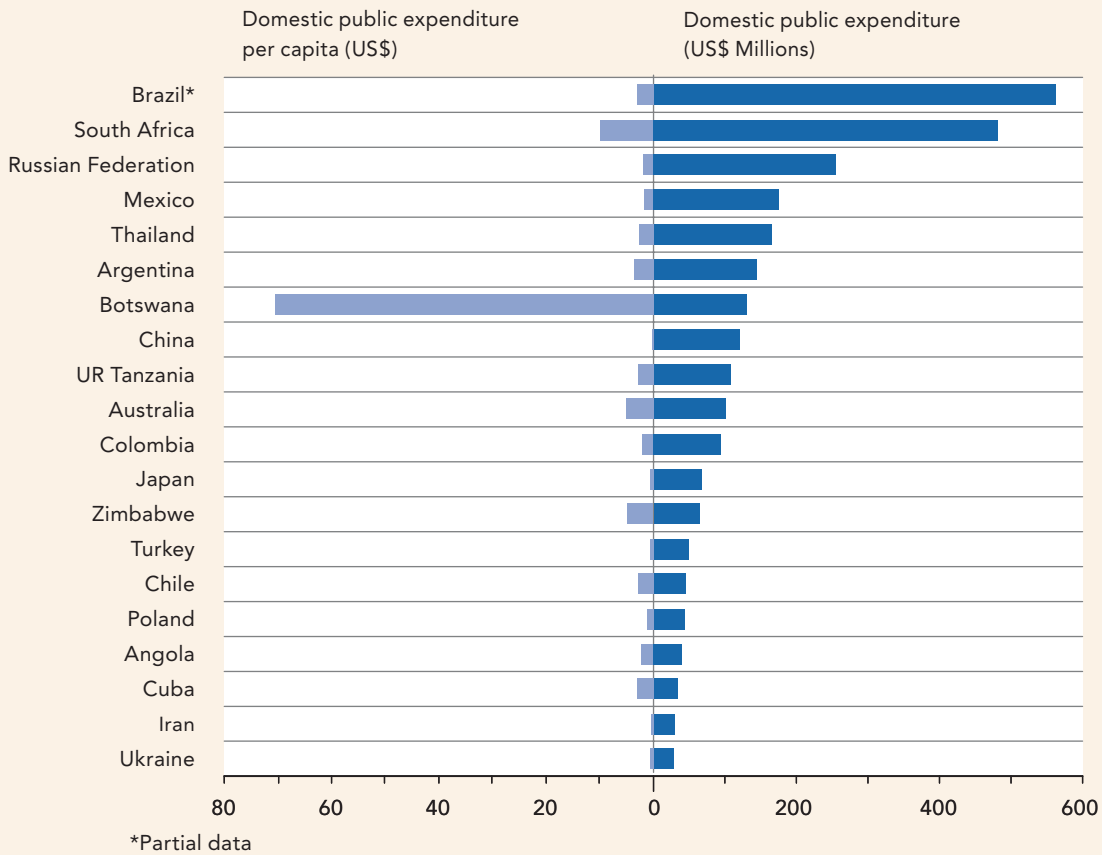
In low-income and lower-middle income countries, per capita domestic spending on HIV more than doubled between 2005 and 2007 (Figure C). Per capita government expenditure in five sub-Saharan African upper-middle income countries is the highest among low- and middle-income countries, and it increased by more than 10% in 2007 to reach an estimated US\$ 12 per capita in 2007.

A number of low- and middle-income countries have exhibited great HIV leadership this decade, significantly increasing domestic HIV outlays while redoubling efforts to mobilize greater external support. They are achieving these increases through various strategies to place the HIV response on a sound, long-term financial footing. By moving in the late 1990s to provide antiretrovirals through

the country's social security programme, Mexico helped ensure the sustainability of its national response; more recently by the expansion of a financial protection system that protects the previously uninsured population against the catastrophic financial impact of selected diseases including HIV. Malawi has enacted legislation requiring all ministries to spend at least 2% of their budgets on HIV activities and has increased nearly six-fold its domestic expenditures for HIV between 2001 and 2005 (Figure D).

The magnitude of domestic HIV spending—as well as the balance between external and domestic sources for HIV financing—varies considerably among countries. As Figure E illustrates, among 20 low- and middle-income countries with the largest amounts of domestic expenditures devoted to HIV, Brazil spends the most in absolute terms, while Botswana has by far the highest per capita domestic spending on HIV.

FIGURE E Annual domestic spending: top 20 countries (US\$ 2.73 billion). UNGASS reports (US\$ million)



National spending on HIV by income level

In Figure F, the per capita spending on HIV includes both domestic and international sources. The Figure demonstrates that in the countries with more elevated income brackets, an increasing proportion of overall funding comes from domestic public resources.

Mobilizing international resources

To finance the push towards universal access to HIV prevention, treatment, care, and support, even greater support will be required from the international community. The Global Fund alone

anticipates needing US\$ 6.7 billion in 2008, with annual funding requirements growing to US\$ 7.7 billion by 2010 (Global Fund, 2007). UNAIDS projects that international donors will need to mobilize roughly two thirds of the total amount required in future years to finance a strong HIV response in low- and middle-income countries.

Contributors to the growth in funding for HIV programmes in low- and middle-income countries have been numerous. While the US accounts for the largest share in financing, other countries provide a larger proportion of their gross domestic product (Figures G and H).

FIGURE F HIV expenditures by finance sources and income level 2007, or latest data available

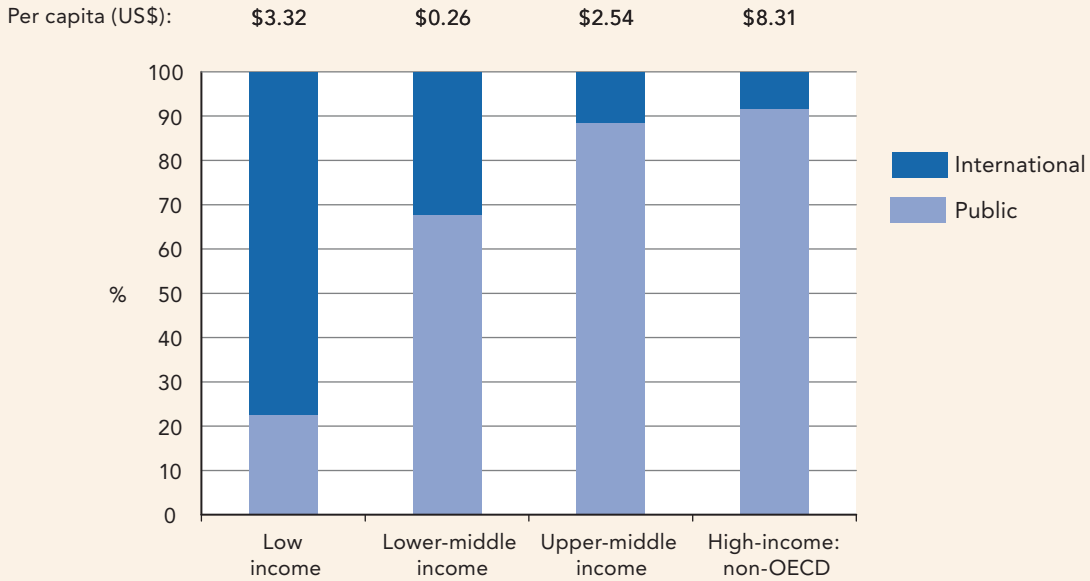
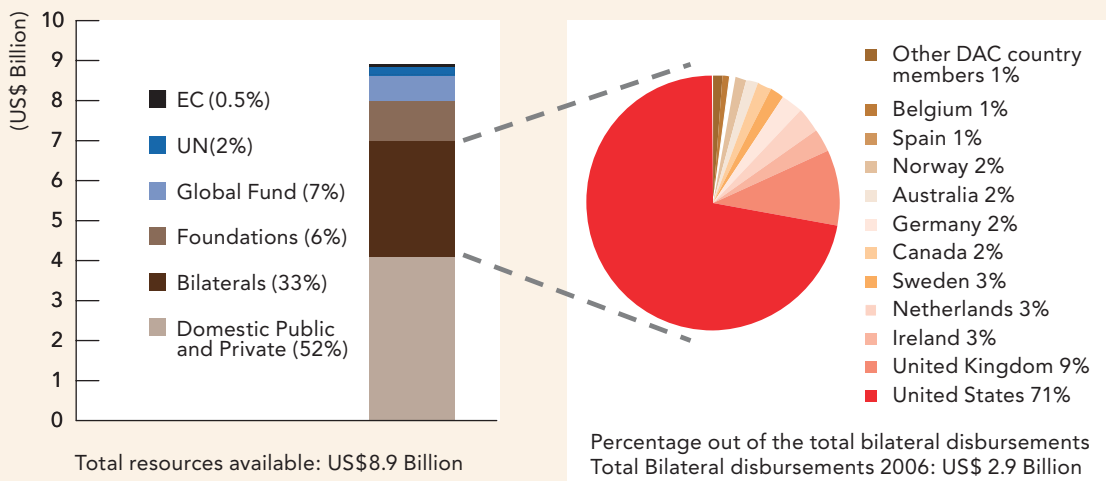


FIGURE G Resources available to HIV-related programmes by source and bilateral disbursements, 2006

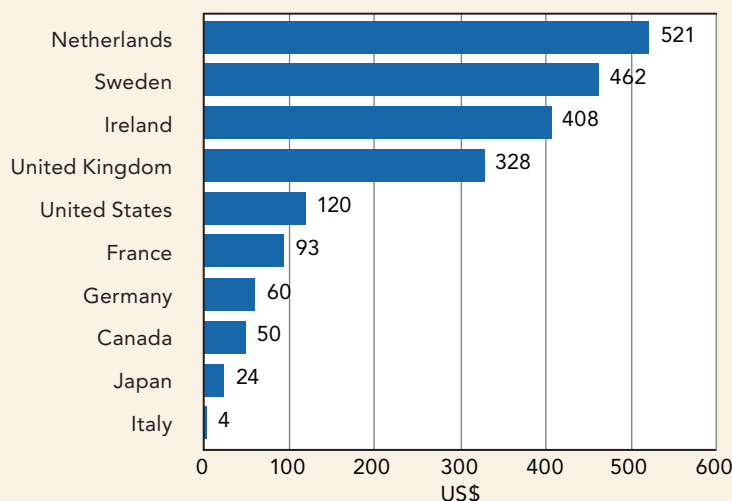
Total resource availability for HIV-related programmes in 2006 (US\$ Billion)

Bilateral disbursements to HIV-related programmes in 2006



The organizational disbursements are different than commitments or obligations, as well as different from in-country expenditures
 Source: UNAIDS analysis based on OECD/DAC online database (last visited on May 6, 2008), Resource availability UNAIDS 2005, Funders Concerned About AIDS (FCAA), European HIV/AIDS Funders Group (EFG) for Philanthropic sector.

FIGURE H Disbursements for HIV per US\$ 1 Million GDP, 2006



Sources: UNAIDS and Kaiser Family Foundation analysis, June 2007; Global Fund to Fight AIDS, Tuberculosis and Malaria online data query May 2007; International Monetary Fund, World Economic Outlook Database, April 2007.

International donors take various approaches to HIV assistance. With respect to amounts actually disbursed in 2006, more than 80% of HIV assistance from Canada, Ireland, Italy, the Netherlands, the US and the UK was channelled through bilateral programmes, while France directed more than 80% of its HIV assistance through the Global Fund.

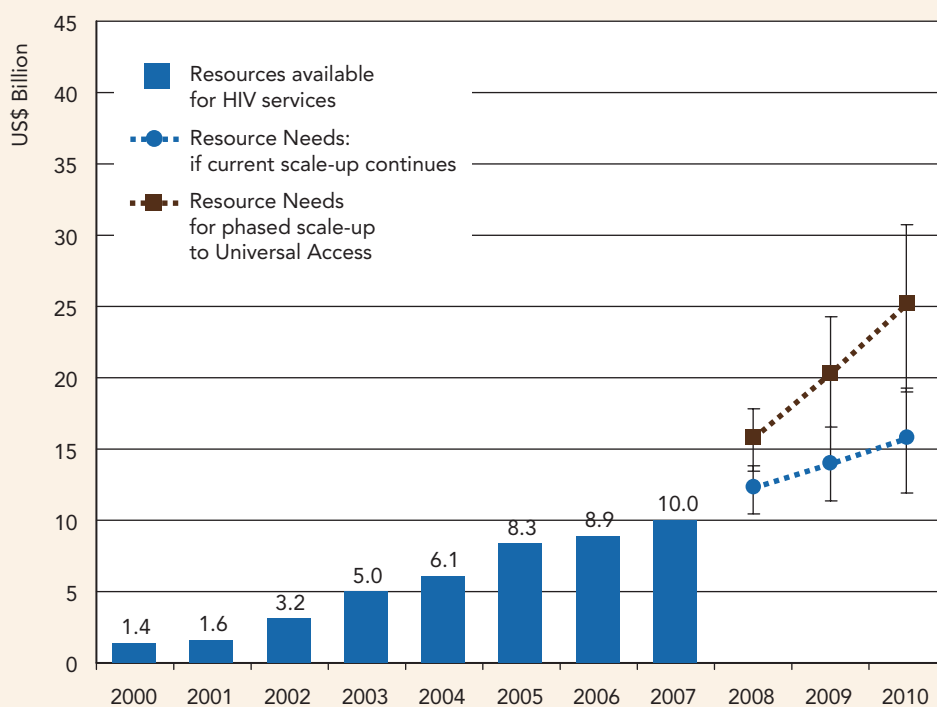
Created in direct response to the 2001 *Declaration of Commitment*, the Global Fund had by March 2008 committed US\$ 10.1 billion in multiyear funding for health programmes in 136 countries, with the majority of such funding dedicated to HIV initiatives. Country-level disbursements by the Global Fund rose from US\$ 430 000 in 2002 to US\$ 641 million in 2006, reflecting a rapid

escalation of financial support for national efforts on HIV, tuberculosis and malaria. The US, the UK and France had by March 2008 pledged the largest amounts to the Global Fund.

Support for HIV activities in low- and middle-income countries from US-based philanthropic foundations nearly doubled between 2004 and 2006, reaching US\$ 979 million. According to Funders Concerned about AIDS, research dwarfed other purposes for foundation spending on HIV in 2006. In 2004, the last year for which data are available, European foundations spent US\$ 101 million on HIV in low- and middle-income countries, a tripling over amounts spent in 2002-2003 (European HIV/AIDS Funders, 2006).

FIGURE I

Annual resources available 2000–2007 and funding gap between projected financial resources if current scale-up continues and a phased scale-up scenario to reach universal access between 2010 and 2015 (US\$ billion)



A growing resource gap

Simply to maintain the current pace of scale-up in service provision, funding levels will need to increase by more than 50% by the end of this decade (Figure I). However, this trajectory would leave the world falling short of universal access to HIV prevention, treatment, care, and support—even by 2015, five years after the globally agreed deadline for achieving this result (UNAIDS, 2007c).

To achieve and sustain universal access to HIV prevention, treatment, care, and support, substantially greater resources will be required. As Figure I illustrates, the gap between available resources and amounts needed to move towards universal access is increasing from year to year.

Funding shortfalls for HIV are part of a broader pattern in the development arena. Reiterating a commitment articulated in other international

agreements, donor countries pledged in the *Declaration of Commitment on HIV/AIDS* to devote 0.7% of their gross domestic product to development assistance. As of 2005, few countries had achieved this target—Denmark (0.81%), Luxembourg (0.82%), the Netherlands (0.82%), Norway (0.94%). Among OECD countries as a whole, an average of 0.33% of gross national income were devoted to official development assistance in 2005—a percentage that had not increased since 1990, notwithstanding numerous international agreements to increase development aid.

(For a discussion of the challenges countries face in translating resources into high-impact programmes, as well as strategies for sustaining robust HIV financing over the coming years and decades, see Chapter 7.)

