

08

Report on the global AIDS epidemic

Executive summary



UNAIDS
JOINT UNITED NATIONS PROGRAMME ON HIV/AIDS

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UNAIDS
20 avenue Appia
CH-1211 Geneva 27
Switzerland

T (+41) 22 791 36 66
F (+41) 22 791 48 35

unaids@unaids.org
www.unaids.org

2008 Report on the global AIDS epidemic

Executive summary



The global HIV challenge: assessing progress, identifying obstacles, renewing commitment

The *2008 Report on the global AIDS epidemic* emerges at the halfway mark between the 2001 *Declaration of Commitment* and the 2015 target of the Millennium Development Goals to reverse the epidemic by 2015. The launch of this latest report also occurs only two years before the agreed target date for moving as close as possible towards universal access to HIV prevention, treatment, care, and support. The current juncture provides an opportunity to assess the HIV response and to understand what must be done to ensure that nations are on course to achieve the HIV commitments they have made.

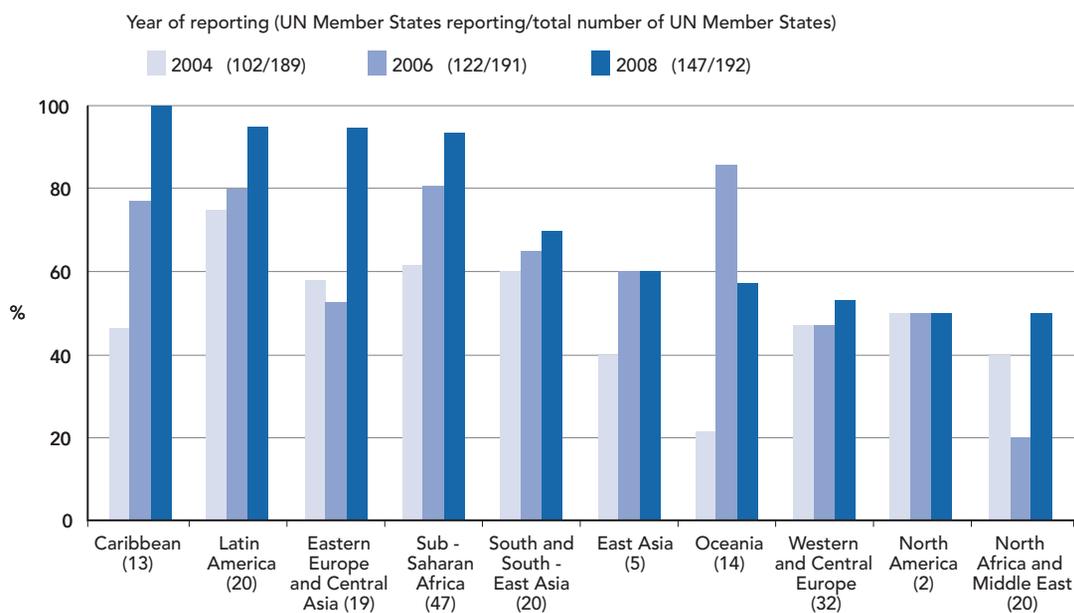
The report documents considerable progress in many countries in addressing their

national epidemics. A six fold increase in financing for HIV programmes in low- and middle-income countries 2001–2007 is beginning to bear fruit, as gains in lowering the number of AIDS deaths and preventing new infections are apparent in many countries. Progress remains uneven, however, and the epidemic's future is still uncertain, underscoring the need for intensified action to move towards universal access to HIV prevention, treatment, care and support.

Reports by 147 countries on national progress in implementing the 2001 Declaration of Commitment on HIV/AIDS provide the most comprehensive global assessment ever undertaken of the HIV response. As Figure 1 illustrates, the number of countries reporting on progress in the HIV response in 2008 is significantly higher than in previous reporting rounds.

FIGURE 1

Percentage of UN Member States reporting by region, 2004–2008



Source: UNGASS Country Progress Reports 2008.

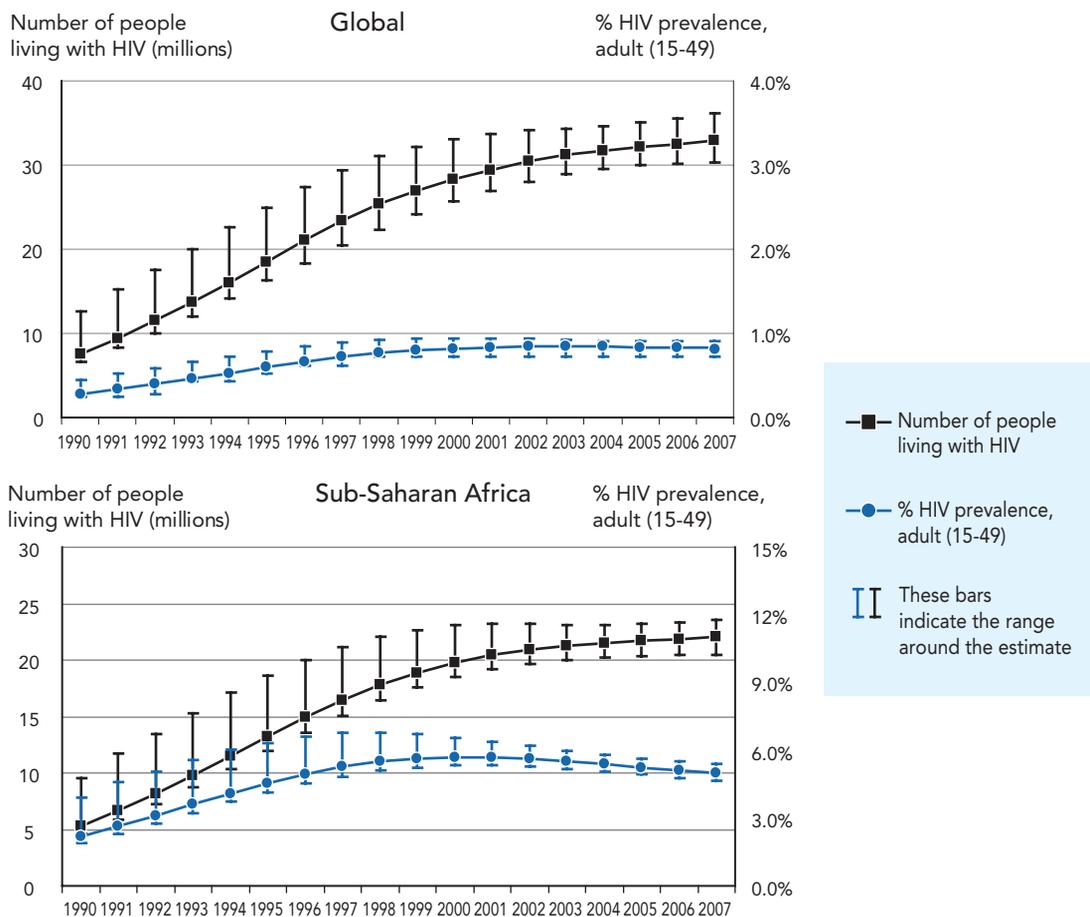
(total number of UN Member States in the region)

The indicators on which countries have reported are based on the specific time-bound pledges made by countries at the 2001 Special Session of the UN General Assembly on HIV/AIDS (UNGASS). The core UNGASS indicators cover a broad array of variables, such as HIV prevalence among young people, aged 15–24, coverage of antiretroviral therapy and key HIV-prevention programmes, services to support children orphaned or made vulnerable by HIV, and national adoption of recommended HIV policies. Information from national progress reports have been supple-

mented by other data sources, such as household surveys, civil society reports, and the budgets and programme monitoring data of donor governments, UNAIDS cosponsors, philanthropic foundations, and biomedical research agencies.

Civil Society groups have joined their government counterparts and participated in this reporting process in unprecedented numbers, using the opportunity to participate as a vehicle for public communication on the situation within their country and to the world. Altogether, more than 700 local

FIGURE 2 Estimated number of people living with HIV and adult HIV prevalence. Global HIV epidemic, 1990–2007; and, HIV epidemic in Sub-Saharan Africa, 1990–2007



Note: Even though the HIV prevalence stabilized in sub-Saharan Africa, the actual number of people infected continues to grow because of ongoing new infections and increasing access to antiretroviral therapy.

nongovernmental organizations (represented by many more individuals) served as key informants on the National Composite Policy Index, which tracks national progress in implementing sound HIV policy frameworks and strategies.

The HIV response is critical to progress across the breadth of the global development agenda. Success in addressing HIV will accelerate progress in achieving virtually all of the Millennium Development Goals. Satisfying the many political commitments made on HIV will require greater leadership, building on recent successes by taking account of lessons learnt, enhanced financial resources, improved coordination of effort, and effective action to address societal determinants of HIV risk and vulnerability.

Status of the global HIV epidemic

The global percentage of people living with HIV has stabilized since 2000

(Figures 2 and 3). However, the overall number of people living with HIV has increased as a result of the ongoing number of new infec-

tions each year and the beneficial effects of more widely available antiretroviral therapy. Sub-Saharan Africa remains most heavily affected by HIV, accounting for 67% of all people living with HIV and for 72% of AIDS deaths in 2007.

The global epidemic is stabilizing but at an unacceptably high level. Globally, there were an estimated 33 million [30 million—36 million] people living with HIV in 2007 (Figure 3). The annual number of new HIV infections declined from 3.0 million [2.6 million—3.5 million] in 2001 to 2.7 million [2.2 million—3.2 million] in 2007.

The rate of new HIV infections has fallen in several countries, although globally these favourable trends are at least partially offset by increases in new infections in other countries. In sub-Saharan Africa, most national epidemics have stabilized or begun to decline (Figure 4). However new information from Kenya suggests that in 2007, HIV prevalence ranged between 7.1% and 8.5%—compared with the 2003 estimate of 6.7%. Outside of Africa, infections are on the rise in a number of countries.

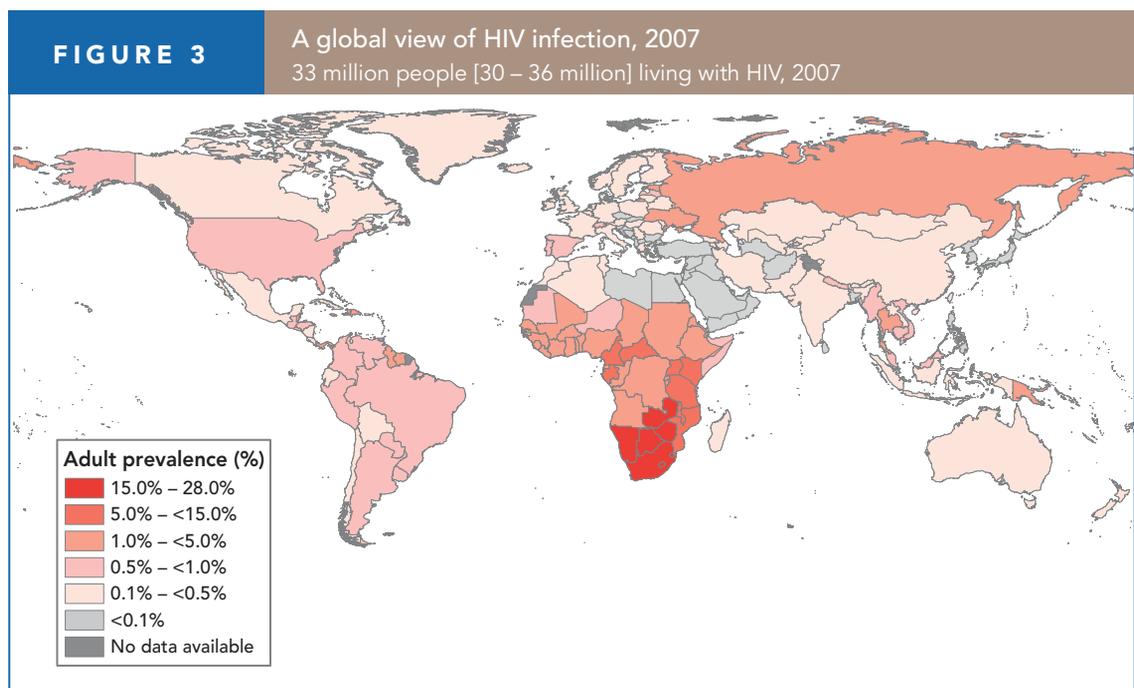
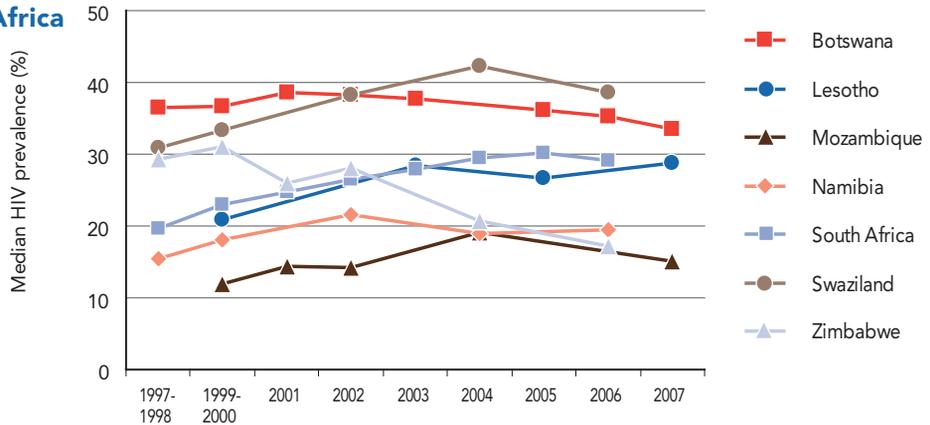
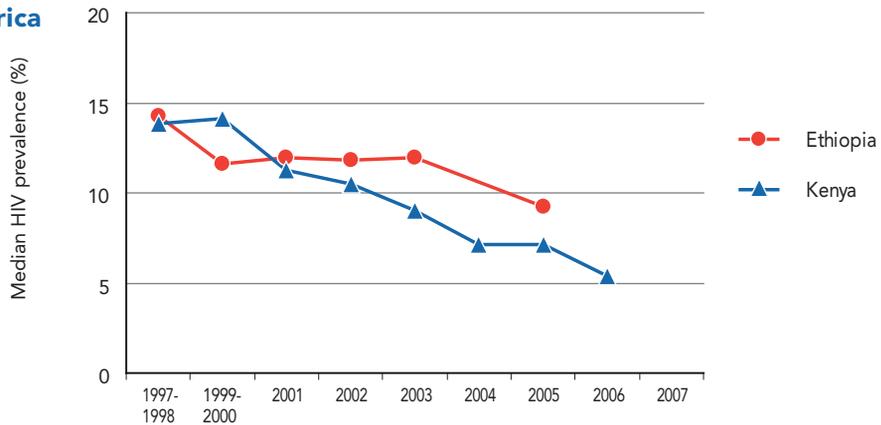


FIGURE 4 HIV prevalence (%) among pregnant women attending antenatal clinics in sub-Saharan Africa, 1997–2007

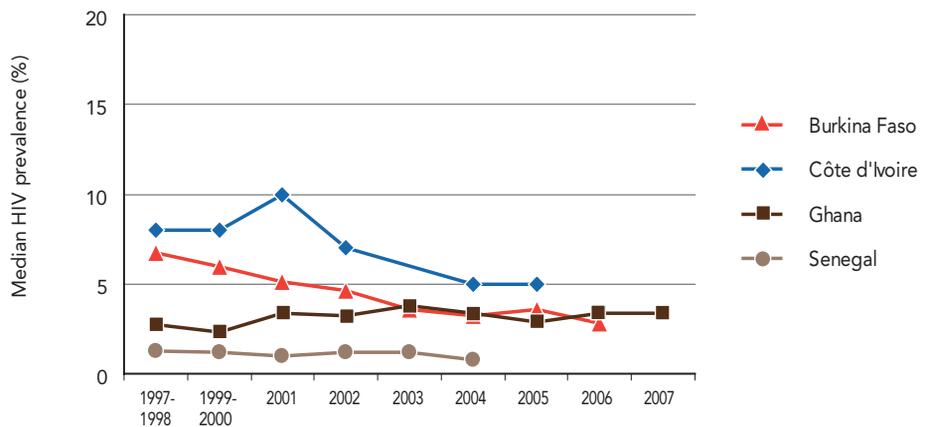
Southern Africa



Eastern Africa



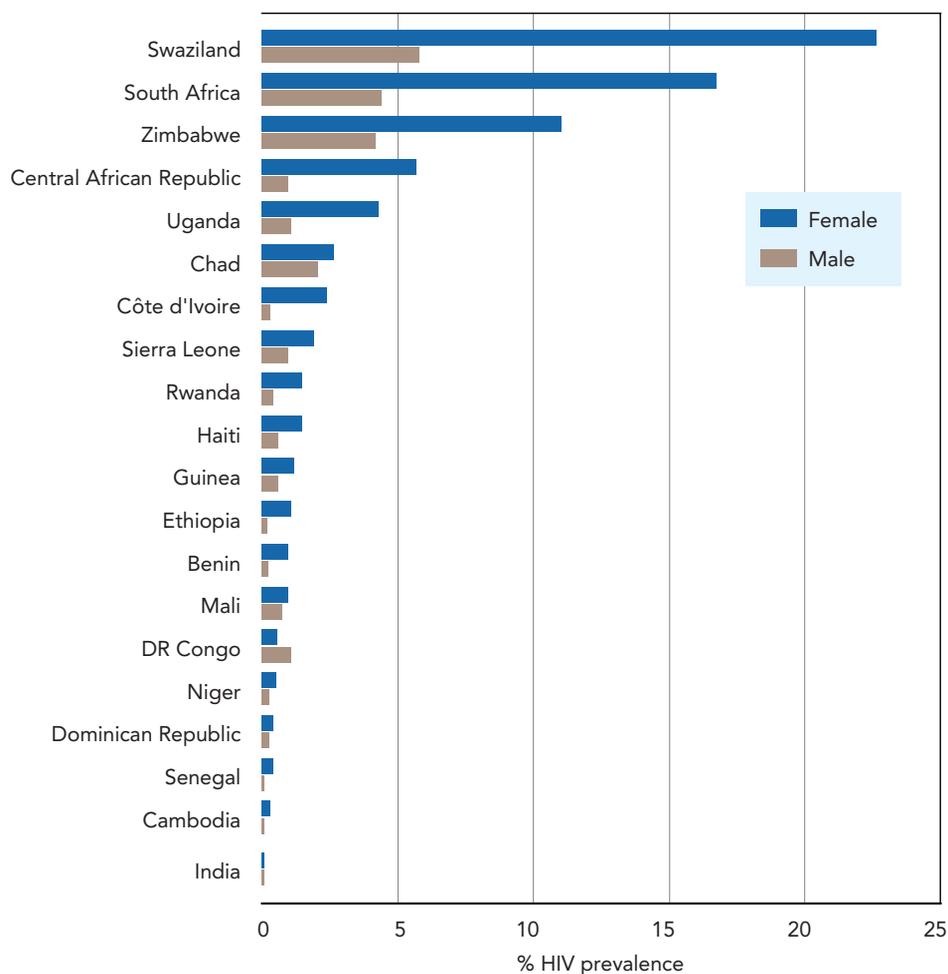
West Africa



Note: Analysis restricted to consistent surveillance sites for all countries except South Africa (by province) and Swaziland (by region). Source: National surveillance reports and UNAIDS/WHO/UNICEF, Epidemiological Fact Sheets on HIV and AIDS, July 2008.

FIGURE 5

HIV prevalence (%) among 15–24 years old, by sex, selected countries, 2005–2007



Source: Demographic and Health Surveys and other national population-based surveys with HIV testing.

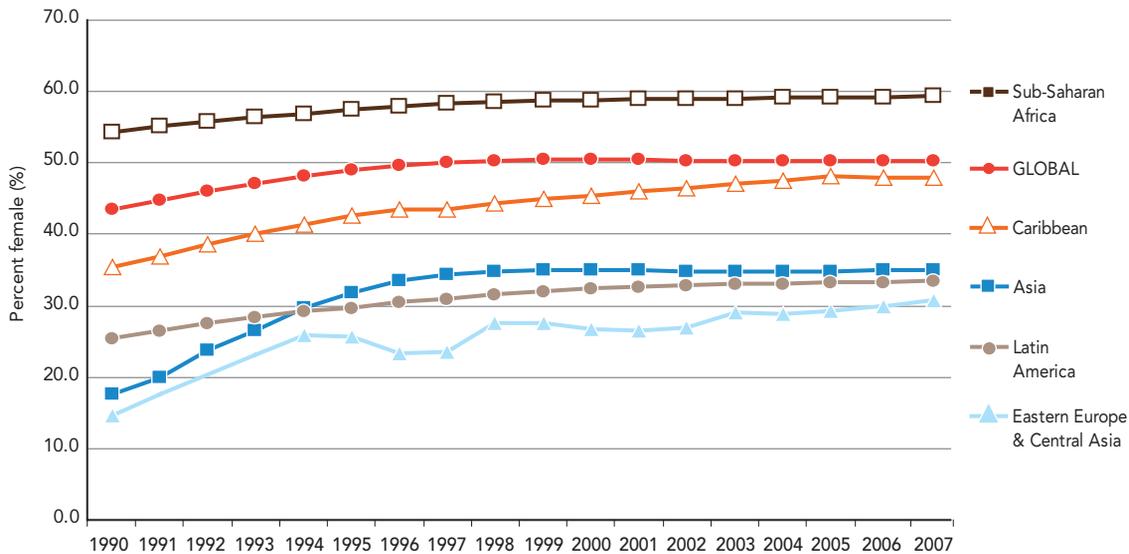
In 14 of 17 African countries with adequate survey data, the percentage of young pregnant women (ages 15–24) who are living with HIV has declined since 2000–2001.

In seven countries, the drop in infections has equalled or exceeded the 25% target decline for 2010 set forth in the *Declaration of Commitment*. Among young people in Africa, HIV prevalence

tends to be notably higher among females than among males (Figure 5).

Globally, the percentage of women among people living with HIV has remained stable at 50% for several years. However, women's share of infections is increasing in several countries (Figure 6).

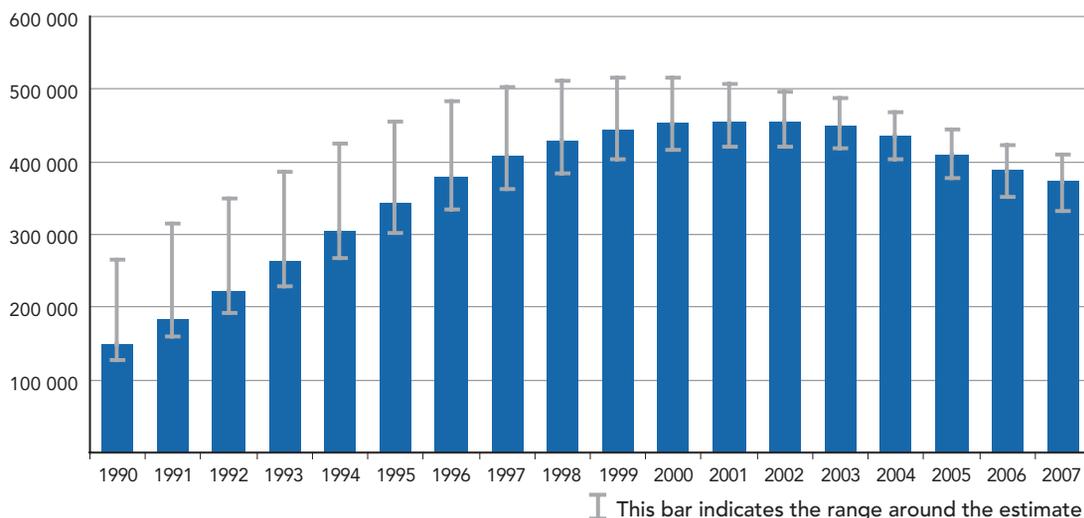
FIGURE 6 Percent of adults (15+) living with HIV who are female, 1990–2007¹



An estimated 370 000 [330 000—410 000] children under age 15 became infected with HIV in 2007. The annual number of

new HIV infections among children worldwide has declined since 2002, as services to prevent mother-to-child transmission have expanded

FIGURE 7 New HIV infections among children, 1990–2007



¹ The global proportion of women versus men who are infected has remained at approximately 50% since the late 1990s. In this graphic of proportional rates, even though the proportion of women versus men has been increasing in each region, in most regions, the overall number of men infected still far outnumbers that of women.

FIGURE 8

Children living with HIV globally, 1990–2007

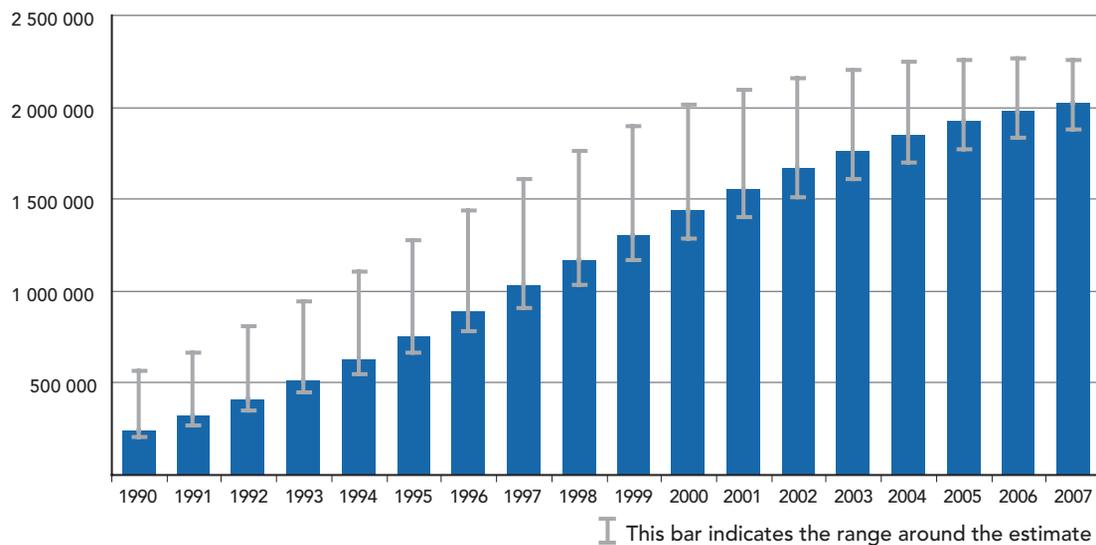
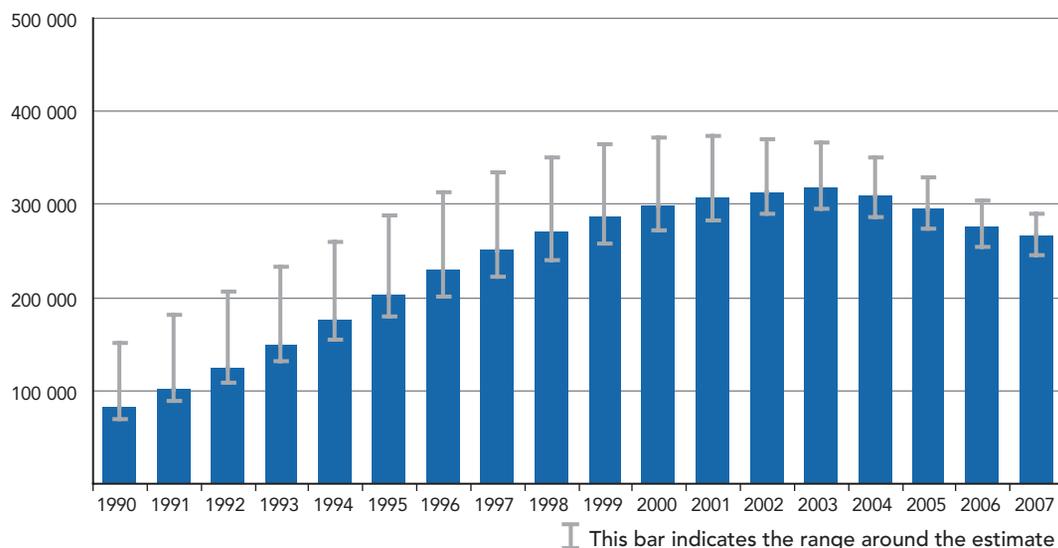


FIGURE 9

Child deaths due to AIDS, 1990–2007



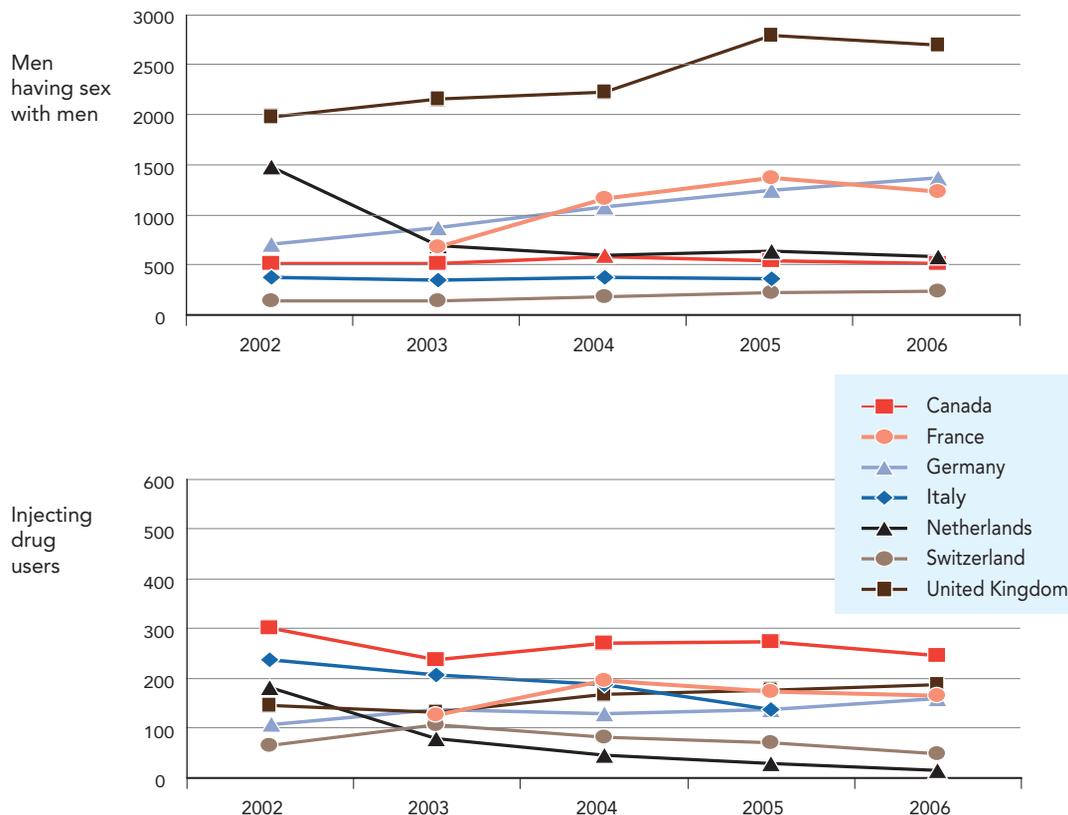
(Figure 7). Globally, the number of children younger than 15 years living with HIV increased from 1.6 million [1.4 million—2.1 million] in 2001 to 2.0 million [1.9 million—2.3 million] in 2007 (Figure 8). Almost 90% live in sub-Saharan Africa. Since 2003, the rate of annual AIDS

deaths among children has also begun to fall, due to treatment scale-up and PMTCT (Figure 9).

In virtually all regions outside of sub-Saharan Africa, HIV disproportionately affects injecting drug users, men who have sex with men, and sex workers. Recent

FIGURE 10

HIV infections newly diagnosed in injecting drug users and men who have sex with men, by country, and year of report, 2002–2006



Sources:

(1) Public Health Agency of Canada. HIV and AIDS in Canada. Selected Surveillance Tables to June 30, 2007. Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada, 2007. (2) Epidemiologisches Bulletin (5. Oktober 2007/ Sonderausgabe B aktuelle daten und informationen zu infektionskrankheiten und public health). (3) The UK Collaborative Group for HIV and STI Surveillance. Testing Times. HIV and other Sexually Transmitted Infections in the United Kingdom: 2007. London: Health Protection Agency, Centre for Infections. November 2007. (4) EuroHIV. HIV/AIDS Surveillance in Europe. End-year report 2006. Saint-Maurice: Institut de veille sanitaire, 2007. No. 75. (5) EuroHIV. HIV/AIDS Surveillance in Europe. Mid-year report 2007. Saint-Maurice: Institut de Veille Sanitaire, 2007. No. 76.

studies show high infection levels among members of these groups in parts of sub-Saharan Africa. Figure 10 shows new infections among men who have sex with men and injecting drug users in a number of high-income countries. HIV infections among men who have sex with men are increasing sharply in parts of Asia.

Addressing societal causes of HIV risk and vulnerability

Long-term success in responding to the epidemic will require sustained progress in reducing human rights violations associated with it, including gender inequality,

stigma and discrimination. Although these social factors differ in their manifestations, intensity and impact between and within regions, they are present to some degree worldwide and in all cases impede an effective, evidence-informed and rights-based response to the epidemic.

Reducing gender inequality

While many countries have begun to recognize gender issues in their HIV planning processes, substantial numbers continue to fall short in the areas of budget and policy support for such issues. Based on countries' responses to 14 questions

regarding their policies related to women, UNAIDS rated each country on a policy index ranging from 0, for those with none of the equitable policies in place, to 14 for countries with all of them. As Figure 11 illustrates, the lowest scores on policies ensuring equal access to women were in East and Central Europe, with the highest in sub-Saharan Africa².

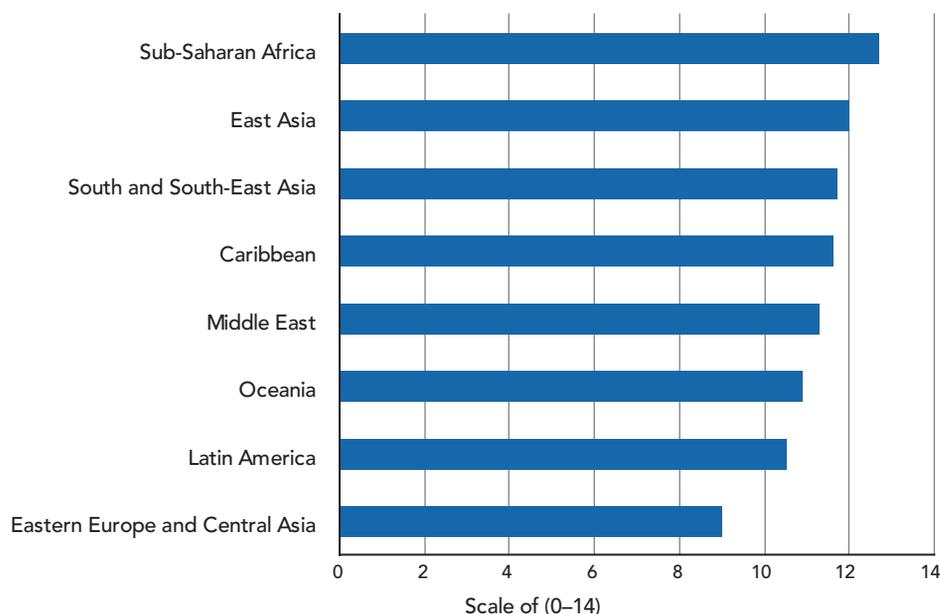
Evidence-informed programmes to forge norms of gender equity should be brought to scale, with particular attention to interventions focused on men and boys. A meta-analysis of programmes to promote gender equality found that those that expressly aimed to transform gender roles through critical reflection, role play and other interactions were most likely to be effective in producing changes in the targeted attitudes and behaviours. Norm-changing interventions

should be supported by legal reform to prohibit gender violence, enhanced law enforcement to hold perpetrators of violence to account, and interventions to address the attitudes and conditions that may contribute to gender-based violence.

Strategies to increase women's economic independence and legal reforms to recognize women's property and inheritance rights, should be prioritized by national governments and international donors. According to a recent study in Botswana and Swaziland, women who lack sufficient food are 70% less likely to perceive personal control in sexual relationships, 50% more likely to engage in intergenerational sex, 80% more likely to engage in survival sex, and 70% more likely to have unprotected sex than women receiving adequate nutrition.

FIGURE 11

Index of policies related to women's vulnerability to HIV

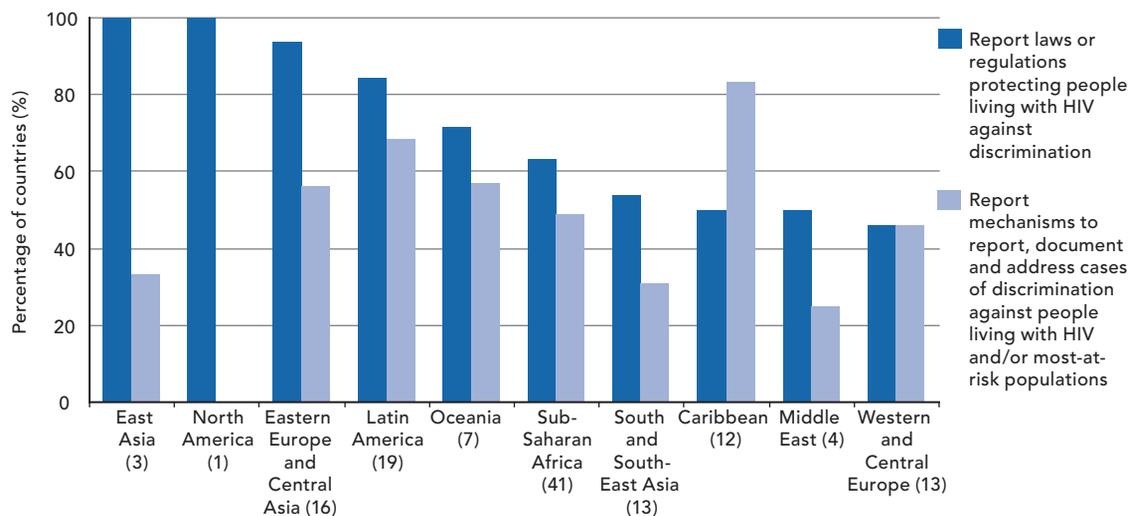


Source: UNGASS Country Progress Reports 2008.

² The 130 responding countries were rated according to their replies to 14 policy questions in NCPI. Each was given a score of 1 each time they have a policy in place. Questions related to inclusion of specific women issues in national strategic plan and in development plans, in HIV prevention (government response) and in human rights (nongovernmental response). To the question about whether there are laws, regulations or policies that present obstacles to HIV programmes for women, a value of minus one was given for a positive answer.

FIGURE 12

Percentage of countries (by region) reporting legal protections against discrimination and relevant mechanisms



Source: UNGASS Country Progress Reports 2008.

(number of countries reporting)

Addressing stigma and discrimination

In the epidemic's third decade, one third of countries lack laws protecting people living with HIV from discrimination. The extent to which these laws are enforced or to which people have access to them has not been documented. According to nongovernmental reports, only 33% of countries use performance indicators or benchmarks for the reduction of HIV-related stigma and discrimination (UNGASS Country Progress Reports 2008), (Figure 12).

Most countries lack legal protections for the populations at highest risk.

Nongovernmental informants in 26% of countries report the existence of laws that protect men who have sex with men; while anti-discrimination laws for sex workers and injecting drug users are reported in 21% and 16% of countries respectively (UNGASS Country Progress Reports 2008). Figure 13 highlights the impact of non-discrimination laws in increasing HIV prevention coverage for such groups.

Much stronger financial and technical support is needed for capacity-building for organizations and networks of people

living with HIV and groups most at risk of HIV. Nongovernmental respondents in only 20% of countries indicate that civil society organizations have meaningful access to financial support (UNGASS Country Progress Reports 2008).

Preventing new HIV infections: the key to reversing the epidemic

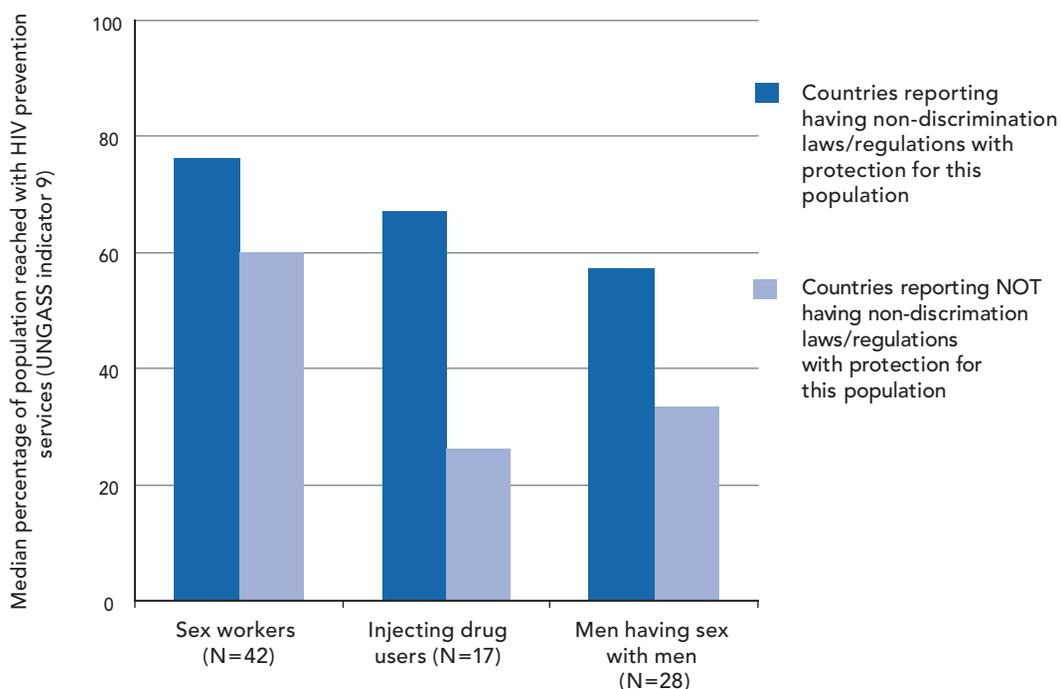
The global HIV epidemic cannot be reversed, and gains in expanding treatment access cannot be sustained, without greater progress in reducing the rate of new HIV infections. Yet even as treatment access has steadily expanded in recent years, efforts to ensure robust HIV prevention activities have lagged. While 87% of countries with targets for universal access have established goals for HIV treatment, only slightly more than half have targets for key HIV prevention strategies.

Existing prevention strategies can be effective in reducing the risk of HIV exposure.

Proven strategies exist to prevent every mode of HIV transmission—sexual, blood borne (including through injecting drug use and in health care settings), and mother-to-child. Recent

FIGURE 13

Median percentage of population reached with HIV prevention services within the specified legal environment



Source: UNGASS Country Progress Reports 2008.³

years have seen the confirmation of medical male circumcision as a potentially valuable technology for HIV risk reduction in men. A cluster of HIV prevention strategies centred on antiretroviral medicines—including prevention of mother-to-child transmission, post-exposure prophylaxis, experimental regimens for pre-exposure prophylaxis⁴, and probable secondary prevention benefits from therapeutic administration of antiretroviral medicines—has also emerged.

Although young people, 15–24 years of age account for 45% of all new HIV infections in adults, many young people still lack accurate, complete information on how to

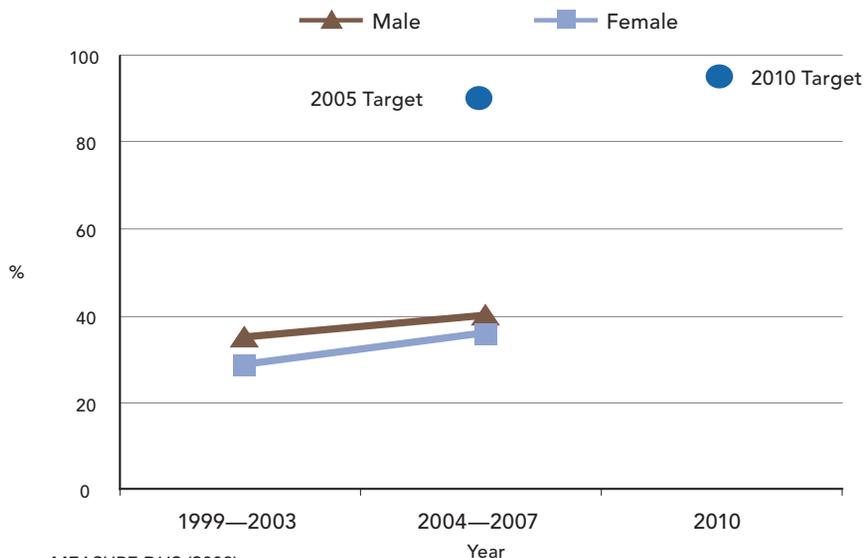
avoid exposure to the virus. Survey data from 64 countries indicate that 40% of males and 38% of females ages 15–24 had accurate and comprehensive knowledge about HIV and about how to avoid transmission (UNGASS Indicator 13)⁵ (Figure 14). Although this represents improvement, especially for females, over knowledge levels in 2005 when 37% of males and 28% of females were found to have a basic knowledge of HIV, knowledge levels in 2007 are still well below the global goal of ensuring comprehensive HIV knowledge in 95% of young people by 2010 (Declaration of Commitment on HIV/AIDS, 2001).

³ Between one third and a half of the countries did not provide information on non-discrimination laws/regulations for most-at-risk populations. Information from NCPI: a different data set (from different countries) from that reflected in Figure 17.

⁴ Trials for 8 different experimental approaches to pre-exposure prophylaxis were either underway or planned as of March 2008. Two of these trials are studying topical formulations, including CAPRISA 004, the first microbicide trial of a product incorporating antiretrovirals.

⁵ This indicator uses population-based survey data (preferably from the last 2 years) to assess young people's ability to correctly identify ways of preventing sexual HIV transmission (e.g. condom use) and to reject major misconceptions about HIV transmission (e.g. that HIV may be transmitted by mosquito bites). Young people are asked 5 pertinent questions and must answer all 5 accurately to be deemed to have accurate and comprehensive knowledge of HIV.

FIGURE 14 Comprehensive knowledge of HIV among young people (ages 15–24), 1999–2007



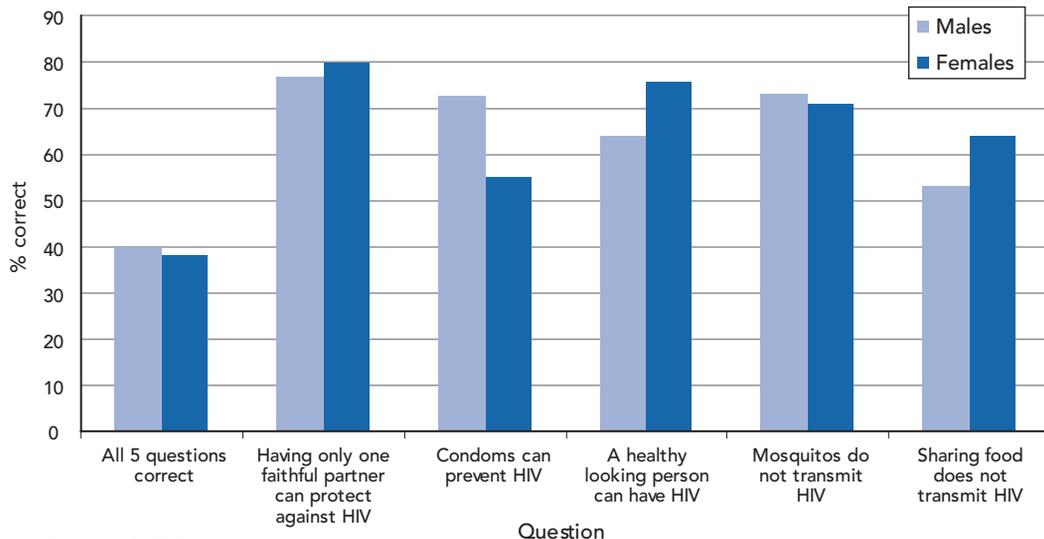
Source: MEASURE DHS (2008).

Young females are notably less likely than young males to have an accurate, comprehensive knowledge of HIV (Figure 15).

While more than 70% of young men know that

condoms can protect against HIV exposure, only 55% of young women cite condom use as an effective prevention strategy (UNGASS Indicator 13).

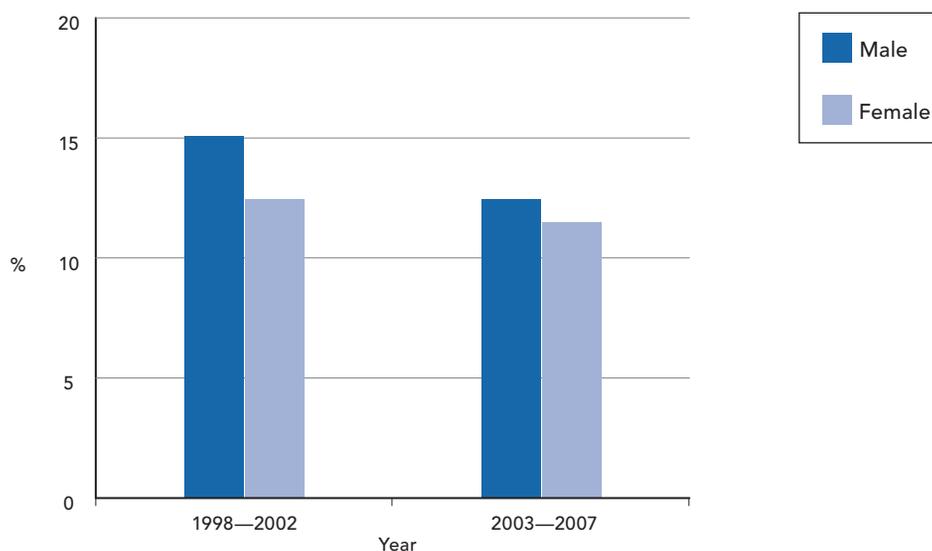
FIGURE 15 Comprehensive knowledge of HIV among young people, by type of question



Source: UNGASS Country Progress Reports 2008.

FIGURE 16

Percentage of young people who have first sex before age 15, by sex



Source: MEASURE DHS.

In low- and middle-income countries, the percentage of young people having sex before age 15 is on the decline in all regions—a continuation of trends detected earlier this decade (Figure 16). There is substantial variation between countries, however, with increases in some countries in the percentage of young people having sex before age 15.

Despite a marked increase in coverage, HIV prevention programmes still fail to reach many people at risk of acquiring HIV, including a majority of men who have sex with men and injecting drug users (Figure 17)⁶. In addition, nongovernmental informants in nearly two thirds of countries (63%) report having laws, regulations or policies that present obstacles to effective HIV prevention, treatment, care and support services for populations most at risk (UNGASS Country Progress Reports 2008.)

Major progress in the last two years in expanding access to services to prevent mother-to-child transmission suggests

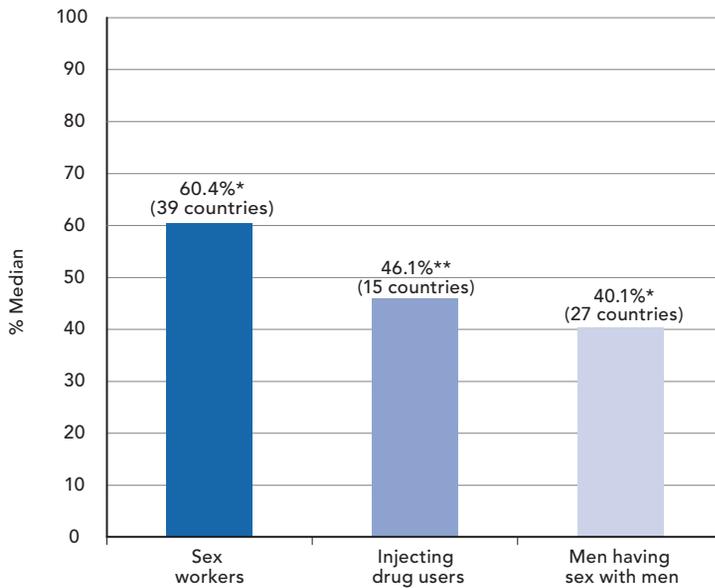
that this mode of transmission could be rendered extremely rare in the future with sufficient financing, commitment and strategic action.

Following adjustments made to earlier coverage estimates based on revised epidemiological estimates of global and national HIV prevalence and following a data reconciliation process between UNAIDS, WHO and UNICEF, and countries reporting on this indicator (UNGASS indicator 5), it appears that coverage of antiretroviral medicines to HIV-positive pregnant women for prevention of mother-to-child transmission in low- and middle-income countries increased from 9% in 2004 to 33% in 2007 (Figure 18).

Prevention efforts should become more strategically focused on sexual partnerships, especially those that increase the risk of HIV exposure. Among serodiscordant heterosexual couples in Uganda, the uninfected partner runs an estimated 8% chance of contracting HIV each year, underscoring the importance of tailored prevention initiatives

⁶ As country reports on HIV prevention coverage for populations most at risk are often based on surveys of convenience samples in urban settings, reported averages probably overstate the actual extent of prevention programme coverage for these groups.

FIGURE 17 Percentage of most-at-risk populations reached with HIV prevention programmes, 2005–2007

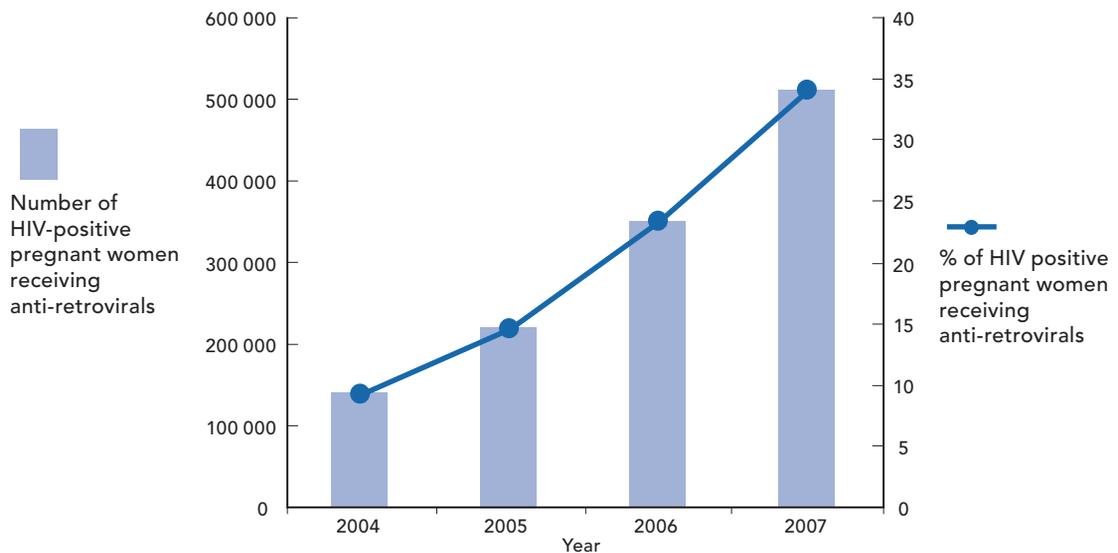


* Percentage of sex workers and men having sex with men reported knowing where they can receive an HIV test and that they were given condoms.

** Percentage of injecting drug users who reported knowing where they could receive an HIV test and be provided with condoms and sterile injecting needles and syringes.

Source: UNGASS Country Progress Reports 2008.

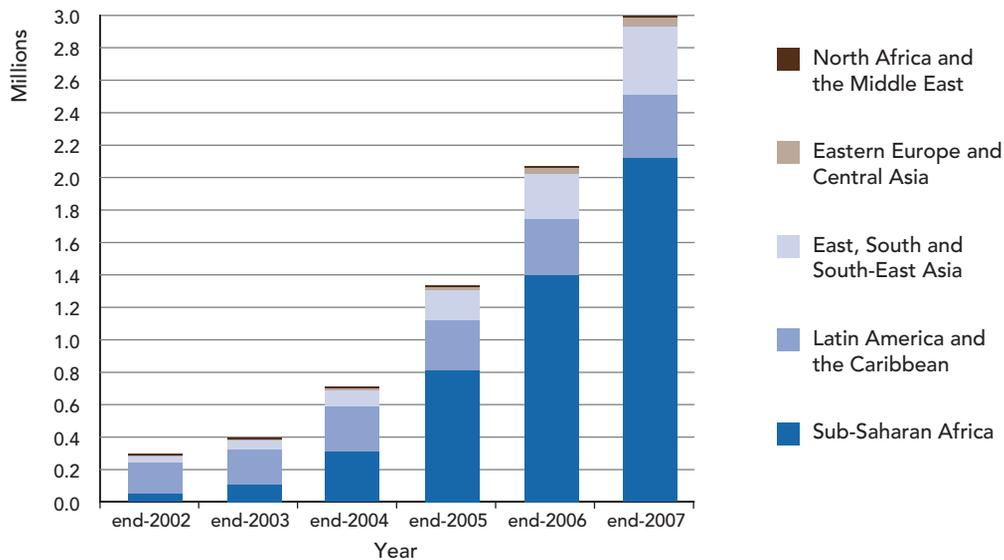
FIGURE 18 Number and percentage of HIV-positive pregnant women receiving antiretroviral prophylaxis, 2004–2007



Source: UNAIDS, UNICEF & WHO, 2008; data provided by countries.

FIGURE 19

Number of people receiving antiretroviral drugs in low- and middle-income countries, 2002–2007



Source: Data provided by UNAIDS & WHO, 2008.

for such couples. Similarly, focused attention is needed to reduce the prevalence of multiple concurrent partnerships, which can lead to the rapid spread of HIV infection within sexual networks.

Sustaining prevention gains represents one of the great challenges of HIV prevention. To maintain a robust prevention response, countries need to nurture a ‘prevention movement,’ build the human and technical capacity that will be needed to sustain prevention efforts, and work to stimulate greater demand for prevention services. In every country where HIV infection rates have sharply fallen, community mobilization for HIV prevention has been a critical element of success.

Treatment and care: unprecedented progress, remaining challenges

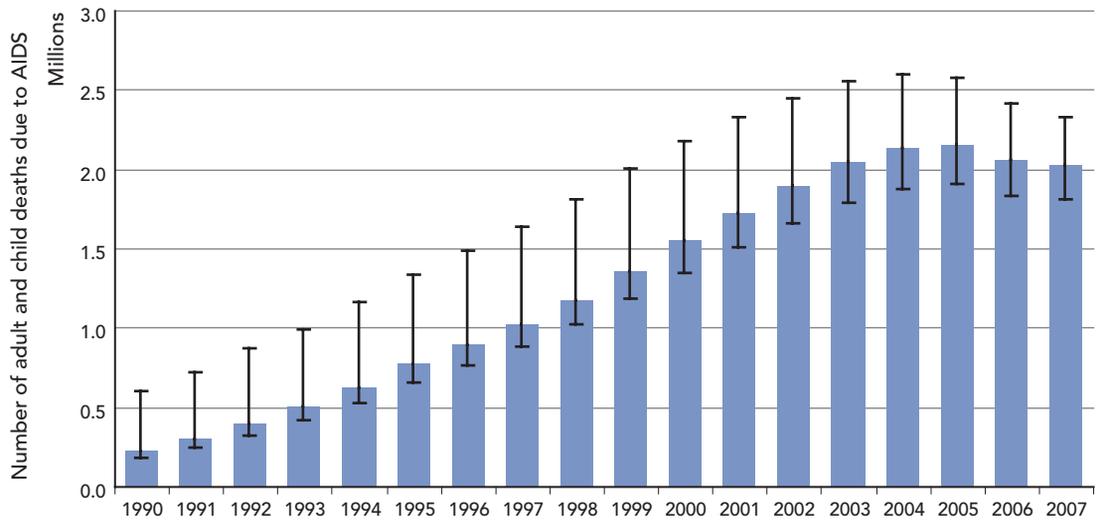
In only six years, the number of people receiving antiretroviral medicines in low- and middle-income countries has increased ten-fold, reaching almost 3 million people

by the end of 2007 (Figure 19). Many actors share credit in this achievement, most notably people living with HIV themselves, whose advocacy helped achieve what was once considered impossible.

The rapid expansion of treatment access in resource-limited settings is saving lives, improving quality of life, and contributing to the rejuvenation of households, communities and entire societies. After decades of increasing mortality, the annual number of AIDS deaths globally has declined in the past two years (Figure 20).

Intensified action is needed to ensure timely delivery of HIV treatment to children, who are significantly less likely than adults to receive antiretroviral medicines. Without treatment, approximately half of children with perinatal HIV infection will die by age 2. HIV is more difficult to diagnose in children than in adults, although cost-effective paediatric diagnostic tools have recently emerged. Available antiretroviral medicines were initially developed for adults, and most standard

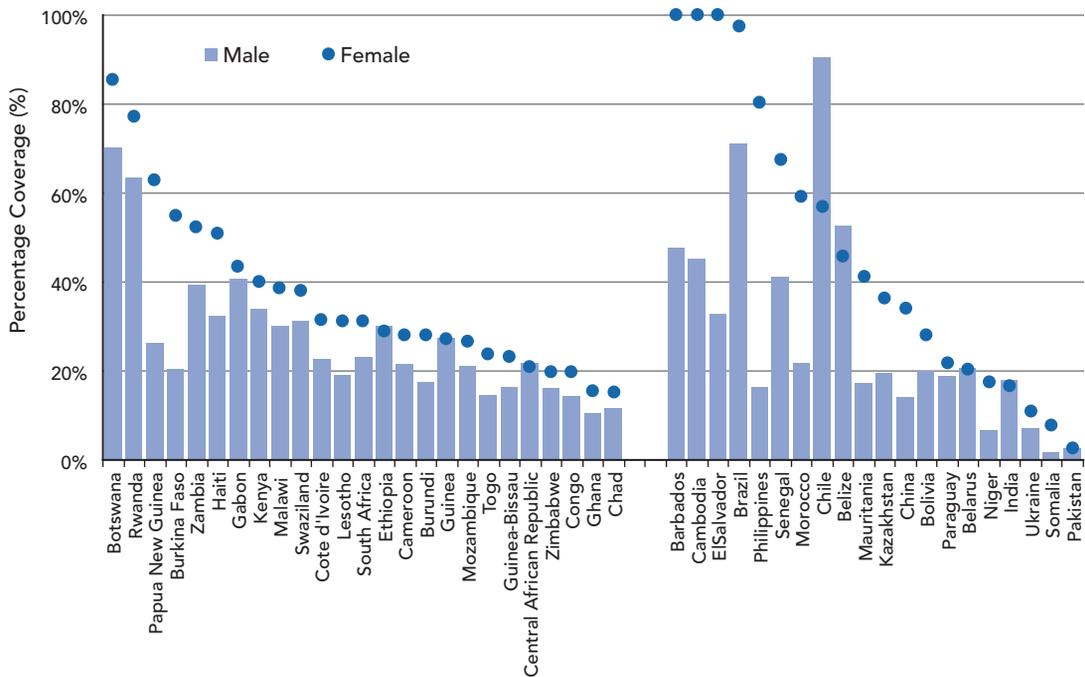
FIGURE 20 Estimated number of adult and child deaths due to AIDS globally, 1990–2007



Source: Data from UNAIDS and WHO, 2008.

This bar indicates the range around the estimate

FIGURE 21 Comparison of antiretroviral therapy coverage in 2007 between males and females (for countries with reported data on the number of people on treatment for both sexes separately)

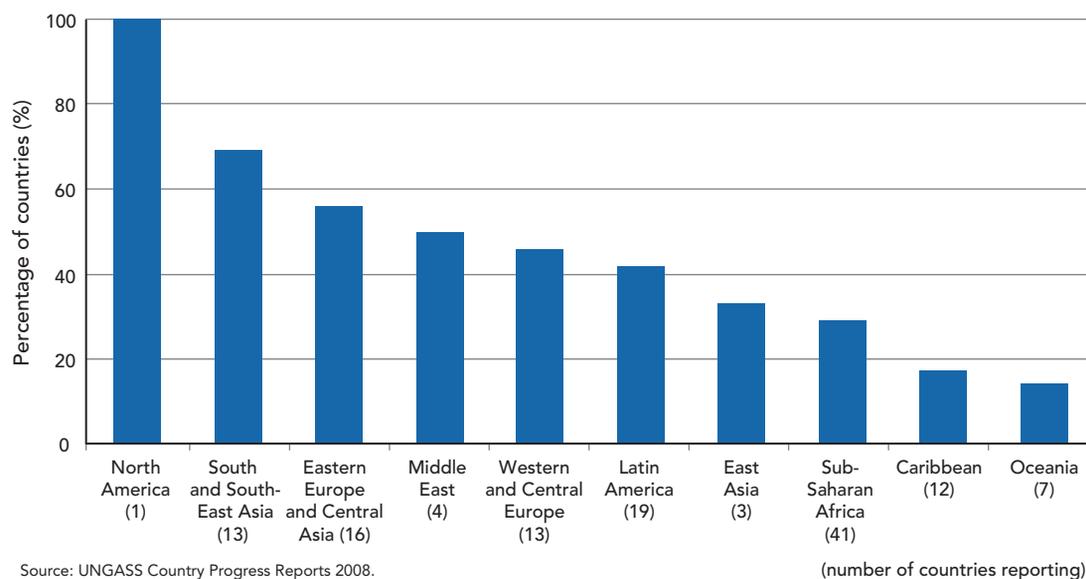


Source: Data from UNAIDS and WHO, 2008.

Note: Coverage estimates are based on applying the ratio of number of males and number of females receiving antiretroviral therapy to the final projected value of all people receiving antiretroviral therapy as of December 2007. This provides December 2007 estimates of number of males and females receiving antiretroviral therapy that are then divided by the estimated number of males and females in need of antiretroviral treatment respectively.

FIGURE 22

Percentage of countries reporting laws, regulations or policies that present obstacles to services for injecting drug users



fixed-dose combinations are inappropriate for children; this challenge, too, can be overcome as a result of increasing availability of paediatric regimens, dosing tools to assist clinicians in resource-limited setting, and increased financial support for uptake of paediatric treatment.

Globally, coverage of antiretroviral treatment for women is higher than or equal to that of men (Figure 21). In most countries, treatment coverage for women exceeds comparable coverage for men. This sex disparity is particularly pronounced in generalized epidemics—a possible consequence of the fact that many HIV-positive women have two portals of entry for treatment, i.e. HIV treatment programmes and programmes to prevent mother-to-child transmission.

The populations most at risk of HIV exposure, such as injecting drug users, face considerable barriers to HIV treatment access, often as a result of institutionalized discrimination. For example, drug rehabilitation treatment, such as substitution therapy, is often essential to the success of HIV treatment but is legally prohibited or restricted in many

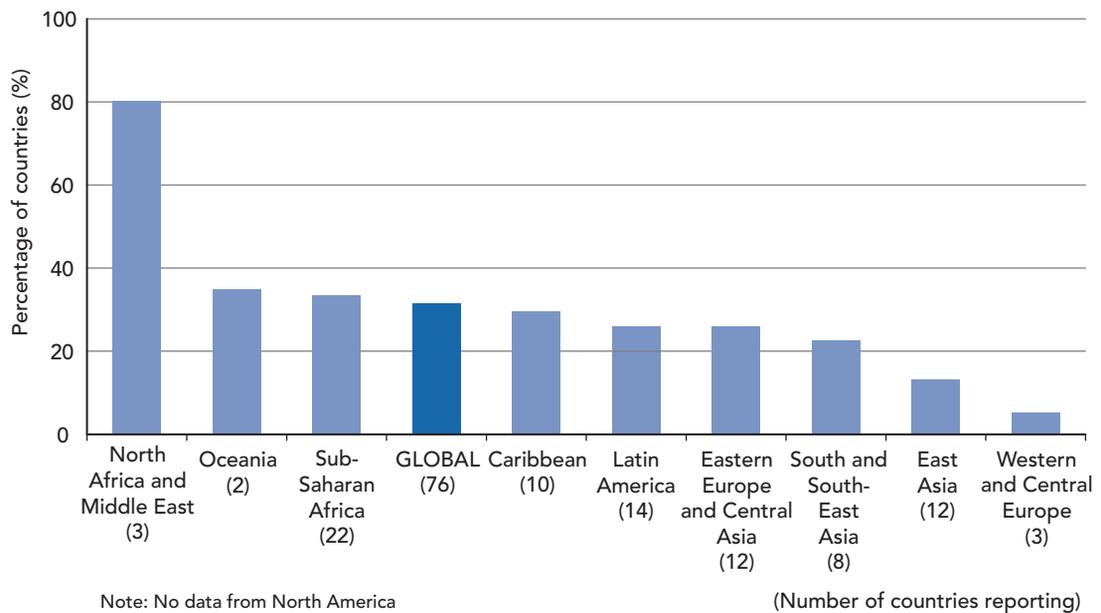
countries. According to reports by nongovernmental informants, many countries, including the Russian Federation and a majority in Eastern Europe and Central Asia, South and Southeast Asia, and North America, have laws, regulations or policies that impede HIV service utilization by injecting drug users (UNGASS Country Progress Reports 2008) (Figure 22).

Despite the existence of affordable medications, too few people living with both HIV and tuberculosis are receiving treatment for both conditions (Figure 23). The failure to make optimal use of existing diagnostic and treatment regimens results in considerable illness and death. An estimated 22% of tuberculosis cases in Africa—and, in some countries in the region, as many as 70%—occur in people living with HIV (WHO, 2008a).

Weaknesses in health care systems are slowing the scale-up of HIV treatment programmes, underscoring the need for intensified action to strengthen these systems. Evidence indicates that scale-up of antiretroviral medicine provision is helping drive

FIGURE 23

Percentage of incident tuberculosis cases in people living with HIV receiving both antiretroviral and anti-tuberculosis medications, 2007



Source: UNGASS Country Progress Reports 2008.

significant improvements in health care infrastructure in resource-limited settings.

As HIV treatment is for life, it is critical that treatment programmes be sustained for the long term. Among the developments needed to ensure the continuity of HIV treatment are more affordable second- and third-line therapies, as well as greater success in preventing new HIV infections.

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

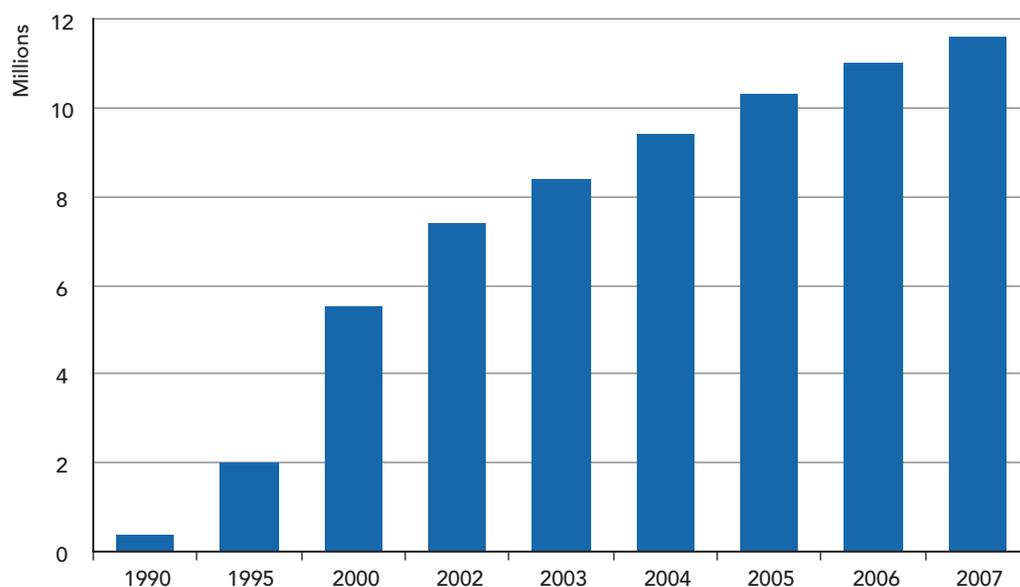
The epidemic continues to inflict significant damage on affected households, with particularly harmful effects on women and children. The financial burden associated with HIV for the poorest of households in India represents 82% of annual income, while the comparable burden for the wealthiest families is slightly more than 20%. About 12 million children (under age 18) have lost one or both parents to AIDS in sub-Saharan

Africa, and the number of children orphaned by the epidemic continues to rise (Figure 24).

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. Among 10 countries in which 5% or more of adults are living with HIV 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 (Figure 25). 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. Targeting cash support to HIV-affected households would significantly enhance assistance to children, who represent a significant share of households. In the pilot project in the Kalomo district of Zambia, 68% of children

FIGURE 24

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



Source: UNAIDS/WHO, 2008.

FIGURE 25

Support to orphans and vulnerable children as reported by countries with adult HIV prevalence ≥ 5 percent (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%

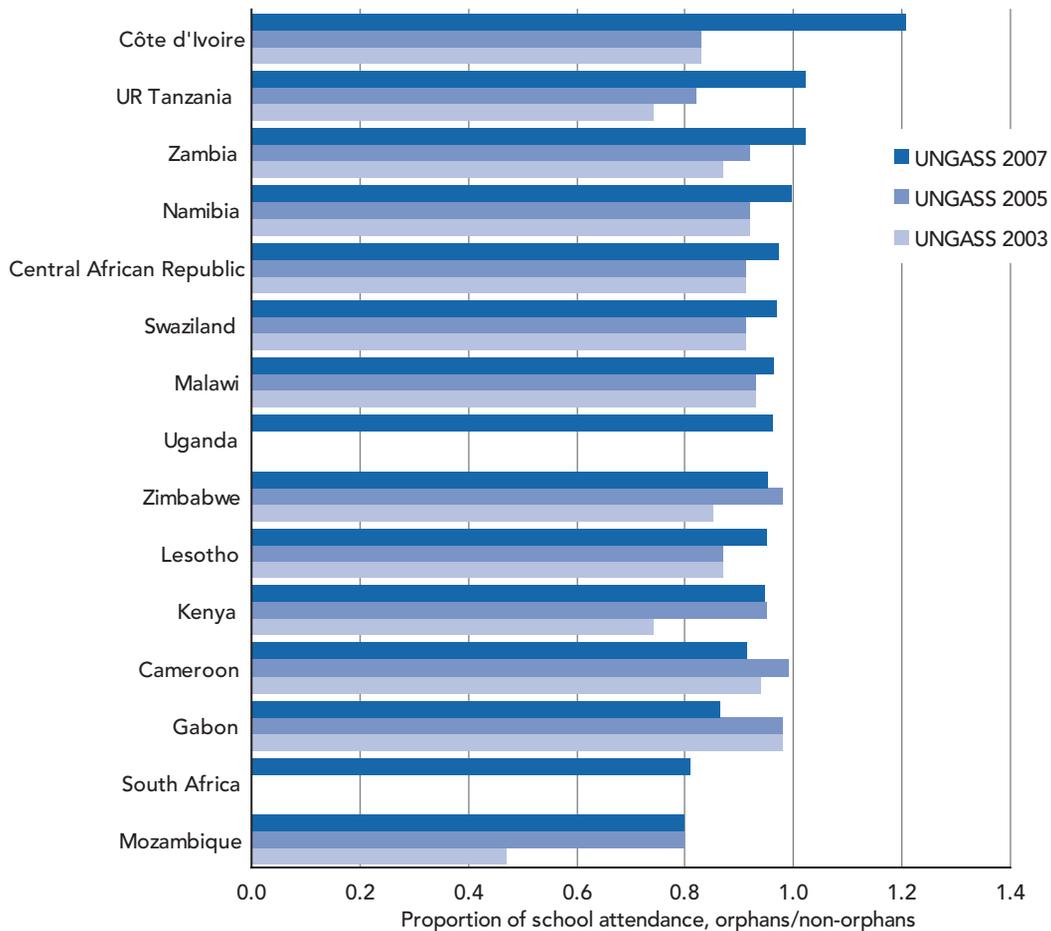
¹ Total number of OVC as reported by countries.

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.

FIGURE 26

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



Source: UNGASS Country Progress Reports 2008.

reached by social cash transfers were orphans, including 35% who had lost both father and mother.

Ensuring educational opportunities for children is critical to mitigation of HIV-related vulnerability. In 56 countries from which 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 epidemic⁷ (Figure 26).

The epidemic is having particularly harsh effects on women, requiring implementation of scaled-up measures to increase women's independent income-generating potential. Women account for two thirds of all caregivers for people living with HIV in Africa, and women who are widowed as a result of HIV

⁷ This indicator pertains to orphans in general, not to children orphaned specifically as a result of HIV.

FIGURE 27

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 Labor 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.

risk social ostracism or destitution. Enhancing women's financial options helps mitigate some of the epidemic's most harmful effects; 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.

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 (Figure 27). 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, 2007)—an impact

that is notable but not catastrophic⁸. However, HIV can slow economic growth, widen economic inequality, and cause severe strains on affected households. In Botswana, modeling 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% (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, by 38% in Thailand, and by 23% in India between 2003 and 2015. It is estimated that HIV imposes an additional US\$ 2 billion in costs each year on affected households in Asia.

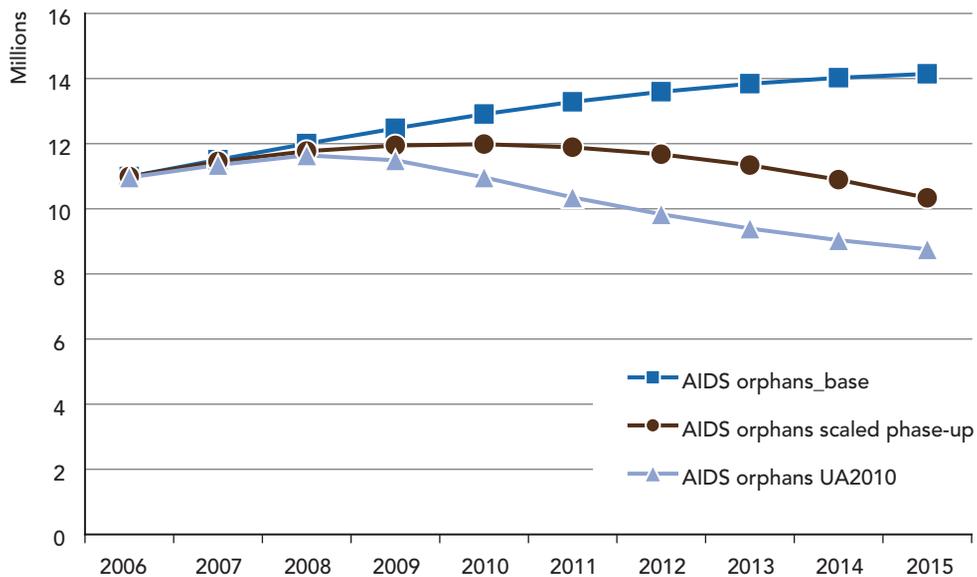
To address the continuing deterioration of government capacity in high-prevalence

⁸ 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.

More recent conclusions regarding somewhat diminished expectations regarding the epidemic's long-term impact on national economies are not universally shared. A 2006 economic analysis suggested that the lower projections of macroeconomic impact are premised 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).

FIGURE 28

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



Source: UNICEF, UNAIDS, WHO, 2008.

countries, strategic, scaled-up approaches are needed to preserve and build capacity in the public sector, including innovative strategies to extend limited capacity as far as possible. 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. The epidemic is having sometimes-severe effects on particular components of the public sector; in 2005, for example, 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.

Antiretroviral treatment programmes represent a critical strategy for mitigating the epidemic's impact. Among tea workers in Kenya, rapid improvements in productivity were seen in the first year after starting anti-

retroviral therapy. A recent study in Uganda found an 81% reduction in child mortality among uninfected children of adults receiving antiretroviral therapy, as well as a 93% reduction in orphanhood. Achieving universal treatment access by 2015 would result in a number of orphans approximately five million below current projections (Figure 28).

Where do we go from here? Sustaining an effective, robust HIV response for the long term

Moving towards universal access to HIV prevention, treatment, care, and support is an important step in the direction of an effective, sustainable HIV response. As Figure 29 reveals, several countries have already achieved their national universal access targets for prevention of mother-to-child transmission and antiretroviral treatment. All values are based on need estimates using UNAIDS/WHO methodology.

FIGURE 29a

Percent Coverage of Antiretrovirals for Prevention of Mother-to-Child Transmission Breakdown by Quartiles (N=63)

Less than 25% Coverage (36 Countries)	25% to 49% Coverage (16 Countries)	50% to 75% Coverage (7 Countries)	Greater than 75% Coverage (4 Countries)
Angola	Benin	Brazil	Argentina
Burkina Faso	Cambodia	Kenya	Botswana
Burundi	Central African Republic	Namibia	Russian Federation
Cameroon	Dominican Republic	Rwanda	Thailand
Chad	Gambia	South Africa	
China	Honduras	Swaziland	
Colombia	Lesotho	Ukraine	
Congo, Republic of the	Malawi		
Côte d'Ivoire	Mozambique		
Democratic Republic of the Congo	Myanmar		
El Salvador	Niger		
Eritrea	Peru		
Ethiopia	Uganda		
Gabon	United Republic of Tanzania		
Ghana	Zambia		
Guatemala	Zimbabwe		
Guinea			
Guinea-Bissau			
Haiti			
India			
Indonesia			
Iran, Islamic Republic of			
Liberia			
Madagascar			
Malaysia			
Mali			
Nepal			
Nigeria			
Pakistan			
Papua New Guinea			
Senegal			
Sierra Leone			
Somalia			
Togo			
Venezuela			
Viet Nam			

All values are based on need estimates using UNAIDS/WHO methodology. Includes all countries for which number of pregnant women receiving antiretroviral therapy was reported for 2007, except countries for which UNAIDS/WHO need estimates are not available, or with need estimates less than 500.

FIGURE 29b Percent Coverage of Antiretroviral Therapy for Adults and Children with Advanced HIV Breakdown by Quartiles (N=106)

Less than 25% Coverage (45 Countries)	25% to 49% Coverage (40 Countries)	50% to 75% Coverage (14 Countries)	Greater than 75% Coverage (7 Countries)
Algeria	Angola	Argentina	Botswana
Armenia	Bahamas	Barbados	Brazil
Azerbaijan	Belize	Cambodia	Chile
Bangladesh	Benin	Czech Republic	Costa Rica
Belarus	Burkina Faso	El Salvador	Cuba
Bolivia	Cameroon	Moldova	Lao People's Democratic Republic
Burundi	Cote d'Ivoire	Netherlands	Namibia
Central African Republic	Dominican Republic	Panama	
Chad	Ecuador	Romania	
China	Equatorial Guinea	Rwanda	
Congo, Republic of the Democratic Republic of the Congo	Estonia	Senegal	
Djibouti	Ethiopia	Thailand	
Egypt	Gabon	Trinidad and Tobago	
Eritrea	Guatemala	Uruguay	
Gambia	Guinea		
Ghana	Guyana		
Guinea-Bissau	Haiti		
Hungary	Honduras		
Indonesia	Jamaica		
Iran, Islamic Republic of	Kenya		
Kazakhstan	Lebanon		
Kyrgyzstan	Lesotho		
Liberia	Malawi		
Lithuania	Malaysia		
Madagascar	Mali		
Mauritania	Morocco		
Mauritius	Nicaragua		
Mozambique	Nigeria		
Myanmar	Papua New Guinea		
Nepal	Peru		
Niger	Philippines		
Pakistan	Poland		
Paraguay	South Africa		
Russian Federation	Suriname		
Serbia	Swaziland		
Sierra Leone	Uganda		
Somalia	United Republic of Tanzania		
Sri Lanka	Venezuela		
Sudan	Viet Nam		
Tajikistan	Zambia		
Togo			
Ukraine			
Uzbekistan			
Zimbabwe			

All values are based on need estimates using UNAIDS/WHO methodology. Includes all countries for which number of adults and children on antiretroviral therapy was reported for 2007, except countries for which UNAIDS/WHO need estimates are not available, or with need estimates less than 500.

To extend these scattered successes to more countries in all regions—and to sustain these achievements in the coming decades—the following key actions are needed.

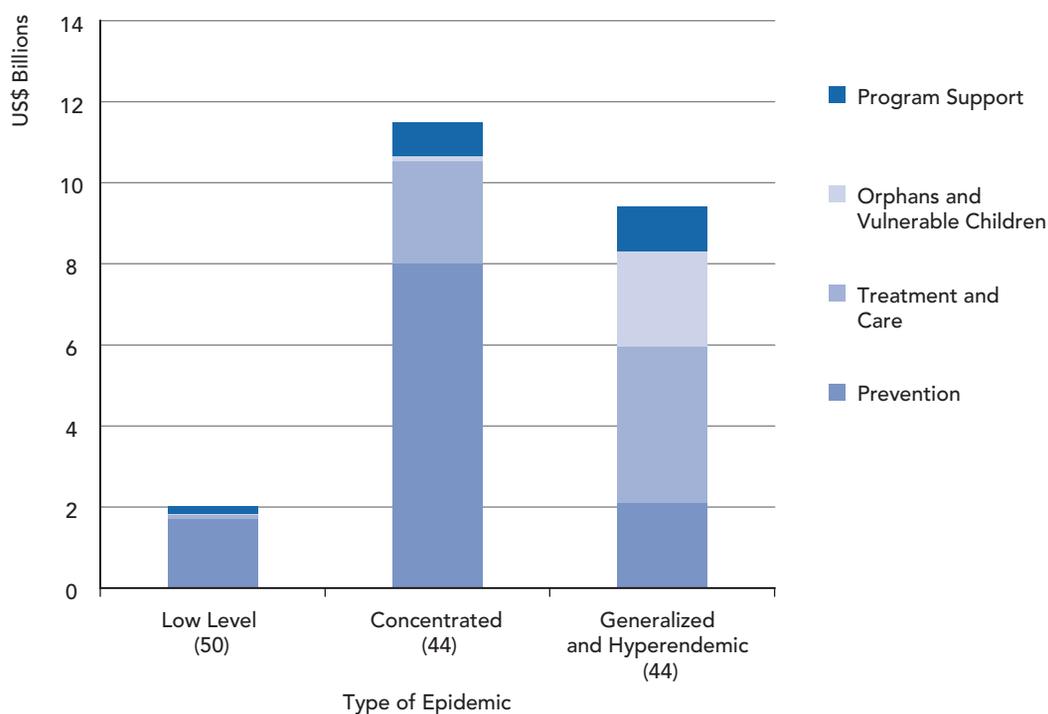
- *Base national action on sound evidence of what works to address documented national needs, ensuring full implementation of evidence-informed policies and programmes.* By basing decisions on strong public health surveillance, resource mapping and evidence of what works, effective national efforts pair evidence-informed strategies with documented national needs.

Too often, however, national HIV expenditures do not match national needs. This is especially the case in many countries with

low-level or concentrated epidemics, where rational funding would focus primarily on HIV prevention services for populations most at risk (Figure 30). In Latin America, where HIV prevalence is well below 1%, HIV prevention accounts for just 15% of HIV spending in 2007. 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. For concentrated epidemics generally, risk-reduction programmes focused on populations most at risk represent only 10% of overall HIV prevention spending.

FIGURE 30

Resources needed in 2010 using a phased scale-up strategy towards universal access?

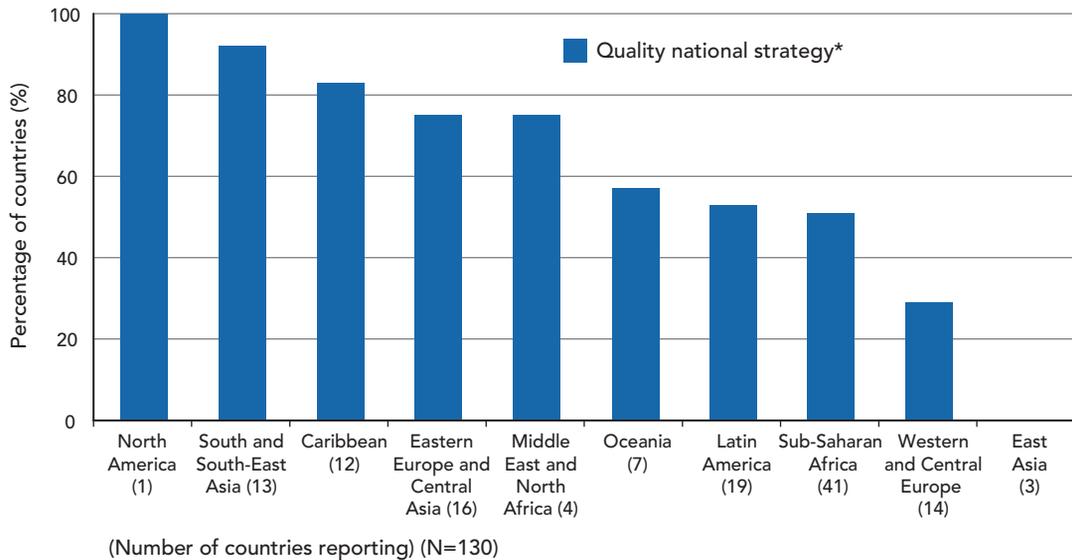


Source: UNAIDS, 2008.

⁹ Estimates in 138 low- and middle-income countries for implementing the most effective programmatic services as determined by data derived from national efforts to “know and act on your epidemic”.

FIGURE 31

Countries reporting quality implementation of the national AIDS strategy



* One national multisectoral strategy and operational plan with goals, targets, costing, and identified funding per programmatic area, and a monitoring and evaluation framework.

Source: UNGASS Country Progress Reports 2008.

Real HIV leadership remains focused on what works. While some may be tempted to address the epidemic by placing travel restrictions on people living with HIV or by limiting prevention programmes for young people to lessons on remaining sexually abstinent, leaders on HIV will be persuaded by public health evidence that such strategies are ineffective and counterproductive.

True leaders are not satisfied with only the development of sound policies but ensure full and timely implementation of strategic action frameworks. In only 69% of countries—far fewer than the 97% that report having a national strategy—have national strategies been translated into costed operational plans with programme goals, detailed programme costing and identified funding sources. In sub-Saharan Africa, only about half of national HIV strategies meet UNAIDS quality criteria (Figure 31).

- *Plan for the future, by implementing strategic planning and evaluation mechanisms that extend beyond three- and five-year time*

cycles. Strong leadership on HIV remains focused on long-term objectives, refusing to permit intervening challenges to undermine the national HIV response.

Real HIV leaders recognize that the epidemic is a generations-long challenge that requires persistence, vision and flexibility. While three- and five-year planning will continue to play a key role in national responses, these processes must increasingly be situated within longer-term planning efforts that recognize the decades-long challenge posed by HIV. Namibia provides an example of this approach; its current five-year plan for HIV, which runs through 2009, is specifically linked to goals and strategies of a longer-term development planning process that extends through 2030.

- *Invest in a truly effective response to HIV, with particular attention to evidence-informed HIV prevention strategies that help contain national epidemics.* HIV prevention is consistently under-prioritized in many national responses. Moreover, as treatment

access increases, the disability and death associated with HIV could become less visible, encouraging communities to relax their guard and tempting leaders to reduce investments in prevention programmes.

Where HIV prevention has succeeded, a popular movement has endeavoured to make risk reduction a societal norm, generating strong demand for prevention services. Here again, the need for strong leadership is apparent. Much has been learned about how to generate and support strong community mobilization, but encouraging such a popular movement requires the courage to invest in strategies that increase the HIV accountability of national governments and other stakeholders.

- ***Couple programmatic scale-up with measures to reduce the societal factors that increase HIV risk and vulnerability, including gender inequities, stigma and discrimination, and social marginalization.*** Supporting evidence-informed prevention efforts requires countries to address difficult issues, invest wisely in the future, and address the societal factors that increase HIV risk and vulnerability. Until sufficient political will exists to address the sources of HIV risk and vulnerability, the epidemic will continue to expand, undermining the sustainability of the HIV response.

Confronting HIV requires addressing issues such as human sexuality, and drug use, that make many people uncomfortable. It also requires compassion and effective action with respect to groups that society often prefers to ignore.

- ***Empower people living with HIV to help lead national HIV responses and involve civil society in the development, implementation and evaluation of national HIV strategies.*** While leadership from heads of government and national ministries is critical, effective national responses depend on commitment and action from diverse actors. Especially in countries where HIV is hyper-endemic, leadership on HIV is needed

from all walks of life, including community groups, faith-based organizations, private businesses, young and old. Above all, people living with HIV must be empowered to help lead national responses. According to nongovernmental informants, however, only about 20% of civil society groups have access to financial assistance for programmes and capacity building (UNGASS Country Progress Reports 2008.)

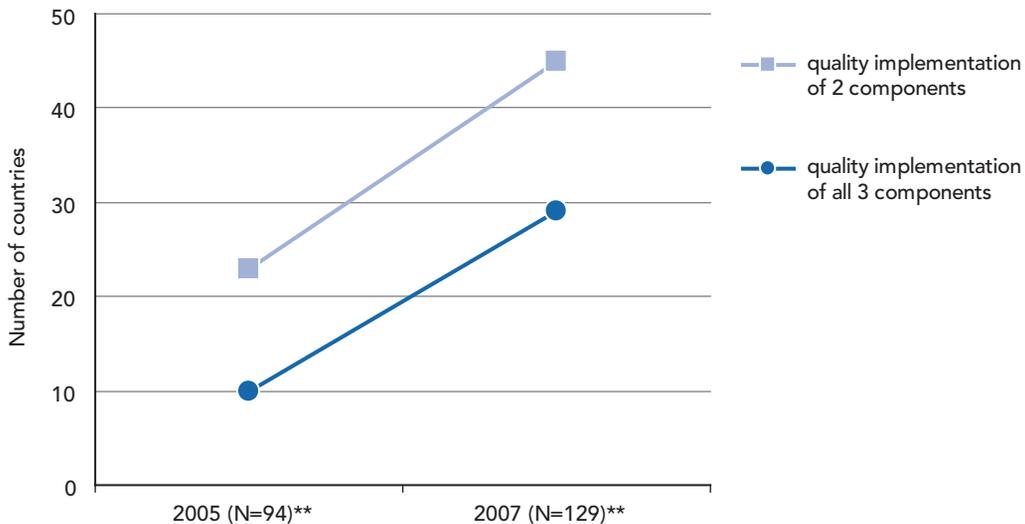
- ***Harmonize and align the efforts of all stakeholders with nationally driven HIV strategies and priorities, strengthening the quality and flexibility of technical support to expedite programme scale-up.*** In line with international efforts to improve the harmonization and alignment of international development aid with country-owned strategies and plans, country-level action on HIV aims to promote the “Three Ones” principles— one national AIDS authority, one national strategic framework, and one national monitoring and evaluation system. Unless efforts by diverse stakeholders are coordinated, the HIV response is unnecessarily wasteful and lacks optimal strategic focus.

Countries have made notable progress in implementing national responses according to the “Three Ones” principles (Figure 32). Yet fewer than half of countries have achieved the full alignment and harmonization of action needed to ensure an optimally effective national response. Nearly one half (45%) of governments report that not all external partners align their efforts with national HIV strategies (UNGASS Country Progress Reports 2008).

Continued efforts are required, especially by multilateral agencies, to enhance the timeliness and effectiveness of technical support to national responses. In 2008, UNAIDS and the Global Fund entered into a formal agreement to strengthen their partnership to expedite the implementation and

FIGURE 32

Country progress in improving the implementation quality of the “Three Ones”: one national strategic framework, one national AIDS authority, and one national monitoring and evaluation system*



* Quality implementation refers to:

- 1 One national multisectoral strategy and operational plan with goals, targets, costing, and identified funding per programmatic area, and a monitoring and evaluation framework;
- 2 One national coordinating body with terms of reference, a defined membership, an action plan, a functional secretariat, and regular meetings;
- 3 One national M&E plan which is costed and for which funding is secured, a functional national monitoring and evaluation unit or technical working group, and central national database with AIDS data.

** Only countries that have all three or two of the three components in place are displayed; other countries have only one or none of the components in place, or did not report.

Source: UNGASS Country Progress Reports 2008.

scale-up of national programmes financed by Global Fund grants. The UNAIDS cosponsors and Secretariat have agreed on a division of labour for technical support to increase the coherence and strategic focus on UN support to countries. Technical support facilities will have been established in seven regions by the end of 2008, and WHO has established regional “knowledge hubs” to help countries translate strategic information into programmes and policies.

- **Mobilize sufficient financial resources to reach the global target of universal access, putting in place innovative mechanisms to sustain financing for the long term.** Robust HIV funding will be needed for decades. In low-income countries, international donors

will need to provide most of the financing for HIV in the coming years. The quest for long-term financing for the HIV response has already led to establishment of a number of innovative funding vehicles, including Product RED and UNITAID. Additional innovation, global commitment and the involvement of multiple partners will be required to generate sufficient funding for the long-term HIV response.

Because it is unrealistic to expect HIV-dedicated funding to support the broad array of initiatives required for a comprehensive and effective HIV response—including universal primary and secondary education, meaningful economic opportunities for women, comprehensive

and well-functioning social protection systems, and support for agricultural sectors and rural communities—international donors must make good on their promises of significant increases in overall development assistance. As of 2005, only five country members of the Organization for

Economic Cooperation and Development (Denmark, Luxembourg, Sweden, the Netherlands, and Norway) were investing at least 0.7% of gross national income towards development assistance (UNDP, 2007), as pledged in the *Declaration of Commitment* and other international agreements.

UNAIDS, the Joint United Nations Programme on HIV/AIDS, brings together the efforts and resources of ten UN system organizations to the global AIDS response. Cosponsors include UNHCR, UNICEF, WFP, UNDP, UNFPA, UNODC, ILO, UNESCO, WHO and the World Bank. Based in Geneva, the UNAIDS secretariat works on the ground in more than 80 countries worldwide.

The paper used in this report is PEFC approved.

Uniting the world against AIDS



UNAIDS
20 AVENUE APPIA
CH-1211 GENEVA 27
SWITZERLAND

Tel.: (+41) 22 791 36 66
Fax: (+41) 22 791 48 35
e-mail: distribution@unaids.org

www.unaids.org