INTRODUCTION

Main global and regional trends

Promising developments have been seen in recent years in global efforts to address the AIDS epidemic, including increased access to effective treatment and prevention programmes. However, the number of people living with HIV continues to grow, as does the number of deaths due to AIDS. A total of 39.5 million [34.1 million–47.1 million] people were living with HIV in 2006—2.6 million more than in 2004. This figure includes the estimated 4.3 million [3.6 million–6.6 million] adults and children who were newly infected with HIV in 2006, which is about 400 000 more than in 2004.

In many regions of the world, new HIV infections are heavily concentrated among young people (15–24 years of age). Among adults 15 years and older, young people accounted for 40% of new HIV infections in 2006.

Sub-Saharan Africa continues to bear the brunt of the global epidemic. Two thirds (63%) of all adults and children with HIV globally live in sub-Saharan Africa, with its epicentre in southern Africa (see pages 10-23). One third (32%) of all people with HIV globally live in southern Africa and 34% of all deaths due to AIDS in 2006 occurred there.

Declines in national HIV prevalence are being observed in some sub-Saharan African countries, but such trends are currently neither strong nor widespread enough to diminish the epidemics' overall impact in this region (see pages 10-23).

Almost three quarters (72%) of all adult and child deaths due to AIDS in 2006 occurred in **sub-Saharan Africa**: 2.1 million [1.8 million–2.4 million] of the global total of 2.9 million [2.5 million–3.5 million]. Overall sub-Saharan Africa is home to an estimated 24.7 million [21.8 million–27.7 million] adults and children infected with HIV—1.1 million more than in 2004.

In the past two years, the number of people living with HIV increased in every region in the world. The most striking increases have occurred in **East Asia** and in **Eastern Europe** and **Central Asia**, where the number of people living with HIV in 2006 was over one fifth (21%) higher than in 2004.

Since 2000/2001, HIV prevalence among young people has declined in eight of 11 countries with sufficient data to analyze recent trends.

The 270 000 [170 000–820 000] adults and children newly infected with HIV in **Eastern Europe** and **Central Asia** in 2006 showed an increase of almost 70% over the 160 000 [110 000–470 000] people who acquired HIV in 2004. In **South** and **South-East Asia**, the number of new HIV infections rose by 15% in 2004–2006, while in the **Middle East** and **North Africa** it grew by 12%. In **Latin America**, the **Caribbean** and **North America**, new infections in 2006 remained roughly the same as in 2004.

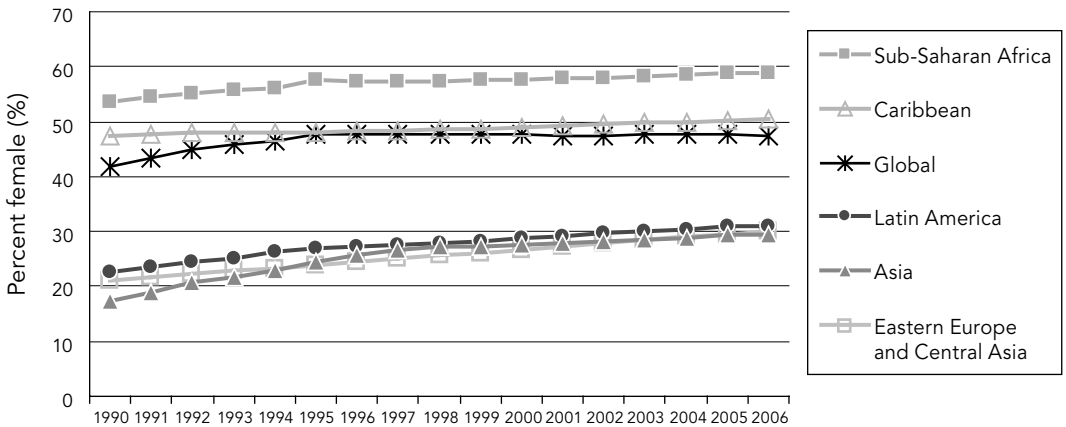
Globally, and in every region, more adult women (15 years or older) than ever before are

Regional HIV statistics and features for women, 2004 and 2006

		Number of women (15+) living with HIV	Percent of adults (15+) living with HIV who are women (15+) (%)
Sub-Saharan Africa	2006	13.3 million [11.5–15.2 million]	59
	2004	12.7 million [11.0–14.5 million]	59
Middle East and North Africa	2006	200 000 [100 000–370 000]	48
	2004	180 000 [89 000–330 000]	49
South and South-East Asia	2006	2.2 million [1.3–3.6 million]	29
	2004	2.0 million [1.2–3.3 million]	29
East Asia	2006	210 000 [110 000–370 000]	29
	2004	160 000 [90 000–280 000]	27
Oceania	2006	36 000 [17 000–90 000]	47
	2004	32 000 [16 000–81 000]	47
Latin America	2006	510 000 [350 000–800 000]	31
	2004	450 000 [310 000–670 000]	30
Caribbean	2006	120 000 [85 000–160 000]	50
	2004	110 000 [80 000–150 000]	50
Eastern Europe and Central Asia	2006	510 000 [330 000–810 000]	30
	2004	410 000 [260 000–650 000]	30
Western and Central Europe	2006	210 000 [160 000–300 000]	28
	2004	190 000 [140 000–260 000]	28
North America	2006	350 000 [190 000–570 000]	26
	2004	300 000 [160 000–510 000]	26
TOTAL	2006	17.7 million [15.1–20.9 million]	48
	2004	16.5 million [14.2–19.5 million]	48

Table 2

Percent of adults (15+) living with HIV who are female, 1990–2006



Source: UNAIDS/WHO, 22 Sept 2006

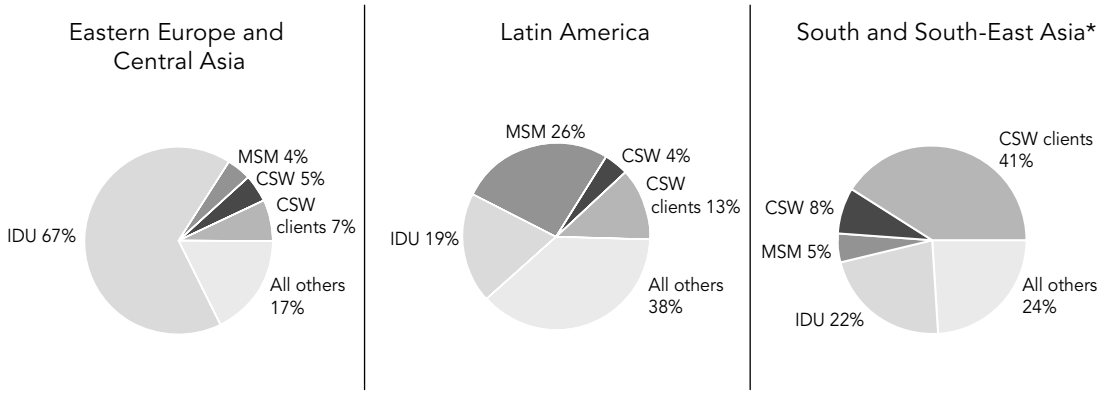
Figure 1

now living with HIV. The 17.7 million [15.1 million–20.9 million] women living with HIV in 2006 represented an increase of over one million compared with 2004 (see Table 2). In **sub-Saharan Africa**, for every ten adult men living with HIV, there are about 14 adult women who are infected with the virus. Across all age groups, 59% of people living with HIV in sub-Saharan Africa in 2006 were women. In the **Caribbean**, the **Middle East** and **North Africa**, and **Oceania**, close to one in every two adults with

Focusing on risk

The centrality of high-risk behaviour (such as injecting drug use, unprotected paid sex and unprotected sex between men) is especially evident in the HIV epidemics of Asia, Eastern Europe and Latin America (see Figure 2). In **Eastern Europe** and **Central Asia**, for example, two in three (67%) prevalent HIV infections in 2005 were due to the use of non-sterile injecting drug use equipment. Sex workers and

Proportions of HIV infections in different population groups by region, 2005



IDU: Injecting Drug Users
MSM: Men having sex with men
CSW: Commercial Sex Workers

* India was omitted from this analysis because the scale of its HIV epidemic (which is largely heterosexual) masks the extent to which other at-risk populations feature in the region's epidemics.

Figure 2

HIV is female. Meanwhile, in many countries of **Asia**, **Eastern Europe** and **Latin America**, the proportions of women living with HIV continue to grow.

Access to treatment and care has greatly increased in recent years, albeit from a very low starting level in many countries. Nevertheless, the benefits are dramatic. Through the expanded provision of antiretroviral treatment an estimated two million life years were gained since 2002 in low- and middle-income countries. In sub-Saharan Africa alone, some 790 000 life years have been gained, the vast majority of them in the past two years of antiretroviral treatment scale-up. In Latin America, where wide-scale treatment provision began earlier, some 834 000 life years have been gained since 2002.

their clients, some of whom also inject drugs, accounted for about 12% of HIV infections.

Paid sex and injecting drug use accounted for a similar overall proportion of prevalent HIV infections in **South** and **South-East Asia** (see pages 24-36). Excluding India, almost one in two (49%) prevalent HIV infections in 2005 were in sex workers and their clients, and more than one in five (22%) infections were in injecting drug users. A small but significant proportion of infections (5%) were in men who have sex with men. In **Latin America,** in contrast, one in four (26%) of the HIV infections in 2005 were in men who have sex with men, while 19% were in injecting drug users. Although HIV prevalence in sex workers is relatively low in this region (see pages 48-52), they and their clients accounted for almost one in six (17%) HIV infections.

Although the epidemics also extend into the general populations of countries in those regions, they remain highly concentrated around specific population groups. This highlights the need to focus prevention, treatment and care strategies effectively on population groups that are most at risk of HIV infection.

Latest regional developments

Almost 25 million people are living with HIV in **sub-Saharan Africa**—63% of all persons with HIV globally. Considerable efforts have been made towards improving access to antiretroviral treatment in recent years. Nonetheless, 2.1 million [1.8 million–2.4 million] Africans died of AIDS in 2006—almost three quarters (72%) of all AIDS deaths globally.

Hardest-hit is southern Africa (see pages 10-23), where **Zimbabwe** remains the only country where national adult HIV prevalence has declined. The declining trend appears to be partly associated with behaviour changes dating back to the mid- to late-1990s.

Meanwhile, the HIV epidemics in **Mozambique**, **South Africa** and **Swaziland** continue to grow. An estimated one in three (33%) adults in **Swaziland** was living with HIV in 2005—the most intense epidemic in the world. In **South Africa**, which in terms of sheer numbers has one of the world's largest HIV epidemics, prevalence of HIV among women attending public antenatal clinics was more than one third (35%) higher in 2005 than it had been in 1999. While HIV infection levels among young pregnant women appear to be stabilizing, they continue to increase among older women. The epidemic is having a significant impact. Death rates from natural causes for women aged 25–34 years increased fivefold between 1997 and 2004, and for males aged 30–44 they more than doubled. A large part of those increases is due to the AIDS epidemic (see pages 10-23).

In East Africa, where HIV infection levels have been lower than in the south of the continent, the general trend of a stabilizing or a declining HIV prevalence appears to be continuing. National HIV prevalence among pregnant women has declined in **Kenya**, as it has in **Tanzania** and, to a lesser extent, in **Rwanda**. In many other countries though, discrepant trends are often being found at local levels (see pages 19-20). Meanwhile, new research indicates a possible erosion of the gains **Uganda** made against AIDS in the 1990s, and HIV prevalence has again been rising in some rural areas. A sudden increase in infection levels among pregnant women in 2005 in **Burundi**'s capital, Bujumbura, could reverse the general, post–2000 decline in HIV prevalence in that country.

West and Central Africa's smaller epidemics show divergent trends. There are signs of declining HIV prevalence in urban parts of **Burkina Faso**, **Côte d'Ivoire** and **Ghana**, but in **Mali** the HIV epidemic appears to be growing. A recent development in sub-Saharan Africa is the emergence of injecting drug use as a potential factor in the HIV epidemics of several countries, notably those of **Kenya** and **Tanzania** (as well as **Nigeria** and **South Africa**).

In Asia, national HIV infection levels are highest in South-East Asia, where combinations of unprotected paid sex and unprotected sex between men, along with unsafe injecting drug use, are the largest risk factors for HIV infection. HIV outbreaks among men who have sex with men are now becoming evident in **Cambodia**, **China, India**, **Nepal**, **Pakistan**, **Thailand** and **Viet Nam.** In very few of these countries, national AIDS programmes adequately address the role of sex between men in the epidemics. HIV outbreaks are being found in **Afghanistan** and **Pakistan**, particularly among injecting drug users. High levels of use of non-sterile injecting equipment and other risk behaviours offer the HIV epidemic considerable scope for growth in these two countries.

The HIV epidemic in **India** is best described as a series of epidemics, widely varied with respect to prevalence levels, risk factors for infection and transmission patterns. Some of these epidemics appear to be stable or diminishing in parts of the south, while others are growing at a modest rate elsewhere (especially in the north-east) (see pages 27-30). In **China**, where the authorities have greatly expanded the AIDS response, HIV is spreading gradually from most-at-risk populations (especially injecting drug users and commercial sex workers and clients) to the general population, and the number of HIV infections in women is growing (see pages 24-27).

Latin America's epidemics remain generally stable, with **Brazil** in particular providing proof that a dual emphasis on prevention and treatment

can keep an HIV epidemic under control (see pages 48-52). Outbreaks of the virus continue to be found among injecting drug users and men who have sex with men in most countries of South America. Although largely a hidden behaviour, sex between men likely accounts for as much as one tenth of reported HIV cases in the **Caribbean**. In that region, HIV prevalence remains stable in the **Dominican Republic** and has declined in urban parts of **Haiti**, but there are some localized indications that the epidemics in both countries could start to increase again if prevention efforts are not enhanced.

In most countries with repeated surveys there are some positive trends in young people's sexual behaviours. The future course of the world's HIV epidemics hinges in many respects on the behaviours young people adopt or maintain, and the contextual factors that affect those choices.

Racial and ethnic minorities in the **United States of America** continue to be disproportionately affected by the HIV epidemic, while Aboriginal people are over-represented in **Canada**'s epidemic (see pages 55-56). There, as in **Western** and **Central Europe**, the main risk factor for HIV remains unprotected sex between men. HIV prevalence ranges between 10% and 20% among men who have sex with men in several countries in Western Europe, amid evidence of increased casual and unprotected sex in this population group. At the same time, approximately three quarters of heterosexually acquired HIV infections in Western and Central Europe are among immigrants and migrants. This fact underlines the need to adapt prevention, treatment and care services so that they reach these populations.

The HIV epidemics in **Eastern Europe** and **Central Asia** are still relatively young, and they continue to grow—most strikingly in **Ukraine**, which has the highest HIV prevalence in all of Europe (see pages 37-43). There, as in the **Russian Federation**'s expanding epidemic and in the smaller but growing epidemics of **Tajikistan** and **Uzbekistan**, the use of non-sterile injecting drug equipment remains the main mode of HIV transmission. The HIV epidemics in these regions are most greatly affecting young people; in the Russian Federation, for example, some 80% of people with HIV are younger than 30 years of age. In the Russian Federation and Ukraine, women (many of them less than 25 years old) bear a growing proportion of the HIV burden, accounting for more than 40% of new HIV diagnoses in 2005.

Inadequate HIV surveillance remains a hindrance in many countries—including **Europe**, the **Caribbean**, **Central America**, the **Middle East** and **North Africa**. This makes it difficult to discern precisely the patterns and trends of some HIV epidemics, and hinders the design and implementation of potentially effective responses. There are recent exceptions, among them **Iran**, which has acted on improved HIV information gathering by expanding its AIDS response among at-risk populations.

HIV and sexual behaviour trends among young people

In 2001, the United Nations' *Declaration of Commitment on HIV/AIDS* outlined a goal of reducing HIV prevalence by 25% in young people in the most-affected countries by 2005, to monitor progress in preventing new infections. Determining real time trends in HIV incidence, and in particular the impact of prevention programmes on HIV incidence—ideally requires longitudinal studies of large numbers of people. Given the practical difficulties of conducting such studies, it has been proposed to use HIV prevalence in young women aged 15–24 attending antenatal clinics as a proxy measure for incidence.

To assess progress towards this goal, countries in which national prevalence exceeds 3% were asked by the WHO/UNAIDS Working Group on Global HIV/AIDS and STI surveillance to participate in this endeavour.

HIV prevalence has declined since 2000/2001 in eight of 11 countries with sufficient data to analyze recent trends among young people (see Table 3).[1] In **Kenya**, HIV prevalence among young pregnant women declined significantly

[1] Data from the 30 most-affected countries were examined, all but two of them (Bahamas and Haiti) in sub-Saharan Africa. Analysis of HIV trends required that at least three rounds of data from consistent HIV surveillance sites in 2000–2005 be available. Only a minority of countries (11 out of 30) had or shared such data.

by more than 25% in both urban and rural areas. Similar declines were evident in urban areas in **Côte d'Ivoire**, **Malawi** and **Zimbabwe**, and in rural parts of **Botswana**. Less prominent (and non-significant) declines were observed in urban **Botswana**, **Burundi** and **Rwanda** and in rural **Tanzania** and **Zimbabwe**. There was no evidence of a decrease in HIV infection levels among young people in **Mozambique**, **South Africa** or in **Zambia**.

Using results from national surveys conducted at least twice in the same country during the period 1994–2005, trends in behaviours among young people were assessed. In **Kenya**, behaviour trend data point to a significant reduction over time in the kinds of sexual behaviour that place people at risk of HIV infection. The proportion of young persons having sex with non-regular partners decreased in **Haiti** (men only), **Kenya** and **Malawi** (young men and women), and **Zambia** (women only), but increased in **Cameroon**, and **Uganda** (women only). Meanwhile, condom use rates with non-regular partners seemed to increase in some of the surveyed countries, including **Cameroon**, **South Africa**, **Tanzania** and **Uganda** (young men and women), **Malawi** (young men only), and **Kenya** and **Zambia** (young women only). In a few countries, most notably **Cameroon**, there appeared to be simultaneous shifts towards both safer and high-risk behaviours—with increases in the percentages of young people who engage in high risk sexual activities occurring alongside rising rates of condom use during casual sex with a non-regular partner, for example.

Unfortunately, relatively few countries were able to provide extensive behavioural trend data for young people and many countries had insufficient or no data on HIV prevalence trends among young people—including some of the countries with exceptionally high HIV prevalence in southern Africa. This reinforces the need to expand HIV surveillance activities as a matter of urgency.

The future course of the world's HIV epidemics hinges in many respects on the behaviours young people adopt or maintain, and the contextual factors that affect those choices. Some recent, positive changes are evident among young people in parts of the Caribbean and sub-Saharan Africa, particularly in East Africa.

Trends among 15–24-year-olds in high-prevalence countries: HIV prevalence among pregnant women (2000–2005) in sentinel surveillance systems, and selected sexual behaviours among women and men (1994–2005) from national surveys

Country	Prevalence trend*		Age at sexual debut**		Sex with non-regular partner***		Condom use during sex with non–regular partner****	
	Urban	Rural	Females	Males	Females	Males	Females	Males
Angola	ID	ID						
Bahamas	ND	ND						
Botswana	↓ NS	↓ ≥ 25%						
Burundi#	↓ NS	↔						
Cameroon	ID	ID	↔	↓	↑	↑	↑	↑
Central African Republic	ND	ND						
Chad	ID	ID	↓	↔				
Congo	ND	ND						
Côte d'Ivoire	↓ ≥ 25%	ID	↓					
Democratic Republic of the Congo	ID	ID						
Djibouti	ND	ND						
Gabon	ND	ND						
Haiti	ND	ND	↑	↑		↓		
Kenya	↓ ≥ 25%	↓ ≥ 25%	↔	↔	↓	↓	↑	↔
Lesotho	ID	ID						
Malawi#	↓ ≥ 25%	↔	↓	↓	↓	↓	↔	↑
Mozambique‡	↔		↔					
Namibia	ID	ID	↔					
Nigeria	ID	ID	↔	↔				
Rwanda	↓ NS	ND	↔					
South Africa§	↔		↔	↔	↔	↔	↑	↑
Swaziland	ND	ND						
Togo	ID	ID						
Uganda	ND	ND	↓		↑	↔	↑	↑
United Republic of Tanzania	↔	↓ NS	↔	↓	↔	↔	↑	↑
Zambia¶	↔		↔		↓	↔	↑	↔
Zimbabwe	↓ ≥ 25%	↓ NS	↓	↔			↔	↔

Note: **Highlighted cells indicate positive trends in prevalence or behaviour.**

Legend:
* Consistent sites used in the analysis of median prevalence by year for a minimum of three years. Significance test based on H0: slope=0. Analyses of countries with more than three years of data based on the following number of consistent urban and rural sites: Botswana (10,10), Burundi (3,3), Côte d'Ivoire (9 urban), Kenya (20,13), Malawi (11,8), Mozambique (5 South, 8 Center, 7 North), Rwanda (6 urban), Tanzania (11,8), Zimbabwe (7,6)
** Among 15–19-year-olds, proportion reported having had sex by age 15. Analyses based on DHS and South Africa national surveys conducted between 1995 and 2005.
*** Among 15–24-year-olds, proportion reported having had sex with a non-regular partner in the last year. In South Africa, the proportion among 15–24-year-olds reporting more than one sexual partner in the last 12 months. Analyses based on DHS and South Africa national surveys conducted between 1995 and 2005.
**** Among 15–24-year-olds, proportion reporting having used condoms the last time they had sex with a non-regular partner. Analyses based on DHS and South Africa national surveys conducted between 1995 and 2005.
↑ Statistically significant increase.
↓ Statistically significant decrease.
↓ ≥ 25% Statistically significant decrease of more than 25%.
↓ NS Decrease over time but not statistically significant.
↔ No evidence of decrease.
ID Insufficient data, i.e. less than three years of data received.
ND Data not received.
Semi-urban and urban areas were combined in analysis of urban data.
§ No data received in response to UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance process; analyses based on data in South Africa surveillance report.
¶ No data received in response to UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance process; analyses based on data reported in Zambia 2005 surveillance report. Analysis based on urban and rural data combined.
‡ Analysis in Mozambique performed for South, North and Central.

Table 3