



AIDS
epidemic
update:
December 1998



Global summary of the HIV/AIDS epidemic, December 1998

People newly infected with HIV in 1998	Total	5.8 million
	Adults	5.2 million
	<i>Women</i>	<i>2.1 million</i>
	Children <15 years	590 000
No. of people living with HIV/AIDS	Total	33.4 million
	Adults	32.2 million
	<i>Women</i>	<i>13.8 million</i>
	Children <15 years	1.2 million
AIDS deaths in 1998	Total	2.5 million
	Adults	2.0 million
	<i>Women</i>	<i>900 000</i>
	Children <15 years	510 000
Total no. of AIDS deaths since the beginning of the epidemic	Total	13.9 million
	Adults	10.7 million
	<i>Women</i>	<i>4.7 million</i>
	Children <15 years	3.2 million

Anatomy of the epidemic

□ Global summary

By the end of 1998, according to new estimates from the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO), the number of people living with HIV (the virus that causes AIDS) will have grown to 33.4 million, 10% more than just one year ago. The epidemic has not been overcome anywhere. Virtually every country in the world has seen new infections in 1998 and the epidemic is frankly out of control in many places.

More than 95% of all HIV-infected people now live in the developing world, which has likewise experienced 95% of all deaths to date from AIDS, largely among young adults who would normally be in their peak productive and reproductive years. The multiple repercussions of these deaths are reaching crisis level in some parts of the world. Whether measured against the yardstick of deteriorating child survival, crumbling life expectancy, overburdened health care systems, increasing orphanhood, or bottom-line losses to business, AIDS has never posed a bigger threat to development.

According to new UNAIDS/WHO estimates, 11 men, women and children around the world were infected per minute during 1998—close to 6 million people in all. One-tenth of newly-infected people were under age 15, which brings the number of children now alive with HIV to 1.2 million. Most of them are thought to have acquired their infection from their mother before or at birth, or through breastfeeding.

While mother-to-child transmission can be reduced by providing pregnant HIV-positive women with antiretroviral drugs and alternatives to breastmilk, the ultimate aim must be effective prevention for young women so that they can avoid becoming infected in the first place. Unfortunately, when it comes to HIV infection, women appear to be heading for an unwelcome equality with men. While they accounted for 41% of infected adults worldwide in 1997, women now represent 43% of all people over 15 living with HIV and AIDS. There are no indications that this equalizing trend will reverse.

Altogether, since the start of the epidemic around two decades ago, HIV has infected more than 47 million people. And though it is a slow-acting virus that can take a decade or more to cause severe illness and death, HIV has already cost the lives of nearly 14 million adults and children.

An estimated 2.5 million of these deaths occurred during 1998, more than ever before in a single year.

□ AIDS and the infectious disease picture

According to recent WHO estimates, malaria causes over 1 million deaths a year. In 1998, AIDS deaths totalled some 2.5 million. Both diseases are among the five top killers worldwide. However, it is important not to overlook the dynamics in this picture. Already in 1954, millions of people were dying annually of malaria. AIDS is a still-emerging epidemic whose death toll rises every year, while the ranks of the newly infected swell by some 16 000 a day.

Tuberculosis, the second biggest infectious killer, is also on the rise, driven in large part by the HIV epidemic. People whose immune defences are weakened by HIV infection become an easy prey for other microbes, including the bacillus that causes tuberculosis. The resulting infections

(along with some cancers) are responsible for the recurring illnesses which in their late stages are called “AIDS”, and which ultimately lead to death. Around 30% of all AIDS deaths result directly from tuberculosis.

While people undermined by HIV infection are more easily infected with the TB bacillus, many already harbour it from childhood. In either case, individuals with dual HIV/TB infection run a far greater risk than TB carriers who are HIV-negative that their tuberculosis will become active and potentially lethal. Worldwide, millions of people are already infected with both HIV and the tuberculosis bacillus, and the potential for further growth of co-infection in the developing countries is vast, given the crushing prevalence of TB carriers in the general population (some 30%) and the almost 6 million new HIV infections a year. Tackling the dual epidemics calls for stronger TB casefinding and treatment—tuberculosis can be cured with antibiotics regardless of whether the person is HIV-infected or not—in parallel with stronger AIDS prevention programmes to avert new HIV infections.

□ Regional roundup

Sub-Saharan Africa is home to 70% of the people who became infected with HIV this year. It is also the region in which four-fifths of all AIDS deaths occurred in 1998.

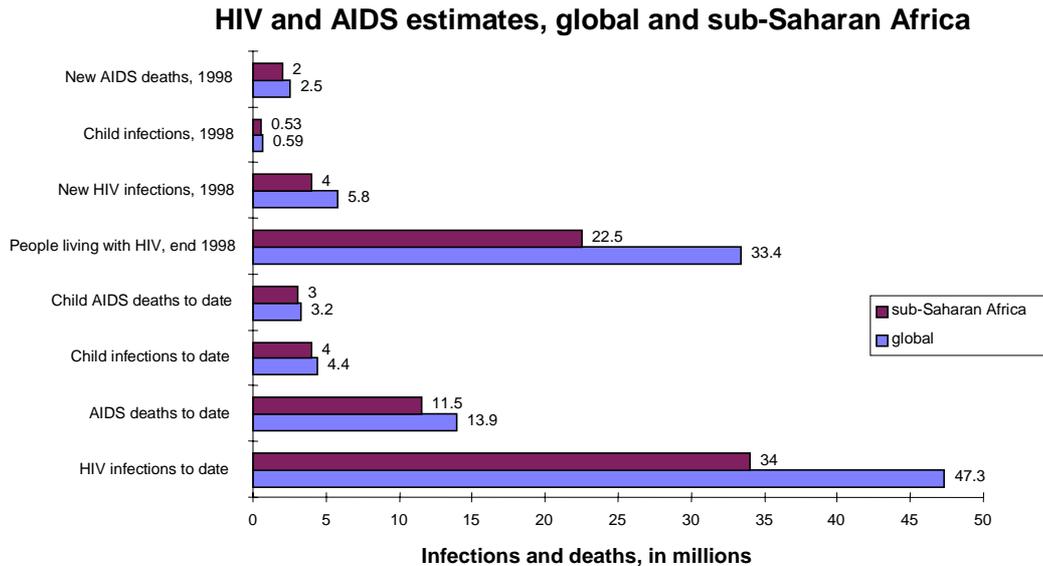
Africa, the global epicentre, continues to dwarf the rest of the world on the AIDS balance sheet. Since the start of the epidemic, 83% of all AIDS deaths so far have been in the region. Among children under 15, Africa's share of new 1998 infections was 9 out of 10. At least 95% of all AIDS orphans have been African.¹ Yet only a tenth of the world's population lives in Africa south of the Sahara.

The sheer number of Africans affected by the epidemic is overwhelming. Since HIV began spreading, an estimated 34 million people living in sub-Saharan Africa have been infected with the virus. Some 11.5 million of those people have already died, a quarter of them children. In the course of 1998, AIDS will have been responsible for an estimated 2 million African deaths—5500 funerals a day. And despite the scale of death, today there are more Africans living with HIV than ever before: 21.5 million adults and a further 1 million children.

While no country in Africa has escaped the virus, some are far more severely affected than others. The bulk of new infections continue to be concentrated in East and especially in Southern Africa.

The southern part of the African continent holds the majority of the world's hard-hit countries. In Botswana, Namibia, Swaziland and Zimbabwe, current estimates show that between 20% and 26% of people aged 15–49 are living with HIV or AIDS. South Africa, which trailed behind some of its neighbours in HIV infection levels at the start of the 1990s, is unfortunately catching up fast: one in seven new infections on the continent this year are believed to be in this one country. Zimbabwe is especially hard-hit. There are 25 surveillance sites in the country where blood taken from pregnant women is tested anonymously as a way of tracking HIV infection. The most recent data, from 1997, show that in only 2 of these sites did HIV prevalence remain below 10%. In the remaining 23 sites, some 20–50% of all pregnant women were found to be infected. At least one-third of these women are likely to pass the infection on to their baby.

¹ UNAIDS defines AIDS orphans as people who lost their mother or both their parents to AIDS when they were under the age of 15.



Other areas of the continent are far from immune. One in ten adults or more are HIV-infected in Central African Republic, Côte d'Ivoire, Djibouti and Kenya. In general, however, West Africa is less affected by HIV than Southern or East Africa, and some countries in Central Africa have also seen HIV remain relatively stable. Early and sustained prevention efforts can be credited with these lower rates in some cases—Senegal provides a good example. But elsewhere, where far less has been done to encourage safer sex, the reasons for the relative stability remain obscure. Research is under way to explain the differences between epidemics in various countries. These studies are looking into factors that may play some role, such as patterns of sexual networking, levels of condom use with different partners, and treatment of other sexually transmitted diseases (STDs), which if left untreated make it easier for HIV to pass through sexual intercourse.

Increasingly, the spotlight is on the spread of HIV through the **Asian continent**, especially in South Asia and East Asia. While rates remain low relative to some other regions, well over 7 million Asians are already infected and HIV is clearly beginning to spread in earnest through the vast populations of India and China.

India provides an interesting example of the shifting patterns of HIV.

- Until recently, it was commonly assumed that HIV infection in the world's second most populous nation was concentrated in urban sex workers and their clients and in drug injectors living in a few states. The last round of sentinel surveillance in antenatal clinics shows that in at least in five states, more than 1% of pregnant women in urban areas are now infected.
- India's rural areas—home to 73% of the country's 930 million people—were thought to be relatively spared by the epidemic. Again, new studies show that at least in some areas, HIV has become worryingly common in villages as well as cities. A recent survey of randomly selected households in Tamil Nadu found that 2.1% of the adult population living in the countryside had HIV, as compared with 0.7% of the urban population. For this small state, with its population of 25 million, the study findings suggest that there are close to half a million people already infected with HIV in Tamil Nadu. Considering that nearly 10% of the people surveyed had gonorrhoea, syphilis or another sexually transmitted disease, HIV clearly has fertile ground for further spread.

Regional HIV/AIDS statistics and features, December 1998

Region	Epidemic started	Adults & children living with HIV/AIDS	Adults & children newly infected with HIV	Adult prevalence rate ²	Percent of HIV-positive adults who are women	Main mode(s) of transmission ³ for adults living with HIV/AIDS
Sub-Saharan Africa	late '70s - early '80s	22.5 million	4.0 million	8.0%	50%	Hetero
North Africa & Middle East	late '80s	210 000	19 000	0.13%	20%	IDU, Hetero
South & South-East Asia	late '80s	6.7 million	1.2 million	0.69%	25%	Hetero
East Asia & Pacific	late '80s	560 000	200 000	0.068%	15%	IDU, Hetero, MSM
Latin America	late '70s - early '80s	1.4 million	160 000	0.57%	20%	MSM, IDU, Hetero
Caribbean	late '70s - early '80s	330 000	45 000	1.96%	35%	Hetero, MSM
Eastern Europe & Central Asia	early '90s	270 000	80 000	0.14%	20%	IDU, MSM
Western Europe	late '70s - early '80s	500 000	30 000	0.25%	20%	MSM, IDU
North America	late '70s - early '80s	890 000	44 000	0.56%	20%	MSM, IDU, Hetero
Australia & New Zealand	late '70s - early '80s	12 000	600	0.1%	5%	MSM, IDU
TOTAL		33.4 million	5.8 million	1.1%	43%	

- The virus is firmly embedded in the general population, among women whose only risk behaviour is having sex with their own husbands. In a study of nearly 400 women attending STD clinics in Pune, 93% were married and 91% had never had sex with anyone but their husband. All of these women were infected with a sexually transmitted disease, and a shocking 13.6% of them tested positive for HIV.

In **Eastern Europe** and in **Latin America and the Caribbean**, infections are concentrated in marginalized groups though clearly not limited to them.

In Latin America the pattern of HIV spread is much the same as in industrialized countries. Men who have unprotected sex with other men and drug injectors who share needles are the focal points of infection. In Mexico studies suggest that up to 30% of men who have sex with men may be infected; among drug injectors in Argentina and Brazil the proportion may be close to half. While transmission through sex between men and women is on the rise, especially in Brazil, heterosexual HIV spread is especially prominent in the Caribbean. Prevalence rates of 8% among pregnant women have been reported from Haiti and one surveillance site in the Dominican Republic.

HIV continues to gallop through drug-injecting communities in **Eastern Europe** and **Central Asia**. A region which until the mid-1990s appeared to have been spared the worst of the epidemic, it now holds an estimated 270 000 people living with HIV. For the moment Ukraine remains the worst-affected country, though the Russian Federation, Belarus and Moldova have all registered enormous increases in the past few years. With HIV gaining new footholds as it penetrates new

² The proportion of adults (15 to 49 years of age) living with HIV/AIDS in 1998, using 1997 population numbers.

³ MSM (sexual transmission among men who have sex with men), IDU (transmission through injecting drug use), Hetero (heterosexual transmission).

drug-user communities, the potential for continued spread through drugs and sex is undeniable given the known overlap between drug-injecting and sex-worker populations and the dramatic rises in other STDs. In the Russian Federation, for example, syphilis rates have shot up from around 10 cases per 100 000 people in the late 1980s to over 260 cases per 100 000 a decade later.

In **North America** and **Western Europe**, new combinations of anti-HIV drugs continue to reduce AIDS deaths significantly. For example, recently-published figures show that in 1997 the death rate for AIDS in the United States was the lowest in a decade—almost two-thirds below rates recorded just two years earlier, before combination therapy came into widespread use. However, because new infections continue to occur while antiretroviral drug cocktails keep already-infected people alive, the proportion of the population living with HIV has actually grown. This obviously increases the demands for care. In a number of less obvious ways, it adds to countries' prevention challenges.

During 1998, North America and Western Europe recorded no progress in reducing the number of new infections. The early dramatic rises in HIV were successfully reversed by the mid-to-late 1980s thanks to prevention campaigns that raised condom use among gay men from virtually zero to well over 50%. But over the last decade, the rate of new infections has remained stable instead of continuing to decrease. During 1998 alone, nearly 75 000 people became infected with HIV, bringing the total number of North Americans and Western Europeans living with HIV to almost 1.4 million.

Clearly, the epidemic is no longer out of control in these countries. Just as clearly, it has not been stopped. And at this stage the prevention challenges are greater than ever. One reason is that prevention efforts have already reached the easier-to-reach groups, such as the largely well-educated and well-organized white gay communities. Another reason is that HIV infections are increasingly concentrated in the poorer sectors of the population. In the USA, to take one example, HIV has become a disproportionate threat to US citizens of African origin. Although African-Americans represent only 13% of the total US population, they bear an undue share of American poverty, underemployment and inadequate health care access. African-Americans are now more than 8 times as likely as whites to have HIV. According to the Centers for Disease Control and Prevention (CDC), among black males national HIV prevalence is estimated to have reached 2% and AIDS has become the leading killer in the 25–44 age group. For black women in the same age group, AIDS takes second place as cause of death. The US administration has just announced a new \$156 million federal effort for minority communities to help curb HIV spread through drug injecting and sex, and to help ensure access to antiretroviral drug therapy for those already living with HIV.

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Further details about regional patterns of HIV infection, together with end-1997 estimates of HIV infection and AIDS deaths for 170 individual countries, can be found in the UNAIDS/WHO publication *Report on the global HIV/AIDS epidemic—June 1998*.⁴ These country-specific estimates are the most recent ones available.

⁴ The report is available on the Internet at <http://www.unaids.org/unaids/document/epidemio/june98/global%5Freport/index.html>

A health crisis and beyond

□ Invisible no longer

For many years, AIDS was referred to as "the invisible epidemic". HIV makes its silent way through a population for many years before infections develop into symptomatic AIDS and become a cause of recurring illness and, finally, death. The virus thus spread stealthily for years before AIDS deaths were registered in any significant numbers.

In industrialized countries AIDS activists succeeded in raising the profile of the epidemic early on. But in the developing world where most men and women with HIV live, it is only now, two decades after the virus first started spreading, that the repercussions of AIDS are stripping off its cloak of invisibility.

In countries with mature epidemics—Uganda in East Africa, Zambia and Zimbabwe in Southern Africa, for example—AIDS is leaving highly-visible damage in its wake. Some doctors report that three-quarters of beds on hospital paediatric wards are occupied by children ill from HIV. Millions of adults have died. Most have left behind orphaned children. Many have left surviving partners who are infected and in need of care. Their families struggle to find money to pay for their funerals, and their employers must now train other staff to replace them.

□ Wiping out the gains of development

Together, the epidemic's visible and less-visible consequences constitute an urgent and massive threat to development.

Life expectancy crumbles

Life expectancy at birth is one of the key measures that policy-makers look at to assess human development. Because of the extra deaths from AIDS in children and young adults, this indicator is giving off alarm signals. According to a just-released report prepared by the United Nations Population Division in collaboration with UNAIDS and WHO, the epidemic will wipe out precious development gains by slashing life expectancy.

The impact on life expectancy is proportional to the severity of the local epidemic. In Botswana, for example, where more than 25% of adults are infected, children born early next decade can expect to live just past their 40th birthday. Had AIDS not been in the picture, they could have expected to live to the age of 70. Not surprisingly, between 1996 and 1997 Botswana dropped 26 places down the Human Development Index, a ranking of countries that takes into account wealth, literacy and life expectancy.

Taking the nine countries with an adult HIV prevalence of 10% or more (Botswana, Kenya, Malawi, Mozambique, Namibia, Rwanda, South Africa, Zambia and Zimbabwe), calculations show that AIDS will on average cost them 17 years of life expectancy. Instead of rising and reaching 64 years by 2010–2015, a gain which would be expected in the absence of AIDS, life expectancy will regress on average to 47 years.

Deteriorating child survival

The dismal decline in life expectancy is due not only to deaths of adults—most of them young or in early middle age—but also to child deaths. HIV is contributing substantially to rising child mortality rates in many areas of sub-Saharan Africa, reversing years of hard-won gains in child survival.

By 2005–2010, for example, 61 of every 1000 infants born in South Africa are expected to die before the age of one year. In the absence of AIDS, infant mortality would have been as low as 38 per 1000. With AIDS in the picture, the infant mortality rate in Namibia is projected to be 72 per 1000; without the epidemic the country could have expected a far lower rate of 45 per 1000.

Children on the brink

Zimbabwe offers a frightening window onto orphanhood, another aspect of the epidemic's development impact. In this nation, where over a quarter of the 5.5 million adults are HIV-infected, AIDS is already pushing hundreds of thousands of children to the brink.

The government estimates that in two years' time 2400 Zimbabweans a week will be dying of AIDS. Most of those deaths will be in adults, and they will be concentrated in the young adult ages when people are building up their families. What is more, they may be disproportionately concentrated among single women whose death would leave a child with no parent at all: one recent study in a farming area showed that single mothers, many of them widowed by AIDS, were twice as likely to be HIV-infected as married women.

As early as 1992, a study in Zimbabwe's third largest city, Mutare, recorded that over 10% of children in the study area were orphaned, and that nearly one household in five had taken in orphans. By 1995, an enumeration in the same area showed that the proportion of children who were orphaned had grown to nearly 15%.

The number of children in need of care is rising just as AIDS is cutting into the number of intact families able to provide such care. Some 45% of those caring for orphans are grandparents; often they have no income of their own, and there is a limit to how many children they can take on without outside help. One orphan-support programme reports helping an 80-year-old grandmother who lives with 12 children in a single room. Another has received a request for help from a widower with 9 dependants who has just inherited another 3 grandchildren to care for. A study of households headed by adolescents and children (some as young as 11) showed that while the overwhelming majority had lost both parents, most did have surviving relatives. However, in 88% of those cases, the relatives reported that they did not want to care for the orphans.

Children themselves are beginning to worry about orphanhood and to recognize the importance of supporting needy children. A majority of children interviewed in one study said that if orphans' needs were not met they would become delinquent. Many said the children would drift into prostitution and onto the streets. They also worried about abuse and exploitation of orphans by relatives. With reason. Reports of sexual abuse of girls have risen rapidly in recent years in Zimbabwe, prompting the establishment of a special clinic at a major Harare hospital and an initiative to promote child-friendly courts. In a single rural district of Zimbabwe one study recorded nearly 400 cases of child sexual abuse, at least a quarter of them girls under the age of 12, and at least 10% of them orphans.

AIDS and business: the bottom line suffers

The onslaught of AIDS is denting the prospects for economic development too. In the hard-hit countries of Africa, the epidemic is decimating a limited pool of skilled workers and managers and eating away at the economy. With many economies in the region in flux, it is hard to determine exactly what the impact of HIV is on national economies as a whole. However, it is clear that businesses are already beginning to suffer.

In Zimbabwe, for instance, life insurance premiums quadrupled in just two years because of AIDS deaths. Some companies say that their health bills have doubled. Several report that AIDS costs absorb as much as one-fifth of company earnings. In Tanzania and Zambia, large companies have reported that AIDS illness and death cost more than their total profits for the year. In Botswana, companies estimate that AIDS-related costs will soar from under 1% of the wage bill now to 5% in six years' time, because of the rapid rise in infection in the last few years.

HIV—a threat to the world's young people

This year's World AIDS Campaign—"Young people: Force for change"—was prompted in part by the epidemic's threat to those under 25 years old. Young people are disproportionately affected by HIV and AIDS. Around half of new HIV infections are in people aged 15–24, the range in which most people start their sexual lives. In 1998, nearly 3 million young people became infected with the virus, equivalent to more than five young men and women every minute of the day, every day of the year. And as HIV rates rise in the general population, new infections are increasingly concentrated in the younger age groups. A recent study in Malawi, for instance, found the annual rate of new HIV infections to be as high as 6% in teenage women, compared with under 1% in women over 35.

But the Campaign also highlights the power of young people. The future of the HIV epidemic lies in their hands. The behaviours they adopt now and those they maintain throughout their sexual lives will determine the course of the epidemic for decades to come. Young people will continue to learn from one another, but their behaviour will depend largely on the information, skills and services that the current generation of adults choose to equip their children with.

Research shows that young people adopt safer sexual behaviour provided they have the information, skills and means to do so. In Senegal, 40% of women under 25 and 65% of men used condoms with non-regular partners in 1997, compared with less than 5% for both sexes at the start of the decade. In fact, given the chance, young people are more likely to protect themselves than adults. In Chile, a 1996 study showed that condom use is highest among 15–18-year-olds, and similar patterns have been found in Brazil and Mexico.

Safer sexual behaviour is becoming the norm among young people in developed countries, too. In several studies in Western Europe, some 60% of young people are now using condoms the very first time they ever have sex—a six-fold increase since the early 1990s. Among young people in the United States, abstinence is becoming more common and condom use is rising significantly. Among high school students in 1997, 63% of boys reported that they had used a condom the last time they had sex, up from 55% six years earlier. For girls, condom use rose to 51% from 38% over the same period.

Young escapees on Brazil's streets

Brazil is a country of contrasts, of great wealth and of crushing poverty from which young people find it hard to escape. Around a third of the 31 million Brazilians aged between 15 and 24 come from families living below the poverty line. Only one adolescent in 12 completes high school, and many of the rest—half of the boys and as many as three-quarters of the girls—remain jobless. Across the country, some two million people aged 15–19 neither work nor go to school.

Undereducated and underemployed, these young people are easy targets for adults selling drugs or buying sex. In fact, they are easy targets for adults wanting sex but unwilling to pay for it. Research in São Paulo, Brazil's largest city, indicates that one girl in five has been sexually abused in her own home or in the surrounding community.

Girls who have lived through sexual abuse are more likely than others to drift onto the streets, into prostitution, and onto the waiting list for HIV infection. In Brazil's impoverished northeast, communities are trying to head off this danger by identifying girls who are at risk of violence or abuse in the home. These girls are invited to join support groups that teach them skills that will help them make a living as well as defend themselves against violence and unwanted sex. Of 850 girls who have been helped by one such programme, so far there are no reports of any of them ending up in prostitution or in a street gang. With HIV rates running as high as 17% among poorer sex workers in some cities, supporting young women with alternatives to a life on the streets is an important way of protecting them from HIV infection.

However, much remains to be done. In the USA, for example, 3 million adolescents a year contract a sexually transmitted disease, a clear indicator of unsafe sex. In developing countries, where the likelihood of encountering a partner infected with a sexually transmitted disease is high, STD infection rates in young people are often much higher.

Young people are vulnerable to HIV for many reasons—they do not know about HIV or STDs, or they know about them but do not know how to avoid infection. Those with the information may be unable to get hold of condoms, or may feel unable to discuss condom use with their partner. Young people, and especially girls, may be unable to defend themselves against unwanted sex. In the Democratic Republic of Congo, nearly a third of young women in a large study reported that they had been forced by their partners into first sex. Similar statistics on coerced sex are reported from many parts of the world.

What is more, adolescence is a time when many people experiment—not only with different forms of sex but with drugs. Apart from the HIV risk connected with needle-sharing, it is known that alcohol and other drugs can affect sexual behaviour and increase young people's risk of becoming infected with HIV or the other STDs. Excessive drinking, for example, diminishes inhibitions, increases aggression, diminishes the ability to use important information learnt about AIDS prevention, and impairs the capacity to make decisions about protection.

Whether or not young people's drug-using habits change over time, the consequences of risk behaviour at this age can be irrevocable, as can be seen in data from places as far apart as Asia and Europe. In Myanmar over 60% of teenage drug injectors are infected with HIV—indeed teenagers are the *only* group of drug users in which HIV prevalence has continued to climb steadily since the early 1990s. In Belarus, over four-fifths of registered HIV infections are in drug users in their teens and twenties. In Lithuania, over half of HIV infections registered in injecting drug users are in people under 25. Regardless of whether these young people continue their drug use or abstain, they will carry HIV with them till their premature death.

What drives the epidemic?

The AIDS epidemic has unfolded very differently in different parts of the world, and among different populations. It is not always clear why HIV infection takes off in some places while rates in neighbouring countries remain stable over many years. However, there are several factors which clearly influence the shape of the epidemic. People on the move—escaping from abuse, or even just leaving their families in search of work—are especially likely to be exposed to infection. People whose daily existence is stressful and dangerous may not care about the long-term risks posed by HIV. People in conflict and refugee situations may have little control over their exposure to HIV, indeed even to sex. And the stigma that still attaches to HIV hinders people from protecting themselves and others from infection, or from seeking out care and support.

The different faces of AIDS can be seen in the following country situations, which illustrate some of the factors driving the epidemic.

□ Driven by loneliness: Migrant labourers in South Africa

The world's population is becoming more and more mobile. People are on the move for all sorts of reasons, but probably the most common reason for people to leave their homes (and often their families) is to seek work.

Nowhere is this more true than in South Africa. Thriving mining industries attract workers not just from rural areas of the nation, but from neighbouring economies where job opportunities are limited and wages are lower. It is hard to know how many people move into and around South Africa in search of work. More than a decade ago 2.5 million South Africans were registered as migrant workers, and that number is likely to have increased. This year, over half a million people will join the country's growing urban population.

Carltonville, at the heart of South Africa's gold mining industry, is home to 88 000 mine workers, 60% of them migrants from other parts of South Africa or from nearby countries: Lesotho, Malawi and Mozambique. With the miners come wages. Some US\$ 18 million is paid out to workers every month in Carltonville. With the wages come all manner of goods and services, including, of course, drugs and sex. Some 400–500 sex workers service the Carltonville mines. And with drugs and sex comes HIV.

The city has become the HIV hot spot of Gauteng Province. Around 22% of adults in Carltonville are infected with HIV, a rate over two-thirds higher than the national average. A small survey of sex workers found HIV in three-quarters of them, while one mineworker in five is thought to be infected. That count is probably an underestimate because it does not include the men who have dropped out of the mines because they are too sick to work.

Why are infection levels so high in miners? Most men live lonely lives in single-sex dormitories, often hundreds of miles from their families. They also have a dangerous job. A gold-miner in South Africa has a one in forty chance of being killed by a rock-fall underground and a one in three chance of serious injury. Compared with that, the dangers associated with a long, slow infection like HIV might seem remote.

Of course, the HIV dangers are not just to the mineworkers themselves, or to their sex partners around the mining sites. Most migrant workers return home periodically. Increasingly, they are

carrying infection back to their wives and their home communities. In Hlabisa, a rural district of KwaZulu/Natal, some 60% of households are estimated to have one or more male migrants. One study here found that sex outside the primary relationship is accepted as almost inevitable in separated families, for both men and women. In this community, HIV rates are rising dramatically, with the prevalence among pregnant women shooting up to 26% in 1997 from 4% just five years earlier. A study in 1995 found that of women whose partners were at home less than a third of the time, 13% were infected. No infections were recorded among women who spent more than two-thirds of the time with their husbands or regular partners.

□ **Driven by conflict: Survivors in Rwanda**

Before the political turmoil of the mid-1990s, more studies had been done to understand the HIV epidemic in Rwanda than in most developing countries. The pattern of infection recorded there was a familiar one: high rates in urban areas (more than 10% of pregnant women infected) but far lower rates in the rural areas that were home to the bulk of the population (just over 1%).

The political difficulties of recent years not only interrupted HIV surveillance; they changed the shape of the epidemic. By 1997, when a well-designed survey of HIV was carried out in the general population, little difference remained between urban and rural rates. Both were just over 11%. Among teenagers, infection was actually higher in rural areas than in cities. And it was appallingly high at the youngest ages: among 12, 13 and 14 year olds, a full 4% were already HIV-infected.

Many of the changes can be ascribed to the huge population movements during and after the years of ethnic conflict. Nearly three-quarters of the 4700 people surveyed in 1997 had lived elsewhere in the preceding three years—an astonishingly high turnover for this largely rural country. Migrants who had spent the years of conflict outside Rwanda had lower rates of HIV infection than those who endured the troubles inside the country. Most of these people are recently returned from Uganda and Tanzania, countries where HIV prevention campaigns are relatively strong.

HIV prevalence among people who said they had spent the conflict years in refugee camps was 8.5%. Most of these people had fled from rural areas where pre-conflict HIV prevalence was just 1.3%. That suggests a six-fold increase in HIV infection among refugees in the camps. Overcrowding, violence, rape, despair and the need to sell or give away sex to survive are all likely to have contributed to this huge leap in infection.

Wars and armed conflicts generate fertile conditions for the spread of HIV. Rape—inside or outside refugee camps—has doubtless played a part in spreading the virus in Rwanda. Some 3.2% of women surveyed reported being raped, over half of them during the conflict itself. Two-fifths of them were teenagers. Among women who had been raped 17% were HIV-positive, compared with 11% of those who had not. Women who reported rape were three times as likely as those who were not raped to have suffered from genital sores, another STD.

□ **Driven by danger: Soldiers in Cambodia**

Decades of political turmoil and civil war have left much of Cambodia's infrastructure in tatters. Education, health care, the transport network—all are being rebuilt more or less from scratch as peace gradually returns to the country. In the meantime Cambodian soldiers, many of them teenagers with no schooling, continue to battle Khmer Rouge rebels in the northwest of the country. For them, risk is a way of life, whether from combat, malaria or land mines.

It is understandable that many of these young men view sex as a source of comfort, not of special danger. The risk of HIV infection, which will not in any case kill them for at least a decade, can seem negligible. "The regular troops are there at the front because they have no education and nothing to eat at home," says a military doctor. "They have no idea of the future. They first think day by day."

But the HIV risks are not negligible at all. Behavioural research shows that over a third of Cambodian soldiers have visited a brothel just in the last month, including many of the married men in the army and the police force who are separated for long periods from their wives and children. Some 43% of sex workers tested positive in Cambodia's brothels in 1998, while HIV prevalence in the military was around 7%.

One in five soldiers say that besides visiting prostitutes, they also have girlfriends—often waitresses or "beer girls" who promote various brands of the beverage in restaurants or nightclubs. Both the beer girls and their soldier partners make a distinction between their relationship and an act of commercial sex in a brothel, for condom use with these girlfriends is abysmally low—just 8%. Yet over 20% of beer girls tested positive for HIV in 1998.

To decrease risky behaviour and new infections, Cambodia's military has trained a number of soldiers about HIV and other STDs and given them support in spreading the prevention message to other soldiers. This system, known as peer education, works well in the military because, as one officer said, "Soldiers live and fight and die together. They have the same problems and the same habits. They are not intellectuals but are very pragmatic and can follow others' example".

While it is still early days in the peer education programme, there is already evidence that Cambodian soldiers are reducing their risk of HIV infection. Condom use by soldiers in brothels is now 63%—16% more than in 1997—and visits to brothels in the month preceding the survey fell by 40%, a remarkable change in a single year.

□ Driven by stigma: Shame, silence and denial

It is hard to measure stigma—people with HIV see it in a scornful look in the marketplace, in the refusal of family and friends to visit, care for or even touch them, in the maltreatment of their children or the loss of their job on a flimsy pretext. But stigma is a very real obstacle to both prevention and care. In many of the hardest-hit countries, government officials and ordinary citizens—including those most affected by the epidemic—often continue to look the other way because of the rejection, discrimination and shame attached to AIDS.

Stigma and the fear it engenders both fuel the spread of HIV, since those with risky behaviour in the past may be reluctant to change that behaviour in case the change is interpreted as an admission of infection. Fear of acknowledging HIV infection can stop a married man from raising the subject of condom use with his wife. Fear of advertising her HIV status may prevent an infected woman from giving her baby replacement feeding to avoid transmitting the virus through breastmilk.

The stigma attached to HIV affects both sexes. However, the consequences may be more severe for women, who risk being beaten and even thrown out of the house by their husband if their status is revealed. This is true even when the husband was the source of the woman's infection. An HIV-infected woman may be blamed for the death of her children, and deprived of care.

In places where shame and stigma are the rule, many people simply do not want to know if they are HIV-infected, even when counselling and testing are offered. And the small minority of people who know their HIV status rarely share it with others, even in confidential support groups. In Zimbabwe's city of Mutare, for example, surveillance data show that close to 40% of pregnant women are HIV-infected, and infection levels in men are likely to be similarly high. There are probably 30 000 adults living with HIV in Mutare. Yet there is just one HIV support group in the city, and it has just 70 members. Many more people know or fear they are HIV infected: some will find support in their partners or families but many will struggle alone with the implications of their infection.

“HIV/AIDS is among us”

South Africa, which in 1998 accounted for nearly 1 in 10 of the new HIV infections estimated to have occurred worldwide, is the latest country in the ranks of those seeking to break through the shroud of stigma and shine a light on the human disaster of AIDS.

"For too long we have closed our eyes as a nation, hoping the truth was not so real," South African Deputy President Thabo Mbeki told South Africans in October 1998. "For many years, we have allowed the human immunodeficiency virus to spread... At times we did not know that we were burying people who had died from AIDS. At other times we knew, but chose to remain silent.

"[Now] we face the danger that half of our youth will not reach adulthood. Their education will be wasted," Mbeki said. "The economy will shrink. There will be a large number of sick people whom the healthy will not be able to maintain. Our dreams as a people will be shattered."

Appealing to South Africans to change "the way we live and how we love", Mbeki called for abstinence, fidelity and condom use, and urged a caring, non-discriminatory attitude to those already infected with or affected by HIV. The speech was nationally televised, and the whole nation was urged to stop work to listen to it. Many private companies gave workers a day off. Flags flew at half mast on government buildings and religious leaders, youth, trade unionists, women's organizations and business leaders committed themselves to the President's Partnership Against AIDS.

Silence can continue to reign even when people with HIV are ill and dying. Because AIDS is just the name for a cluster of diseases that immunodeficient people develop, patients and their carers can choose to view the illness as just tuberculosis, or diarrhoea, or pneumonia. An example from southern Africa is telling. In one study of home-based care schemes, fewer than 1 in 10 people who were caring for HIV-infected patients at home acknowledged that their charges were suffering from AIDS. Patients themselves were only slightly more likely to acknowledge their status, and several told researchers that they had not disclosed their HIV-positivity to anyone, including the person caring for them. This self-imposed silence is hard on the patient. It can also be hard on the carers, particularly when they are children or adolescents. If they do not know that their parent or loved one is suffering from a fatal disease, they cannot prepare themselves for the death or acknowledge that it will inevitably come no matter how much effort they put into care. So carers risk compounding their feelings of grief and loss with feelings of failure.

In some countries, leaders have spoken out loudly, clearly and repeatedly about AIDS, have sought to demystify it, and have encouraged discussion about safe sex everywhere from the classroom to the boardroom. It is in such countries—of which Uganda is probably the best-known example in the developing world—that most progress has been made not just in putting a brake on new infections but in ensuring the well-being of those people who are already living with the virus.

Note about UNAIDS/WHO estimates

The estimates concerning HIV and AIDS in this document are based on the information available to UNAIDS and WHO at the current time. They are provisional. WHO and UNAIDS, together with experts from national AIDS programmes and research institutions, keep these estimates under constant review with a view to updating them as improved knowledge about the epidemic becomes available and as advances are made in the methods used for deriving estimates.

For example, knowledge about the epidemic improves not only as better information becomes available about HIV spread (for example, through more representative sentinel surveillance), but also as more is learnt about the factors that help or hinder the spread of the virus (for example, the natural history of HIV infection in different parts of the world, the impact of HIV infection on fertility, and the effects of improved treatment). This improved knowledge together with methodological advances together provide the basis for updated estimates of HIV incidence, prevalence and mortality.

Because of these factors, the 1998 estimates cannot be directly compared with those for 1997 or earlier years, nor with those that may be published subsequently. While they are largely based on the country-specific models prepared for last year's estimates and published in the joint UNAIDS/WHO publication *Report on the global HIV/AIDS epidemic—June 1998*, the December 1998 estimates reflect upward or downward adjustments that were made for a number of countries in the light of updated information.

The purpose of publishing these estimates is to help governments, nongovernmental organizations and others who have a stake in bringing AIDS under control to gauge the status of the epidemic in their country and to monitor the effectiveness of the considerable efforts at prevention and care being made by all partners.

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End-1998 global estimates Adults and children

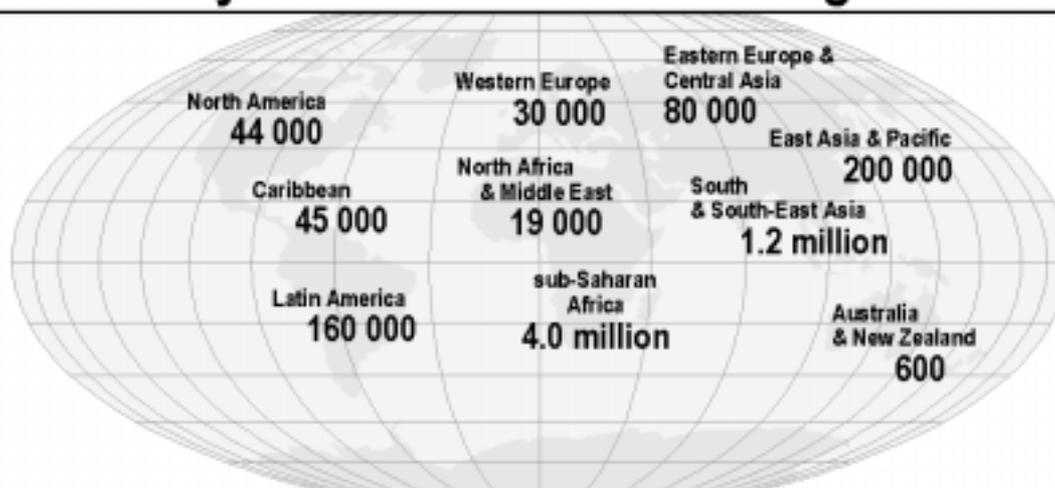
- People living with HIV/AIDS 33.4 million
- New HIV infections in 1998 5.8 million
- Deaths due to HIV/AIDS in 1998 2.5 million
- Cumulative number of deaths due to HIV/AIDS 13.9 million



MAD-EV 1998



Estimated number of adults and children newly infected with HIV during 1998



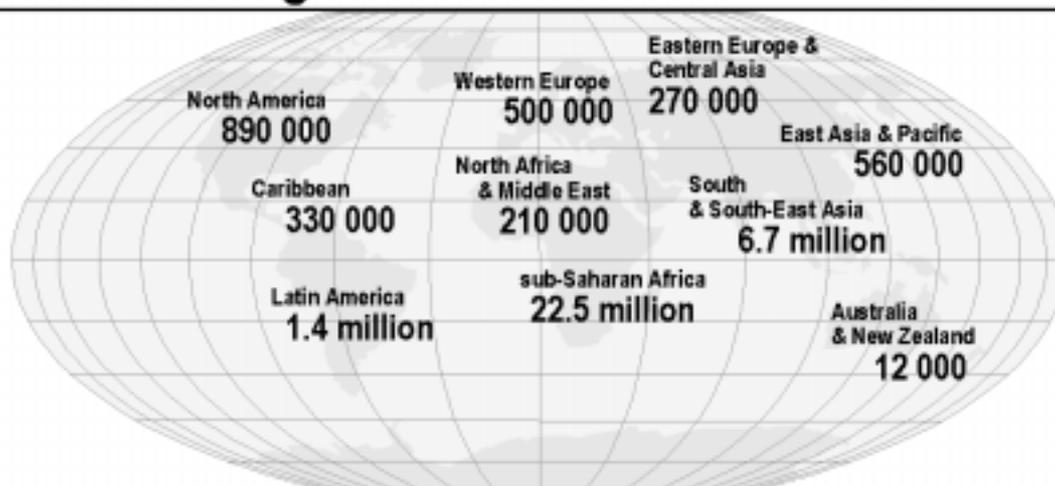
Total: 5.8 million



MAD-EV 1998



Adults and children estimated to be living with HIV/AIDS as of end 1998



Total: 33.4 million



MAD-EV 1998



Estimated number of new HIV infections in young people

- About 7 000 young people aged 10–24 get infected with HIV every day, that is five young persons every minute
- About 1.7 million young people in Africa get infected with HIV every year
- Close to 700 000 young people get infected with HIV every year in Asia and the Pacific



MAD-EV 1998

