AIDS into the 21st Century: Some Critical Considerations

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The story of AIDS in the 21st century is likely to be dominated by heterosexuals in Africa and injecting drug users around the world. HIV infection has persisted and grown because people do not like to recognise, much less talk about, the behaviours that spread the virus. Drug injection remains the leading cause of HIV infection in in the countries of the former Soviet Union, the northeastern states of India, the USA, Western Europe, China and parts of the Middle East. In Africa, where the overwhelming majority of infections occur during unprotected sex, a high proportion of girls are infected with HIV during their teens and before marriage. Industrialised countries responded with massive prevention campaigns, open discussion of the potential dangers of unprotected sex, and aggressive condom promotion. In the few developing countries that have taken similar action to contain the epidemic – Thailand, Uganda and Senegal - the initial leadership came from senior politicians. As HIV prevalence rises in a population, the chance of someone encountering an infected partner close to the beginning of their sexual life also rises. It is therefore crucial to reach people with appropriate preventative interventions before they first have sex. However, it is not realistic to expect political commitment to as sensitive a problem as AIDS from any government that has less than a wholehearted commitment to the basic health and welfare of its people. The first challenge in the fight against AIDS, as in the fight for development in general, is to support good government.

Keywords: HIV/AIDs, injection drug use, heterosexual transmission, condoms, needle exchange

VIRTUALLY unheard of two decades ago, AIDS is, at the turn of the century, one of the best known and most talked about diseases on the globe. As AIDS and the virus, HIV, that causes it were identified in one population after another in the 1980s, alarm bells began to ring around the world. What had first appeared to be a disease confined to certain well-defined populations such as gay men and haemophiliacs became a disease that threatened everyone, everywhere.

While the headlines continue to scream of a 'global pandemic', the developments of recent years actually suggest something rather different. Yes, HIV has reached every corner of the globe. Yes, it continues to spread disproportionately fast in marginalised populations in most countries. Yes, all populations should remain vigilant against it. But as the 20th century drew to a close, the 'global pandemic' was – in public health terms at any rate – looking more and more like two distinct epidemics, one global and one regional. Controversial as it may be to say so, the story of AIDS in the 21st century is likely to be dominated by heterosexuals in Africa and injecting drug users around the world.

At the end of 1999, WHO and UNAIDS estimated that 33.5 million people around the world were living with HIV and AIDS (see Figure 1). Half that many again have already died of AIDS since the epidemic first emerged in the late 1970s, and the virus continues its relentless march. On average, over 15,000 people were infected every day of 1999, according to WHO/UNAIDS estimates.[1]

Most of the new HIV infections were in sub-Saharan Africa. In 1999, seven out of 10 new HIV infections in adults and nine out of 10 new HIV infections in children were estimated to be in the 40 or so countries of Africa that lie south of the

Figure 1. Estimated adults and children living with HIV, end of 1999[1]

Sub-Saharan Africa	23,330,000
South and Southeast Asia	6,000,000
Latin America	1,300,000
North America	920,000
East Asia and Pacific	530,000
Western Europe	520,000
Caribbean	360,000
Eastern Europe and Central Asia	360,000
North Africa/Middle East	220,000
Australia/New Zealand	12,000

Sahara. The African situation is discussed at some length after a brief review of other HIV 'hot-spots'.

India: an opportunity to pre-empt a national catastrophe

India, a country with one-and-a-half times as many people as all of Africa put together, led the rest of the world in new infections. The debate about the true magnitude of the HIV epidemic in India continues to rage. Activists within the country say 10 million are already infected and throw around projections of up to 50 million infections in a few years' time. The national government, which has invested heavily in improving surveillance systems for HIV in the last two years, says the true total is unlikely to be more than four or five million currently living with HIV.[2] The government hopes to prove those forecasting explosive growth wrong by investing over US$130 million in HIV and STD prevention and care activities over the next five years.[3]

The key to epidemic growth in India lies in patterns of sexual networking. Much of the spread of the virus in South Asia has been through unprotected sex between men and the sex workers they patronise. Many of these men have carried HIV back to their wives. The potential for an epidemic on the scale seen in many countries of East and southern Africa will be determined by the extent to which these wives also have sex with other men. A substantial proportion of men are known to buy sex from professional sex workers, but available data suggest that premarital and extramarital sex among women in the general population is extremely limited. If this is true, the potential for an overwhelming AIDS epidemic will also be limited.

Of course, because of its vast population, even small rises in HIV prevalence in India will translate into huge absolute numbers, and the country would do well to plan to meet the care needs of its infected population. It would also do well to increase prevention efforts, especially in the light of successes recorded in the southern state of Tamil Nadu, which has mounted the most creative and best organised of India's state-level responses to the threat of HIV.[4] A huge campaign based around the national passion, cricket, and encouraging men to choose safer sex seems to be paying off. The proportion of men using condoms with their last casual sex partner rose dramatically in the two years since the campaign was launched: from 1996-1998 condom use in last sexual encounter rose among truck drivers from 44 to 66 per cent, and among factory workers from 17 to 50 per cent. The proportion of men reporting that they had sex with a sex worker in the previous year also fell, from 38 per cent to 25 per cent among truck drivers and from 7 per cent to 5 per cent among factory workers.[5]

AIDS drops off the agenda in industrialised countries

AIDS was first identified at the end of the 1970s, and first assumed massive importance among gay men in the USA and other industrialised countries. For a while, AIDS became the leading cause of death among men in certain age groups of the US population. The increasing proportion of heterosexually transmitted cases raised the spectre of the virus running riot through the general population. Most industrialised countries responded with massive prevention campaigns, both among groups with high risk behaviour such as gay men and among young heterosexuals. The potential dangers of unprotected sex were openly discussed, and condom use was aggressively promoted. The result: a dramatic decrease in risky sexual behaviour. In Switzerland, for example, just 8 per cent of respondents to a survey of sexual behaviour conducted in 1987, before the launch of a national AIDS prevention campaign, said they had used condoms with casual partners in the previous six months.

By 1994, this had reached 59 per cent. A survey in 1997 showed that three-quarters of all people who had recently acquired a new sexual partner used condoms with them from the very first sexual encounter.[6]

1995 marked a watershed for HIV in industrialised countries, when it was demonstrated that an expensive combination of antiretroviral drugs could put a brake on the progression from HIV infection to AIDS, and from AIDS to death. As large numbers of people began to take these therapies, the number of AIDS cases and of AIDS-related deaths dropped. In the USA, AIDS deaths fell by 42 per cent between 1996 and 1997, and by half that proportion again between 1997 and 1998.[7] In Western Europe, the fall in AIDS deaths was similar.[8] The slowing in the drop in AIDS deaths suggests that there may be limits to the 'miracles' wrought by antiretroviral therapy. While it is known that a significant proportion of people cannot tolerate the therapy and there is evidence that strains of HIV resistant to the therapy are emerging, no one is yet able to predict the long-term effect of these drugs on the course of the epidemic in countries rich enough to afford them.

Many public health professionals worry that the very existence of these life-sustaining drugs is breeding complacency in communities with high risk sexual behaviour and is making people lazy about maintaining safe sexual habits. A recent study in California tends to confirm these worries. Half of gay men reported they had had anal sex without using a condom in 1996/97, up from just one-third three years earlier, before antiretroviral therapy was available.[9]

Although activism in the gay community played a central role in putting HV on the national agenda in many industrialised countries, in truth it was the threat of the virus running rampant through the heterosexual population that really kept governments interested. As prevention campaigns achieve their aim and it becomes clear that there is not enough unprotected heterosexual activity with multiple partners to sustain a generalised HIV epidemic in most industrialised countries, AIDS has lost its scare value. New infections appear to be concentrated principally in more marginalised groups, especially among drug injectors and members of ethnic minorities. For the states that provided data on HIV cases, the US Centers for Disease Control report that 40 per cent of new infections among women are among drug or sexual partners of drug injectors in the year to June 1999. For both sexes combined, there were twice as many new HIV infections reported among black and Hispanic Americans as among white Americans.[7] Marginalised groups do not tend to be major sources of political support for mainstream governing parties, so AIDS has slipped down the political agenda in industrialised countries.

Interestingly, the advent of antiretroviral therapy has had the opposite effect in some of the countries of Latin America. In countries as diverse as Argentina, Mexico, Brazil and Uruguay, access to antiretroviral therapy for those infected with HIV has become a rallying point for AIDS activists. Some countries have made great strides in providing these therapies. Argentina, which provides combination antiretroviral therapy for everyone diagnosed as HIV positive, saw AIDS deaths fall by over 40 per cent between 1996 and 1998.[10] Brazil spent some US$300 million on therapy in 1999, providing drugs for close to 70,000 people. Brazil estimates that it pulled back nearly half of that amount in savings in hospital admission and treatment costs for HIV-related infections between 1997 and 1998.[11]

It is encouraging that some developing countries in Latin America are making such good progress in providing antiretroviral therapy to those living with HIV and AIDS. But it is quixotic to hope that African countries, with far higher proportions of adults infected and far lower incomes, will be able to follow suit. The average income per person per year in sub-Saharan Africa was US$503 in 1997 (and just US$308 if the giant economy of South Africa is excluded).[12] A course of combination antiretroviral therapy for one person for one year costs at least US$10,000. In several countries, between one-fifth and one-third of all adults are infected. Clearly, providing drugs for even a small fraction of these people would be a near-impossible task for many African economies.

Shooting up – HIV among drug users

The fastest growing HIV epidemics in the world at the close of the 20th century were in injecting drug users, principally in the countries of the former Soviet Union. This appears to be for two

reasons. First, HIV is only just being introduced into networks of drug users in these countries. Second, injecting drug use itself appears to be on the rise, so the network of people who might become infected is expanding.

Sharing drug-injecting equipment with an infected person is an extraordinarily efficient way of spreading HIV. Once HIV appears in a network of drug injectors who regularly share equipment, it can infect a majority of users in a very short time. In the North Indian state of Manipur, for example, surveys among drug injectors found virtually no HIV infection in 1988. By 1999, 60 per cent of those surveyed were infected with HIV and by 1992, prevalence was recorded at 80 per cent. One study calculated that a new drug injector sharing the average injecting behaviours of other drug users in Manipur would become infected with HIV in just 50 days.

Drug injection remains overwhelmingly the leading cause of HIV infection in the north-eastern states of India, as well as in the USA, Western Europe, China and parts of the Middle East.[13] In some countries, including Pakistan, Iran and China, drug injection itself seems to be on the increase. In China, for example, injecting drug use was previously concentrated in the mountainous southwest of the country, where heroin injection has recently gained ground from the previously traditional smoking of opium. Now, drug use is spreading to the heavily populated coastal areas of the southeast. A drug-injecting population has, for example, recently emerged in the city of Guangzhou, close to Hong Kong and home to over six million people. No HIV was recorded among drug injectors in Guangzhou at the start of 1998. A year later, 11 per cent of drug injectors surveyed tested HIV positive. Over half of injectors reported sharing needles, so this rate is likely to rise rapidly in the future.[14]

It is in the countries of the former Soviet Union that cause for concern is greatest. The earliest epidemics of HIV among drug injectors in the region were registered in Ukraine and in the Russian port city of Kaliningrad in the mid-1990s. By the end of the decade, HIV had found its way into drug-injecting populations as remote as Irkutsk in Siberia, and was spreading at an astounding rate through networks of drug injectors in many other major cities, including Moscow. Over 2,700 new cases of HIV were reported in Moscow between January and September of 1999, three times as many as in all previous years put together. Almost all of them were in drug injectors. In Russia as a whole, nearly 10,000 new cases of HIV were reported in the first three quarters of 1999, almost as many as in all previous years combined.[15] Authorities estimate that the true number of cases is many times higher than the number that are actually reported. Other cities such as St Petersburg are still relatively free of the virus, but high risk drug-injecting practices suggest that this situation will not last for long.

It is often assumed that an HIV epidemic among drug injectors will act as the seed for a generalised epidemic in the general population, automatically spreading to sexual partners and beyond. Drug injectors do frequently pass HIV on to their regular sex partners. In the Indian state of Manipur, where almost all drug injectors are men, some 6 per cent of the wives of drug injectors were infected with HIV in 1991. Five years later, 45 per cent of wives tested HIV positive, even though they did not themselves inject drugs.[16] But for a generalised epidemic to develop, these women have to go on to have unprotected sex with other men, infecting at least one partner other than their husband. There is no evidence that this next step is common.

The knock-on effect of HIV in drug injectors is likely to be larger among female addicts who support their drug purchases by selling sex. Available evidence would suggest that most women who both sell sex and inject drugs work in countries where condom use in commercial sex is high. While this remains to be confirmed it would, if true, limit the possibility of an HIV epidemic in drug users 'spilling over' into the general heterosexual population to any significant degree.

Why has HIV infection persisted and even grown in drug-using populations? Partly for the same reason that heterosexual transmission has persisted and grown in sub-Saharan Africa – because we do not like to recognise, much less to talk about, the behaviours that spread the virus.

It is known that easy access to sterile injecting equipment – including needle exchange programmes – can greatly reduce the spread of HIV among drug injectors. These programmes are especially effective if introduced on a large scale

early on in the epidemic, when not more than 5 per cent of drug users are infected with HIV. And yet many countries and cities with drug-injecting populations refuse to provide such services. No federal funding is available for needle exchange programmes in the USA, for example, even though the government-run Centers for Disease Control endorse their effectiveness.

Opponents of harm reduction programmes say that if you provide clean needles, you encourage people to inject drugs. It seems that the USA and many other governments are not prepared to argue differently just to protect the welfare of drug users. Interestingly, a similar argument is used to oppose condom promotion in many countries – promoting condoms is equated with promoting casual sex. In this case, Washington is less convinced, at least outside of its own borders. The US government is one of the single biggest funders of condom promotion programmes in Africa.

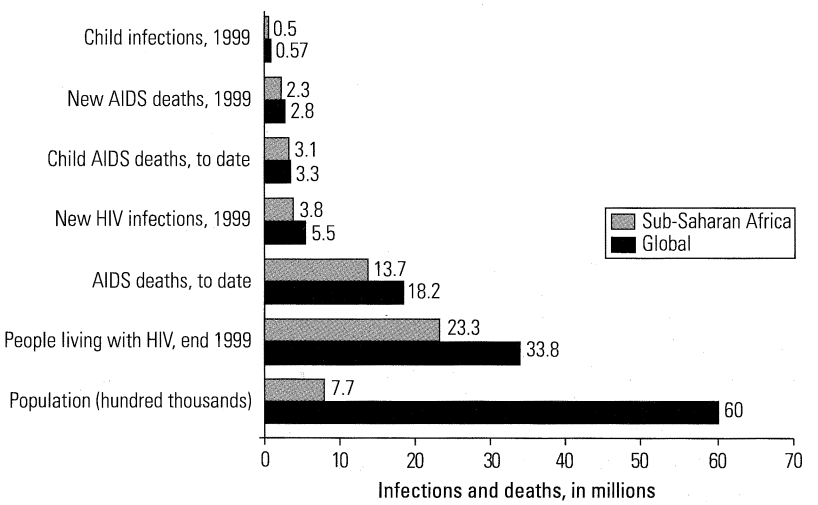
AIDS in Africa – the more we learn, the worse it seems

Although it is considered politically incorrect to say so, all the evidence points to the fact that AIDS was, by the end of its second decade, predominantly an African disease. The numbers illustrated in Figure 2 are well known but bear repeating. According to WHO/UNAIDS estimates, some 23.3 million people are currently living with HIV in Africa, 70 per cent of the world total. A further 70 per cent of those infected in 1999 live in Africa, and of new infections among children that proportion reaches 88 per cent. In the last year, the continent has lost over two million people to the disease, the equivalent of 20 passenger jets crashing every day, or four funerals every minute.

The overwhelming majority of these infections have taken place during unprotected sex. Most of the remaining infections are the indirect consequence of unprotected sex: women passing the virus on to their infants during pregnancy or breastfeeding.

The worst-affected countries are in southern Africa. It is estimated that close to one adult in five aged between 15 and 49 is currently infected with HIV in Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. In some of those countries the proportion infected is closer to one-quarter, and in all of them, the growth of the epidemic has been rapid. In South Africa, for example, levels of infection have risen roughly ten-fold in just the last six years. In most of East Africa, infection rates among adults are between 7 and 15 per cent. West Africa is home to a few badly affected countries, notably Côte d'Ivoire, but HIV prevalence tends to be lower there than in other parts of sub-Saharan Africa, with few countries exceeding 5 per cent prevalence among adults. The continent's most

Figure 2. HIV and AIDS estimates, sub-Saharan Africa and global[1]



populous country, Nigeria, which accounts for one-fifth of the population of sub-Saharan Africa, may become an exception. At present, estimates of HIV prevalence among adults hover around the 5 per cent mark. However, data have been patchy, and public health officials in Nigeria suspect infection rates may be on the rise. Efforts are currently being made to improve Nigeria's surveillance system for HIV, and future estimates should be made with greater confidence.[17]

The reasons for the regional differences in HIV prevalence are only partially understood. One common reaction is to lay HIV at the door of poverty, and yet some of the worst affected countries – Botswana, Namibia, South Africa and Swaziland – have the highest per capita incomes in sub-Saharan Africa.[12] Clearly, other factors are at play. New data suggest that male circumcision protects against the rapid spread of HIV at a population level, independently of other factors such as sexual behaviour and other sexually transmitted infections (STIs). In a study in Kenya, for example, uncircumcised men were over four times as likely as circumcised men of the same tribe to be infected with HIV, even after controlling for sexual behaviour and other factors.[18] This cannot fully explain regional differences in infection, however. While circumcision is extremely common in most low-prevalence countries of West Africa, it is also very widespread in a number of countries where HIV is much more firmly established, for example in Ethiopia.

Economic structure may also contribute to patterns of infection. Large concentrations of men separated from their families to work in mining, commercial agriculture and other industries tend to provide a ready market for sex workers, who contribute disproportionately to the rapid spread of HIV because of high partner turnover. When these men go to visit their families, they may well carry the infection back into rural areas. A study in a rural area in the South African province of KwaZulu-Natal, conducted in 1995, showed that 13 per cent of women whose husbands worked away from home two-thirds or more of the time were infected with HIV. Among women who spent two thirds or more of their time with their husbands, no HIV infection was recorded.[19] The increase in labour mobility following the end of apartheid in South Africa has doubtless contributed to the rapid spread of HIV. High HIV prevalence is more common in economies based around extractive industries and commercial farming than in other parts of Africa.

Women are generally better integrated into economic life in West Africa than elsewhere in the continent. Being less dependent on men for survival than women in East and southern Africa, they may therefore be better able to negotiate the terms of sex, insisting on condom use when having sex with men who have other partners. Indeed, a generally more realistic attitude to sex in many West African societies has helped greatly in establishing successful HIV prevention programmes. In Senegal, for example, sex work was a legalised profession long before the advent of AIDS. When HIV loomed, and the link between other STIs and the rapid transmission of HIV became known, the country was easily able to strengthen STI screening and treatment services for sex workers. Regular, mandatory screening among licensed sex workers also provided an easy access point for condom promotion and other prevention initiatives. Following prevention initiatives in Senegal, STIs among sex workers have dropped, and over two-thirds of men who said in a survey that they have casual sex reported using a condom with their most recent casual partner. Partly in consequence of these successes, HIV in the general population has remained low in Senegal, with under 2 per cent of pregnant women testing positive for HIV in major urban areas.[20]

Older men – fanning the fires of HIV

The estimates quoted above are derived largely from the anonymous screening of pregnant women at antenatal clinics. New community-based studies have taught us more about the patterns and age structures of infection in various populations in Africa. What emerges is not pleasant. An astonishingly high proportion of girls are infected with HIV during their teens and before marriage. The studies show that most of these girls must have been infected by men much older than themselves. A study conducted in two East and two West African cities shows, for example, that in the western Kenyan city of Kisumu 23 per cent of girls aged between 15 and 19 were infected with HIV, as compared with only 8 per cent of boys. The difference persists among men and women in their young 20s also,

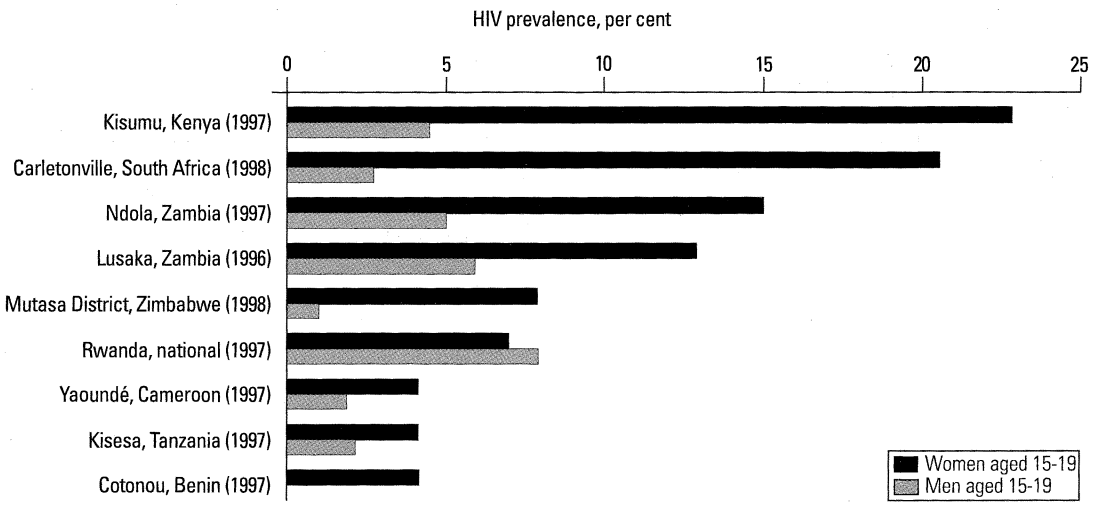
although it narrows somewhat with age. Some 38 per cent of women aged 20-25 tested positive for HIV in Kisumu, against 12 per cent of men of the same age.[21]

This pattern is by no means unique to Kenya. Figure 3 shows the prevalence of HIV infection in teenage boys and girls in population-based studies in a number of African countries and settings. With the exception of Rwanda,[22] HIV infection in girls far exceeds that in boys in this age group – by a factor of eight, on average. What do these figures tell us? First, that women are having unprotected sex from very young ages. Although this is no surprise to anyone who keeps track of teen pregnancies, it is a fact often wilfully ignored by opponents of sex education in schools. Kenya, for example, still has no 'family life education' in schools despite the blinding evidence of early high-risk activity provided by the above study and others. Indeed, attempts to introduce such education have repeatedly been defeated following intensive opposition from conservative religious groups.

Second, the age disparity in HIV infection rates indicates that young women must be having sex with men much older than themselves. This reality must be taken into account in designing prevention programmes aimed at young people. Teaching young women to negotiate condom use with their peers may not help them at all if the principal threat to their sexual health comes from an older man who controls the terms of every sexual encounter.

Indeed, these figures ought to give policy makers and other older men pause for thought. In qualitative studies, men often say they select young girls for sex because they are 'clean', that is, unlikely to be infected with HIV or STDs. This belief is misplaced. The very high prevalence rates recorded among teenagers mask the fact that a significant proportion of this five-year age group is not sexually active. In Kisumu, for example, HIV prevalence among 15-19 year-old girls is 23 per cent, but 29.9 per cent of this age group has never had sex. It therefore follows that HIV prevalence among sexually active teenage girls is closer to 33 per cent. Similarly in Ndola, in Zambia, HIV prevalence of 15.4 per cent among all teenage girls in the study translates into prevalence of close to 26 per cent among the sexually active.[21] So those girls who are already sexually active are even more likely to be infected with HIV than the high prevalence rates suggest. What is more, given that they are close to the start of their sexual lives, younger girls have probably been infected with HIV relatively recently. Because the virus replicates very quickly at the start of an infection, only gradually being brought under temporary control as antibodies are produced, people who are newly infected are actually highly infectious. Having unprotected sex with young women may therefore actually

Figure 3. HIV prevalence among teenagers, various community-based studies[23-28]



represent a higher risk of acquiring HIV for older men than selecting a partner their own age.

The data from community-based studies suggest another startling finding, likely to be controversial. Data on sexual behaviour and sexual networking show that boys begin sexual activity around the same time as girls, and have higher numbers of partners, on average, than girls their own age. And yet they do not become infected until much later in their sexual careers. It is known that HIV is more easily transmitted from men to women than from women to men, for physiological reasons. The disparities in ages at infection together with behavioural data collected in the same population suggest that many young men must be having sex with infected women and not themselves becoming infected. This is probably for a combination of reasons. First, while young men may report more partners than young women, the frequency of sex with any of these partners may be limited. Second, young men may achieve orgasm relatively quickly, so their exposure to infection from an infected partner may be brief. Third, younger men may be more likely to use condoms with their casual partners than older men.

The controversy starts here: all of these factors may evaporate upon marriage. Married men are likely to have sex more frequently with their wives than with any one casual premarital partner, and they are less likely to use condoms. No data exist on the length of an act of sex with different partner types. But with such high rates of HIV among unmarried young women in many populations, and comparatively low rates among men the same age, it is entirely plausible to suggest that one of the biggest risk factors for men acquiring HIV infection in high prevalence areas is getting married to a woman who was infected during premarital sex.

Another apparent consequence of the age pattern of infection is that there are more women living with HIV in Africa than men. A Ugandan study published in 1999 suggests that the younger an adult is infected with HIV, the longer it is likely to be before they develop AIDS and die.[29] This confirms a pattern observed in both men and women in industrialised countries. Because women are consistently infected with HIV at younger ages than men, on average, they are likely to live longer with the infection. So for similar rates of new infections in each sex, there will be more women than men living with HIV at any given point in time. WHO/UNAIDS estimate that there were 12.2 million women and 10.1 million men living with HIV in Africa at the end of 1999.[13]

Sending the wrong messages

As HIV prevalence rises in the general population, the chance of encountering an infected partner close to the beginning of one's sexual life also rises. It is therefore absolutely crucial to reach people with appropriate preventative interventions before they first have sex.

This does not happen frequently enough. With exceptions such as Kenya, most countries badly affected by HIV have attempted to include information about the disease in their school curricula. However, the subject is frequently introduced too late to be useful, often concentrates on information that is not helpful to young people, and is almost never backed up by service provision.

The messages most frequently conveyed to young people focus on abstinence and 'sticking to one partner'. Abstinence is, indeed, the most effective way of avoiding HIV infection. It appears as though there is a broad correlation between the average age at first sex in a population and the final shape of the epidemic. As Figure 4 shows, high rates of sexual activity in girls in their early teens are associated with high overall levels of HIV in the population. Any interventions that promote abstinence and successfully delay the onset of sexual activity are likely to put a brake on the spread of HIV.

But clearly, with a majority of both men and women sexually active by the end of their teens in almost every African nation, the abstinence message is failing for many people.

As long as the 'stick to one, faithful, uninfected partner for the duration of your sexual life' message succeeds, it does not much matter that the abstinence message has failed. But reams of data suggest that this message is interpreted only selectively by most people. They may stick to one partner at a time, or they may stick to one partner in perpetuity, but have no way of verifying whether that partner is faithful. Or they may have no idea of the HIV status of their partner. None of these approaches is protective against HIV, and the higher the population prevalence of the virus, the more dangerous these alternatives

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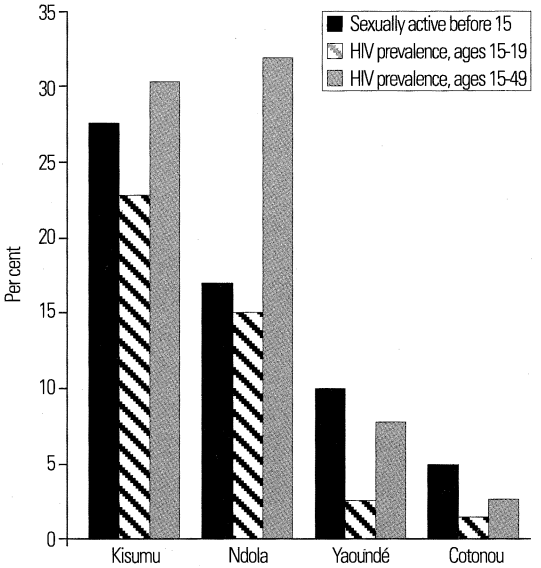
Figure 4. Early sexual activity and HIV prevalence in girls, various sites[21]



become. Indeed, in many countries background prevalence is so high and knowledge of HIV status so low that it is nothing short of irresponsible to suggest that monogamy (much less serial monogamy) can protect an individual from exposure to this fatal disease.

This is especially true for young people, whose idea of a relationship that will last 'forever' may change every few months. Between 40 and 60 per cent of unmarried women under 20 had had sex in the four-site study mentioned above, and young married women said they had been sexually active for between two and seven years before marriage. Unmarried men in their teens were even more likely to be sexually active, and because men marry later than women, married men said they had been sexually active for an average of between eight and 11 years before finding a wife. Needless to say, most had more than one partner in this interval – married men said they had averaged between three and eight partners before getting married, while women reported between two and three premarital partners on average.[21]

The 'stick to one partner' message seems to be failing married people, too. In the same study, up to two-thirds of men and one-quarter of women had had sex with two or more people other than their spouse since their marriage.

In short, many people in many countries where HIV is prevalent are neither abstaining from sex nor sticking to one, faithful, uninfected lifetime partner. The most common argument against the alternative message 'if you must have sex, use a condom' is that it promotes promiscuity. But let us be honest: if available data are to be believed, 'promiscuity' is well established in most affected populations: hence, the high level of STDs which hasten the spread of HIV, and hence the HIV epidemic itself.

Resistance to condom use is gradually being eroded in many countries. A sharp rise in condom use at last casual sex has accompanied a fall in new HIV infections in the youngest age groups in Uganda. The repeated cross-sectional data that allowed this rise to be measured do not exist for many countries, but condom sales have risen dramatically in a number of countries and companies giving free condoms to their workers on payday have reported a surge in demand in Botswana, South Africa and Zambia, to name but a few countries.[30]

Encouraging though this rise in demand for condoms is, there is still much to be done. Frequent diatribes against condom use by church leaders can be seen in the press in many countries; their effect is hard to calculate. A recent study in central Kenya showed that 60 per cent of both adolescents and their parents believed that condoms were not protective against HIV infection.[31]

An epidemic of silence

With the exception of leaders in Uganda and Senegal, most leaders in East and southern Africa shut their eyes to HIV until it established a firm grip on their populations. While some have recently begun to speak out on the threat the disease poses to development, none saw fit to attend a high-profile conference on AIDS in Africa held in Lusaka in September of 1999. South African president Thabo Mbeki has recently done some straight talking about sexual behaviour and the need to use condoms. Many of his peers, however, if they address the issue at all, continue to couch AIDS in terms of a moral scourge, to be dealt with by a return to the traditional values of an ill-defined past. National

budgets show scant evidence of a commitment to providing resources to prevent HIV or care for affected individuals and families.

The silence at the top levels of government mirrors that found at all levels of society. The story of Gugu Dhlamini, beaten to death in South Africa because she admitted she was HIV positive,[32] is all too symptomatic of 'not in my back yard' attitude to AIDS, an attitude we are apparently passing on to our children. Figure 5 shows data from a recent study of orphans from AIDS in western Kenya. All know about AIDS, and many acknowledge that it is a problem in their community. However the closer to home they come, the less likely they are to admit that AIDS is an issue. Not one of 72 children who had recently lost one or both parents to AIDS was prepared to say that someone in their immediate family had died of the disease.

Like any other problem, AIDS cannot be dealt with effectively if it cannot be talked about. Efforts to reduce the stigma attached to HIV will be crucial to reducing the spread of the virus, and perhaps more crucial still to improving the lives of over 23 million men, women and children currently living with HIV in Africa.

The need for leadership

Much has been said about successful community responses to HIV. Communities working together have demonstrated their ability to mount offensives against risky behaviour and to organise effective care for people infected by HIV and their families. These initiatives are to be applauded; where possible they should certainly be reproduced.

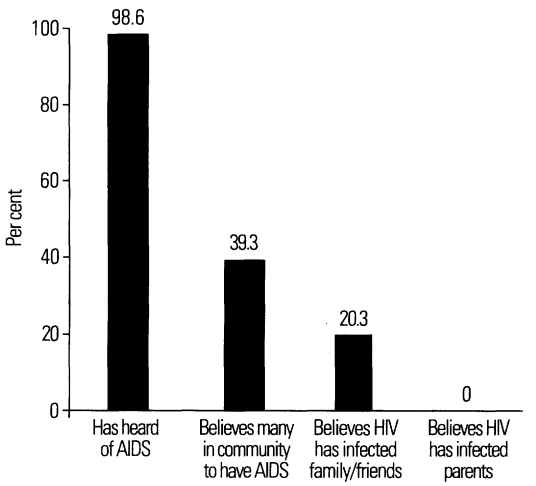
Let us consider for a moment, however, the countries that have succeeded through deliberate action in containing the epidemic at low levels or in reducing the level of infection in new generations. The examples are few and well-vaunted: in Africa, there is urban Uganda and Senegal. Elsewhere in the world, Thailand's prevention successes stand out.[17] In all three of these countries, initiatives and organisations at the community level (be it the religious community, the business community or village women's groups) have been instrumental in reducing stigma, in supporting prevention efforts, in providing for the needs of those affected. Nonetheless, in all three countries, the initial push came from senior politicians.

Indeed, it is no surprise that politicians should take the lead in confronting AIDS. Before it became a development problem, AIDS was a public health problem. Wise public health practitioners recognise that individual behaviour changes most easily when the social and economic environments first permit and then favour changed behaviour. Attacking structural props to high-risk behaviour requires intervention at the population rather than at the individual level. Only governments are in a position to deliver these interventions on a scale that makes a difference to public health.

In all three developing countries cited on the honour roll of HIV prevention, government budgeted a significant amount of money for spending on HIV prevention and care programmes. According to a study by UNAIDS and the Harvard School of Public Health, Uganda spent US$37.6 million on HIV/AIDS activities in 1996, or US$47 per adult with HIV, while Senegal, with much lower prevalence, spent US$221 per adult with HIV. Thailand was between the two, with almost US$100 per adult with HIV. While for the African countries these amounts include borrowing and overseas donor money as well as money from national funds, 94 per cent of Thailand's spending on AIDS came from the Thai taxpayer.[34]

Obviously, HIV has to compete for funding

Figure 5. Beliefs and denial among AIDS orphans in Kenya (n=72)[33]



with many other priorities, and it would not be realistic to expect all money now spent on defence or other non-development areas suddenly to be channelled into AIDS prevention and care. However, sufficient spending in other areas – especially education, health and social welfare – ought by itself to have a significant impact on the spread and impact of HIV. As a recent study in Zambia showed, educated girls are less likely to be HIV infected than uneducated girls, presumably at least in part because they have better access to information about the disease and are better able to make use of that information.[35] A stronger health sector is better able to provide counselling and HIV testing services, and to deliver low-cost care for common opportunistic infections related to HIV, thus delivering extra years of healthy life to young parents and breadwinners. A functioning social welfare system can support communities as they develop strategies to care for the million orphans currently estimated to be living in sub-Saharan Africa. Responsible development spending can increase the chances that prevention and care programmes will succeed, even when AIDS-specific spending is relatively limited.

Yet all the signs are that these areas of social development are not priorities for many governments on the continent. At worst, politicians allocate funds to warfare and to putting down rebellions, to political constituency-building, international posturing and the welfare of their own families and supporters. At best they are often scrambling to repair tottering infrastructures and to restore basic services decimated by previous economic mismanagement. Indeed, the stigma surrounding AIDS serves some governments quite well. As long as citizens and voters are in denial about the epidemic, they will not raise their voices to demand responsible action, including the provision of basic services for affected individuals and families.

At the most recent conference on AIDS in Africa, it was suggested that governments in countries with high HIV prevalence should negotiate debt swaps, allowing them to invest in HIV prevention and care money that would otherwise have gone to pay off interest on international loans. For this to work, governments will have to demonstrate that money will indeed be used for HIV, and will be used wisely. This will not be easy, particularly for countries whose record of wise social spending is mixed, and where there is evidence of financial mismanagement. In South Africa, over 50,000 cases of fraud are waiting to be investigated by a special unit on corruption. In Kenya, a recent Public Accounts Committee report stated that the country was in deficit to the tune of US$875 million because of the misappropriation of public funds.[36] In 1999, Tanzania, Kenya and Uganda ranked 7th, 10th and 11th, respectively, on Transparency International's index of global corruption.[37]

Leaders of international agencies such as UNAIDS, UNICEF and the World Bank regularly call for greater political commitment to dealing with the problem of AIDS. It is clear that strong political commitment from a president, prime minister or other national leader can be the cornerstone of a national effort to prevent the further spread of HIV/AIDS and its impact. But it is not realistic to expect political commitment to as sensitive a problem as AIDS from any government that is less than wholehearted in its commitment to the basic health and welfare of its people, regardless of their wealth, ethnic or religious affiliation, or voting habits. The first challenge for international partners in the fight against AIDS, as in the fight for development in general, is to support good government.

Note

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Acknowledgements

I would like to acknowledge the contribution of colleagues at UNAIDS and elsewhere to the data in this report. The opinions expressed, however, are entirely my own and do not represent the views of any of the institutions or individuals with whom I work.

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References and Notes

1. Gilada IS, Indian Health Organisation. Quoted in Guha K, 1999. The slow poisoner. *Financial Times* (London). 20 October.
2. India National AIDS Control Organisation, 1999. Country Scenario 1997-98. New Delhi.
3. India National AIDS Control Organisation, 1999. National AIDS Control Project, Phase II. Project Implementation Plan. New Delhi.
4. Tamil Nadu State AIDS Society, 1998. *Meeting the Challenge. Annual Report 1997-1998.* Chennai.
5. Voluntary Health Services AIDS Prevention and Control Project, 1999. *HIV Risk Behaviour in Tamil Nadu: Sentinel Surveillance Survey 1998.* Chennai.
6. Dubois-Arber F, Jeannin A, Spencer B, 1999. Long term global evaluation of a national AIDS prevention strategy: the case of Switzerland. *AIDS.* 13(18):2571-82.
7. Centres for Disease Control and Prevention, 1999. HIV/AIDS Surveillance Report. 11(1). Atlanta.
8. European Centre for the Epidemiological Monitoring of AIDS, Paris.
9. Ekstrand ML, Stall RD, Paul JP et al, 1999. Gay men report high rates of unprotected anal sex with partners unknown or discordant HIV status. *AIDS.* 13(12):1525-33.
10. Argentina National AIDS Programme, 1999. *Boletín Epidemiológico, 1999.* Buenos Aires.
11. Data courtesy of Pedro Chequer, Brazil National STD and AIDS Control Programme, Brasilia.
12. United Nations Development Programme, 1999. *Human Development Report, 1999.* UNDP, New York.
13. UNAIDS/WHO, 1999. AIDS Epidemic Update, December 1999. UNAIDS/WHO, Geneva.
14. China UN Theme Group on HIV/AIDS, 1999. *HIV Update for China, 1999.* Beijing.
15. Data courtesy of the Russian AIDS Centre, Moscow.
16. Hangzo C, Chatterjee A, Sarkar S et al, 1997. Preaching out beyond the hills: HIV prevention among injecting drug users in Manipur, India. *Addiction.* 92(7):813-20.
17. UNAIDS, 1997. *Report on the Global AIDS Epidemic 1997.* UNAIDS, Geneva and national estimates.
18. Kahindo M, Nyang J, Chege J, 1998. Multicentre study on factors determining the differential spread of HIV in Africa – preliminary results of the Kisumu site study (biomedical data). 2nd National HIV/AIDS/STDs conference, Nairobi, Kenya. 28-30 October.
19. Lurie M; Wilkinson D; Harrison A et al, 1997. Migrancy and HIV/STDs in South Africa – a rural perspective. *South African Medical Journal.* 87(7):908-09. This reference is to a letter, which is a comment on: *South African Medical Journal.* 1996; 86(10):1249-51.
20. Meda N, Ndoye I, M'Boup S et al, 1999. Low and stable HIV infection rates in Senegal: natural course of the epidemic or evidence for success of prevention? *AIDS.* 13:1397-1405.
21. Buvé A, Auvert B, Caraël M et al, 1999. Factors determining differences in rate of spread of HIV in sub-Saharan Africa: results from a population based survey in four African cities. (Submitted)
22. A nationally representative serosurvey of HIV infection undertaken in 1997 showed that the pattern of HIV infection in the country is in many ways atypical. The peculiarities almost certainly relate to the genocide and population redistribution that began in 1994.
23. Data for Kisumu, Ndola, Yaounde and Cotonou in ref [21].
24. Data for Carletonville in: Campbell C, MacPhail C, Williams B, 2000. Relative risk of HIV infection amongst men and women in a South African township. (Submitted)
25. Data for Lusaka in: Fylkesnes K, Ndhlovu Z, Kasumba K et al, 1998. Studying dynamics of the HIV epidemic: population-based data compared with sentinel surveillance in Zambia. *AIDS.* 12:1227-34
26. Data for Mutasa in: Gregson S, Garnett G, 1999. Contrasting gender differentials in HIV-1 prevalence and associated mortality increase in Eastern and Southern Africa: Artefact of data or natural course of epidemics? Paper prepared for presentation at INED seminar, Paris, 1 April.
27. Data for Rwanda in: Rwanda National AIDS Control Programme, 1998. 1997 Population-based serosurvey. Kigali.
28. Data for Kisesa in: Boerma JT, Urassa M, Senkoroa K et al, 1999. Spread of HIV infection in a rural area of Tanzania. *AIDS.* 13:1233-40.
29. Morgan D, Malamba S, Maude G et al, 1997. An HIV-1 natural history cohort and survival times in rural Uganda. *AIDS.* 11:633-40.
30. Population Services International and company managers, personal communications.
31. Erulkar A, Karureru J, Kaggwa G et al, 1998. *Adolescent Experiences and Lifestyles in Central Province, Kenya.* Population Council, New York.
32. All Africa News Agency, 1999. Woman beaten to death because of AIDS. 19 January.
33. Johnston T, Ferguson A, 1999. *Adolescent AIDS Orphans: A Profile. A Rusing Island study.* Population Communication

Africa, Nairobi.
34. UNAIDS, Harvard School of Public Health, 1999. Level and flow of national and international resources for the response to HIV/AIDS: 1996-1997. UNAIDS, Geneva.
35. Fylkesnes K, Musonda R, Sichone M et al, 1999. Favourable changes in the HIV epidemic in Zambia in the 1990s. Presentation at the XIth International Conference on AIDS and STDs in Africa, Lusaka.
36. Fox D, 1999. Latest accounts show Kenya $870 million in the red. Reuters, 14 June.
37. Transparency International, 1999. *Corruption Perceptions Index*. Washington DC.

Résumé

L'histoire du SIDA au XXIe siècle sera probablement dominée par les hétérosexuels en Afrique et les toxicomanes dans le monde. L'infection à VIH a persisté et progressé parce que les gens n'aiment pas reconnaître, et encore moins évoquer, les comportements qui propagent le virus. L'injection de drogue demeure la principale cause d'infection à VIH dans les pays de l'ex-Union soviétique, les Etats du nord-est de l'Inde, les Etats-Unis, l'Europe occidentale, la Chine et certaines régions du Moyen-Orient. En Afrique, où l'immense majorité des infections se produit pendant des rapports sexuels non protégés, une forte proportion de jeunes filles sont contaminées par le VIH pendant leur adolescence et avant le mariage. Les pays industrialisés ont réagi avec des campagnes massives de prévention, un débat ouvert sur les dangers potentiels de rapports non protégés et une promotion agressive des préservatifs. Dans les rares pays en développement qui ont pris des mesures similaires pour contenir l'épidémie – Thaïlande, Ouganda et Sénégal – l'impulsion initiale est venue des plus éminents hommes politiques. A mesure que le VIH se propage dans la population, les risques de trouver un partenaire infecté au début de la vie sexuelle augmente également. Il est donc vital d'atteindre la population avec des interventions préventives avant le premier rapport sexuel. Néanmoins, il n'est pas réaliste d'escompter un engagement politique sur un problème aussi sensible que le SIDA de la part d'un gouvernement qui ne s'est pas mobilisé pleinement en faveur des soins de santé de base et du bien-être de la population. Le premier défi dans la lutte contre le SIDA, comme pour le développement en général, est de soutenir une bonne gestion gouvernementale.

Resumen

Es probable que la historia del SIDA en el Siglo XXI sea dominado por los heterosexuales en Africa y los usuarios de drogas inyectables alrededor del mundo. La infección del VIH ha persistido y crecido porque las personas no quieren reconocer, y menos hablar, de los comportamientos que propagan el virus. La inyección de drogas se mantiene como la causa principal de infección de VIH en los países del antiguo Unión Soviética, los estados norestales de la India, los Estados Unidos, Europa Occidental, China y áreas del Medio Oriente. En Africa, donde la gran mayoría de las infecciones suceden durante relaciones sexuales no protegidas, una proporción alta de mujeres están infectadas del VIH durante la adolescencia y antes de casarse. Los países industrializados respondieron con campañas masivas de prevención, discusión abierta de los peligros potenciales de las relaciones sexuales sin protección, y la promoción agresiva del condón. En los pocos países en desarrollo donde se ha actuado de manera similar para contener la epidemia – Tailandia, Uganda y Senegal – la dirección inicial provenía de los políticos mayores. Al aumentar la prevalencia de VIH en una población, aumenta también la posibilidad de encontrar una pareja infectada a principios de la vida sexual de un individuo. Por lo tanto, es crucial llegar a las personas con intervenciones preventivas apropiadas antes de que comiencen a tener relaciones sexuales. Sin embargo, no es realista esperar un compromiso político hacia un problema tan sensible como el SIDA de cualquier gobierno que tiene menos que un compromiso sincero con la salud y el bienestar básico de su pueblo. El primer desafío en la lucha en contra del SIDA, como en la lucha por el desarrollo en general, es apoyar el buen gobierno.