

Prevention: applying the lessons learned



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4 Investment in HIV prevention averts untold human suffering, together with its social and developmental consequences, regardless of a country's HIV prevalence rates. Further rises in HIV incidence will only be slowed by a massive expansion of prevention efforts. Programmes for young people are vital and must continue as each new generation approaches sexual maturity.

Prevention has maximum impact as part of comprehensive interventions, spearheaded by governments that break the silence around HIV/AIDS and deploy sufficient human and financial resources. Their impact is amplified by wider public health and development strategies addressing the underlying socio-economic causes that leave people vulnerable to infection, as well as vulnerabilities arising

from gender inequities, the denial of human rights and discrimination against marginalized groups. Prevention efforts must be buttressed by well-supported community responses that include people living with HIV/AIDS, religious groups, and traditional and trusted leaders. And, in the context of more effective HIV treatment and the drop in antiretroviral drug prices, prevention must be linked to the provision of care and support.

As the epidemic is constantly shifting, prevention efforts must be tailored to developments in the epidemic, on the research front, and to evaluations that confirm success or failure. Like society itself, the epidemic is in constant flux as it adapts to surrounding factors and circumstances.

Declaration of Commitment

By 2005, ensure: that a wide range of prevention programmes [...] is available in all countries, particularly the most affected countries, including information, education and communication [...] aimed at reducing risk-taking behaviour and encouraging responsible sexual behaviour [...] expanded access to essential commodities [...] harm-reduction efforts related to drug use; expanded access to voluntary and confidential counselling and testing; safe blood supplies; and early and effective treatment of sexually transmittable infections (paragraph 52).

United Nations General Assembly Special Session on HIV/AIDS, June 2001, New York

Declaration of Commitment

By 2003, develop and/or strengthen national strategies, policies and programmes, supported by regional and international initiatives [...] to promote and protect the health of those identifiable groups which currently have high or increasing rates of HIV infection or which public health information indicates are at greatest risk of, and most vulnerable to new infection [...] (paragraph 64).

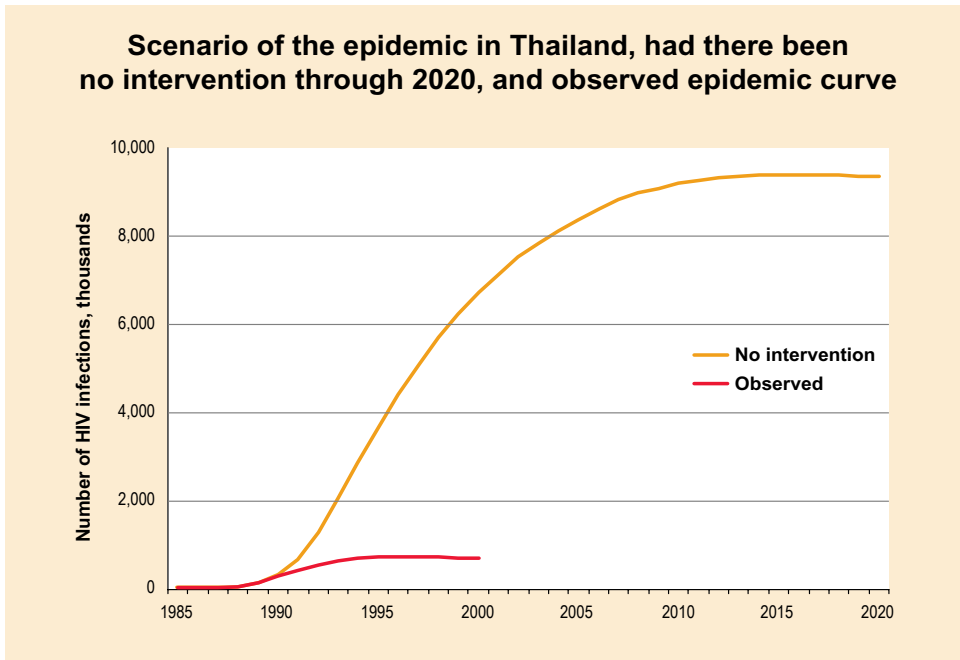
United Nations General Assembly Special Session on HIV/AIDS, June 2001, New York

Prevention essentials

The success stories of Cambodia, Senegal, Thailand, Uganda and urban Zambia, as well as those of a number of high-income countries, show that comprehensive prevention approaches are effective. These experiences provide clear evidence of what works:

- *Knowledge is not enough.* Behavioural change requires locally-appropriate, targeted information, training in negotiating and decision-making skills, social and legal support for safer behaviours, access to the means of prevention (e.g., condoms or clean needles) and motivation to change behaviour.
 - *The distribution of risk and vulnerability in societies varies greatly, as does the ability to locate and work with specific vulnerable populations.* No single prevention approach can be effective everywhere. To effectively produce and sustain behavioural change on a national scale, focused prevention programmes will involve multiple components, developed with the close input of each targeted population, to address the specific needs of vulnerable groups and the many factors influencing behavioural change.
 - *General population efforts are important, especially for the young.* Effective national programmes take into account the need to raise the awareness, knowledge, and HIV prevention and care skills among the rest of the population, especially the young, among whom almost half of all HIV transmission occurs.
 - *Partnerships are essential for effective prevention.* Because multiple programmes in multiple populations are needed, it is crucial to create partnerships between different players, including people with HIV/AIDS.
 - *Political leadership is essential to an effective response.* Political leadership and action are clearly needed to set the direction for a national response and initiate the development of policies that determine the strategy for managing the epidemic.
 - *Half-measures bring, at best, partial results.* Interventions that do not achieve sufficient coverage will simply fail to have a significant impact.
- Prevention depends on an environment of openness and inclusion that enables all people,

Figure 18



Source: Division of AIDS, Ministry of Public Health in Thailand; Thai Working Group on HIV/AIDS Projection (2001) *HIV/AIDS Projections for Thailand: 2000-2020*.

People living with HIV/AIDS: essential for effective prevention

More and more, people living with HIV/AIDS are being seen as leaders in prevention and care. The GIPA principle (Greater Involvement of People living with HIV/AIDS), as set out in the 1994 Paris Declaration, recognizes that people who live with the disease add immeasurable value and impetus to the response. They help personalize the epidemic and bring home to the wider public, political and civil society institutions and policy-makers the realization that HIV is everyone's problem. The difference they have made has led to their inclusion on the National AIDS Councils of a number of countries (see 'National responses' chapter).

GIPA is at work in Burundi's National Association of People Living with AIDS, which has been active since 1993 in giving AIDS a public face in the country. The association runs prevention campaigns, promotes voluntary counselling and testing, and offers medical care and psychosocial support.

In northern Thailand, groups of people living with HIV/AIDS are providing care and support for HIV-positive individuals. They lobby politicians to step up their involvement, counsel people on their legal rights, and campaign for better social services.

In South Africa, GIPA field workers have been trained and recruited by companies such as Eskom, Imperial Transport Holdings, Lonmin Mines and a well-known newspaper, *The Sowetan*. Their presence in the workplace has added credibility to HIV/AIDS programmes and, by speaking out openly, they have made a dent in stigma, while increasing public awareness.

including those living on the margins of society, to undergo voluntary testing, seek and receive treatment, alter their own behaviour, and become allies in the fight against HIV/AIDS. Successful responses challenge stigma and discrimination, protect the rights of those infected and affected by HIV, and include marginalized groups as active participants rather than mere 'beneficiaries' of services.

Integrating care and support with prevention efforts

Care and prevention are integrally related. Prevention efforts have always been hard to implement when access to treatment, care and support is limited. Without the hope of treatment, care and support, and fearing stigma and discrimination, people see little reason to learn about, or disclose, their HIV status.

Prevention is enhanced when it is linked to care and support. People are encouraged to come forward and get tested for HIV if they

know treatment will be available. For those who test HIV-positive, treatment, care and support not only improve their quality of life, they also decrease the spread of infectious diseases (particularly tuberculosis and sexually transmitted infections) through early diagnosis and treatment. Voluntary counselling and testing services are an entry point for behavioural change; they offer an opportunity for people worried about their serostatus to talk with medical and other trained staff, and discuss how they might prevent further spread of the infection. Open and compassionate care for HIV-infected people helps counter wider societal fears about HIV/AIDS.

Ironically, in some high-income countries where access to treatment and care is widespread, prevention has increasingly become divorced from care. The result has been upturns in risky behaviour and, in some instances, increases in the number of new HIV infections. In such situations, treatment and care efforts must be accompanied by increased and integrated prevention efforts.

Strategic prevention

The global HIV/AIDS epidemic is made up of many different epidemics that are evolving in tandem, often within the same country.

Effective HIV prevention combines society-wide strategies with particular focus on those parts of the population most at risk.

Whatever the extent of the spread of the epidemic, young people need to be at the centre of all HIV strategies—not least because most HIV infections occur during, or soon after, adolescence. Strategies that work combine:

- AIDS life-skills education;
- mass media communication;
- access to condoms;
- voluntary counselling, testing and referral;
- treatment of sexually transmitted infections;
- involvement of parents and other adults; and
- efforts to improve young people's social and economic status.

In low-prevalence settings, a concentrated epidemic tends initially to be associated with certain high-risk contexts—typically, sex work, injecting drug users and sex between men. Usually, these activities are also highly stigmatized. But the people at risk in these contexts are not isolated groups; they mix across populations, as confirmed by behavioural surveillance. However, early, large-scale interventions among these groups could stave off a potential epidemic.

In high-prevalence settings, the epidemic is spread much more broadly throughout the general population. The higher the national HIV prevalence rate, the higher the proportion of people who must adopt safer behaviour if the epidemic is to be brought under control. Very high coverage with demonstrably effective interventions then becomes crucial.

Whether in low- or high-prevalence areas, the key to effective prevention is to apply essential prevention strategies to the realities of the epidemic, at the local, national or even regional levels.

The illusions of low national HIV prevalence

Twenty years into the HIV/AIDS epidemic, the majority of countries in the world still register national HIV prevalence rates of less than 1%, for the global epidemic is still in its early stages. But two decades ago, there was no country in the world that had nationwide adult HIV prevalence rates above 1%; today there are nearly 50 and, in 12 of them, national adult HIV prevalence is estimated to be more than 10%.

Countering harmful gender norms

Programmes should seek to counter harmful gender norms that lead to the sexual coercion and exploitation of women and girls (see 'Focus: AIDS and human rights'). Through the use of media, public information campaigns, the arts, schools and community discussion groups, such programmes should:

- encourage discussion of the ways in which boys and girls are brought up and expected to behave;
- challenge concepts of masculinity and femininity, based on inequality and aggressive and passive stereotypes;
- encourage men and boys to talk about sex, violence, drug use and AIDS with each other and their partners;
- teach female assertiveness and negotiation skills in relationships, sex and reproduction;
- teach and encourage male sexual and reproductive responsibility;
- teach and promote respect for, and responsibility towards, women and children;
- teach and promote equality in relationships and in the domestic and public spheres;
- support actions to reduce male violence, including domestic and sexual violence;
- encourage men to be providers of care and support in the family and community; and
- encourage understanding and acceptance of men who have sex with men.

Figure 19

HIV rates, reported as a national average, can be misleading. In populous countries, national adult HIV prevalence of, say, 2–3% may nevertheless mean millions of infections. National HIV prevalence rates can also mask the concentrated nature of HIV epidemics in specific parts of the country and among specific populations.

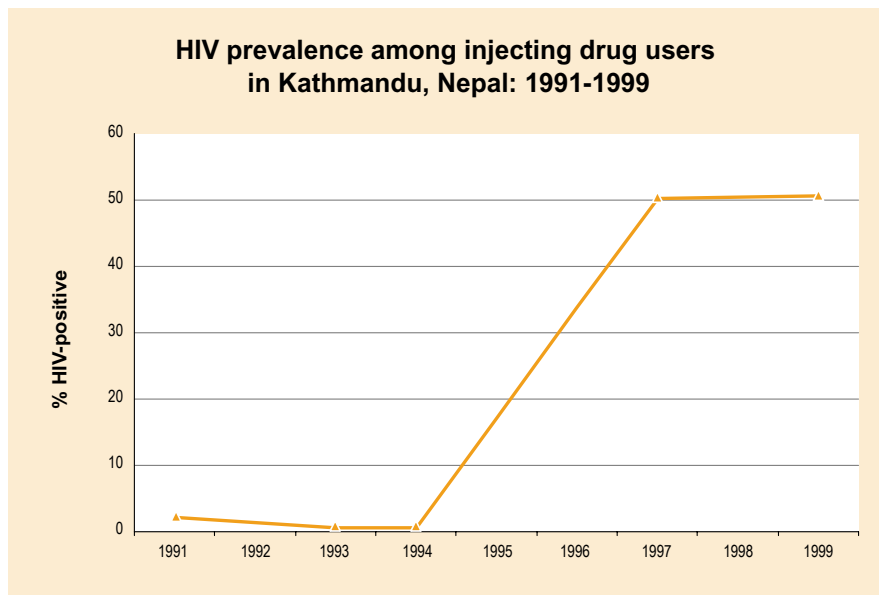
Large-scale epidemics always begin as localized outbreaks before spreading more widely across regions and communities. In Nairobi, Kenya, HIV prevalence among female sex workers surged from 4% in 1981 to 61% in 1985, while prevalence among pregnant women rose from 0% in 1981 to only 2% in 1985, before its subsequent steep rise.

The danger signs of impending epidemics are now familiar, but the exact pace of the epidemic's growth still cannot be predicted with certainty. In Thailand, for example, the virus was first detected in 1984, but did not start spreading virulently among sex workers and their clients until five years later. Similarly, in the Nepalese city of Kathmandu, needle-sharing was rife in the early 1990s, yet HIV infections among injecting drug users stayed negligible for six or seven years before rising sharply to the point where, by 1997, nearly half the users were infected.

In Indonesia, anonymous HIV testing of sex workers began in 1988 and, for almost

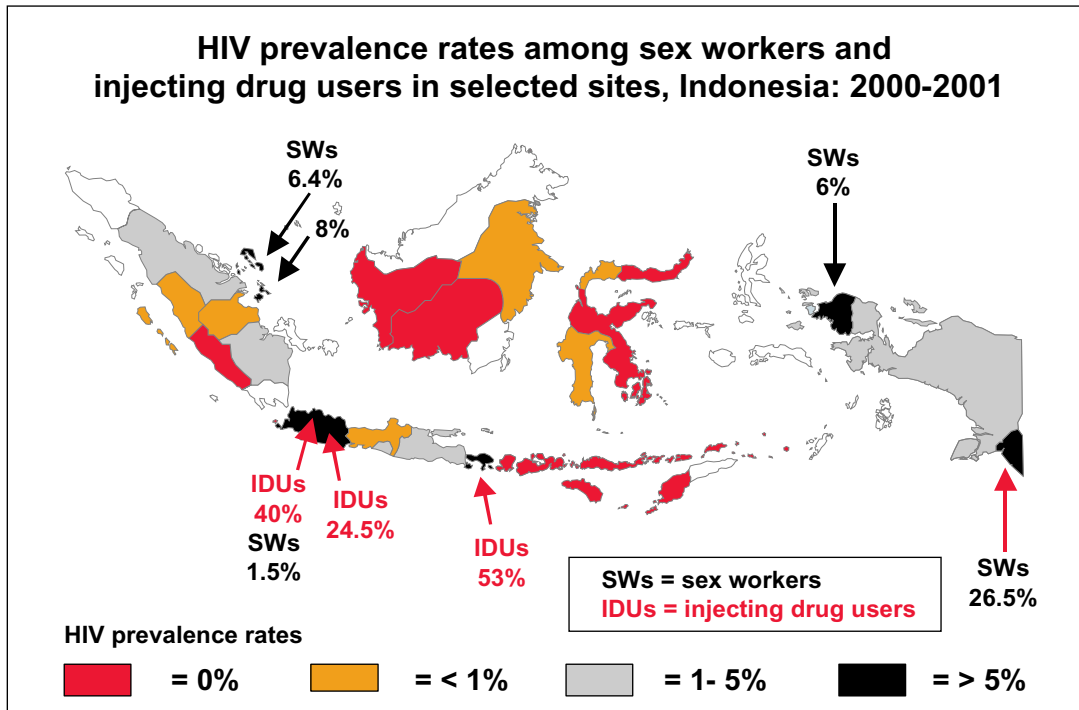
a decade, registered virtually no HIV infection. The results were puzzling because other research was showing that sex work was common, condom use very low, and other sexually transmitted infections highly prevalent. The absence of a HIV epidemic may have been partly because sex workers in Indonesia had a relatively low turnover of partners—around seven in a week, on average, compared with over 30 a week in Thailand at the height of the HIV rise in that country.

But new data suggest that there has been a surge in HIV infection among sex workers in some Indonesian locations. Figure 20 depicts provinces where high rates of HIV infection have now been recorded among sex workers and drug users. Large-scale migration, in the wake of the 1997–98 economic crisis and political instability and violence in parts of the country, may also explain increased vulnerability.



Source: Peak A et al. (1995); *AIDS*. Gurubacharya RL et al. (1998); 12th World AIDS Conference, Abstract 23246. Oelrichs RB et al. (2000) *J. Virol.*

Figure 20



Source: Indonesian National AIDS Commission (2001) *HIV/AIDS and other sexually transmitted infections in Indonesia: challenges and opportunities for action*

Prevention and condoms

Condoms are key to preventing the spread of HIV/AIDS and sexually transmitted infections, together with sexual abstinence, postponement of sexual debut, and mutual fidelity. Uganda's success in curtailing the spread of HIV can be attributed to behavioural change, notably a reduction in the number of individuals' sexual partners and the postponement of sexual debut among young people. Decline in infection rates among young people has been mostly due to the rise in the median age of first intercourse by 2 years—from age 15 to 17. But increased condom use (see Figure 21) and treatment of sexually transmitted infections have played an important role.

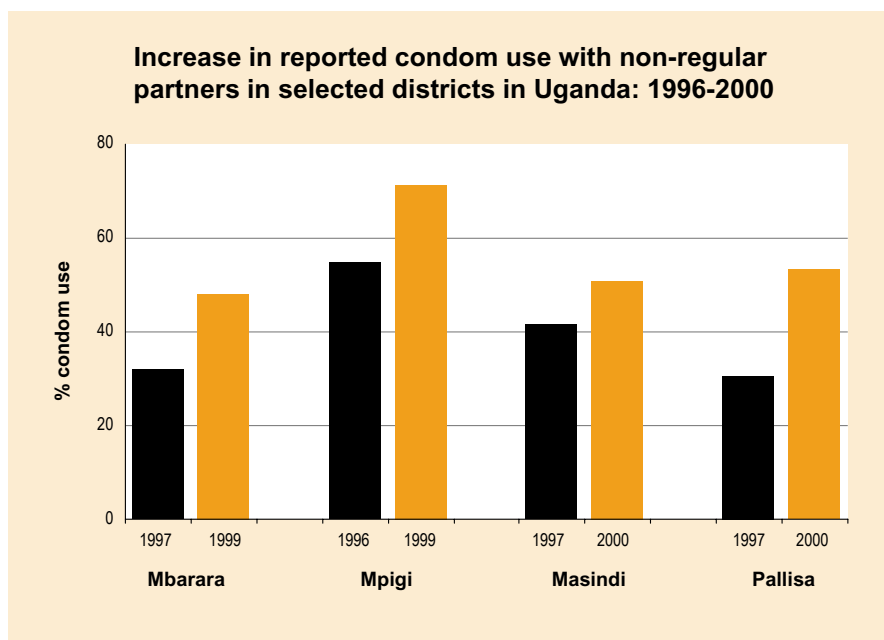
The US National Institutes of Health and the US Centers for Disease Control and

Prevention conducted an extensive review of available studies, and confirmed that condoms, when used correctly, are an effective means of preventing HIV infection in women and men, and gonorrhoea in men. Without access to condoms, many other prevention strategies (such as behavioural change communication and sexual and reproductive health education in schools, not to mention family planning campaigns) lose much of their potential effectiveness.

The condom gap

An estimated 6–9 billion condoms are distributed annually (including those sold commercially)—considerably fewer than the estimated 8–24 billion condoms that are

Figure 21



Source: STD/AIDS Control Programme, Uganda (2001) *HIV/AIDS Surveillance Report*

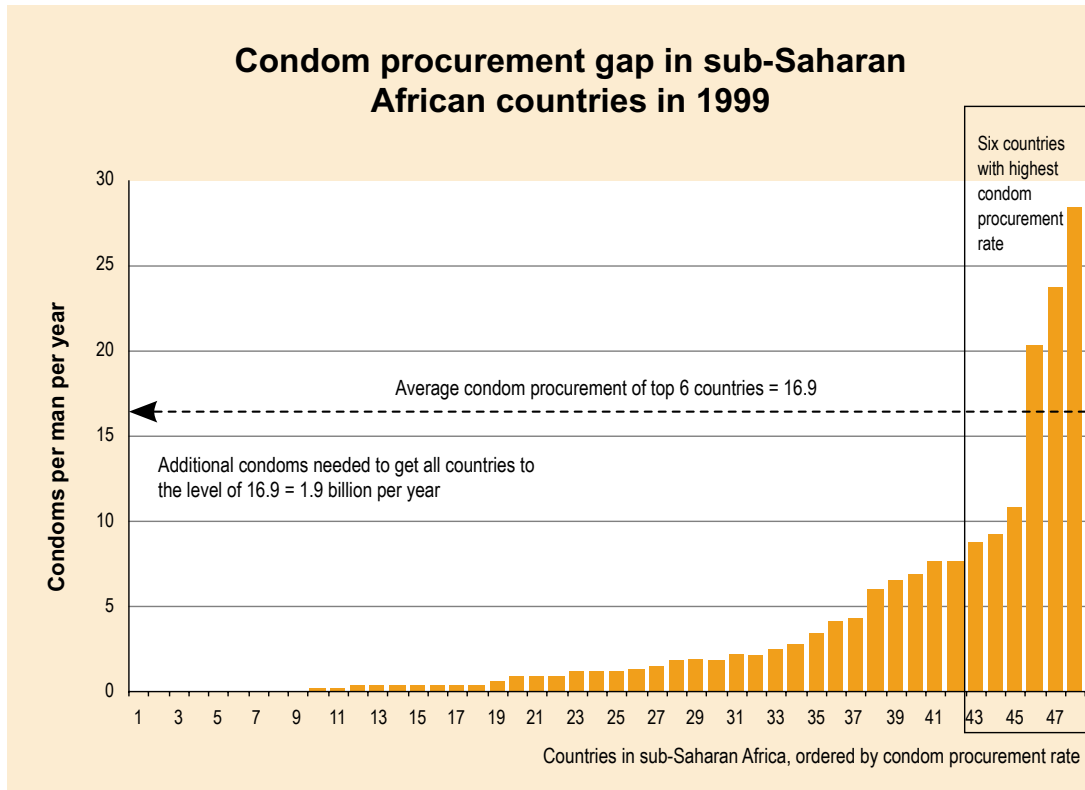
needed if all populations are to be able to protect themselves from HIV and other sexually transmitted infections. In sub-Saharan Africa alone, the condom gap has been estimated at 2 billion a year (see Figure 22).

To overcome the supply gap, the United Nations (through the United Nations Population Fund, World Health Organization and the UNAIDS Secretariat) is collaborating with international nongovernmental organizations, specialized agencies and public and private donors. Cost is a major issue. The United Nations Population Fund estimates that the number of condoms needed to prevent HIV/AIDS and other sexually transmitted infections will more than double in the next 15 years. Costs will rise from US\$239 million in 2000 to an estimated US\$557 million in 2015. This total does not include distribution, training or counselling costs. Low-income countries will need plans that address supply problems along with steady increases in donor support to meet condom costs.

Increasing condom accessibility and availability can increase condom use. In Brazil, there was a massive increase in the uptake of condoms when prices came down in the early 1990s. When Ford South Africa made mass condom distribution part of its HIV/AIDS strategy and put condom distribution machines in workplace toilets, uptake increased 25-fold.

However, supply is not the only determinant of condom use. Almost everywhere, sexually active young people (especially young women) are denied information about condoms. Researchers in Kenya report that 54% of young people do not believe that condoms protect against HIV infection. There, as in many other countries, attempts by government and nongovernmental organizations to promote condom use have met with opposition from some religious organizations that claim that condoms promote promiscuity. But religious opinion is not monolithic. In Uganda, for example, a dialogue between the Islamic Medical Association and Muslim reli-

Figure 22



Source: Shelton JD, Johnston B (2001) Condom gap in Africa: evidence from donor agencies and key informants, *British Medical Journal*

gious authorities resulted in a statement by the latter that education on the responsible use of condoms was both acceptable within Islamic teachings and necessary to defend communities against AIDS.

A recent analysis of study samples from eight countries in sub-Saharan Africa found that attitudes towards condom use also depended on the nature of relationships. In marital and regular relationships, many people said that they did not use condoms because they 'trusted' their partner; in regular and casual relationships, people frequently cited a dislike of condoms. This suggests that condom promotion messages need to be tailored to context: couples in steady relationships may need

to be convinced that using condoms is a primary means of caring for each other's health.

The way ahead

Condom programming works best as part of a comprehensive 'package' of interventions that include HIV/AIDS education, sexual health and human sexuality, and gender sensitivity training.

Since it was first introduced by public health authorities in Ratchaburi Province, Thailand's innovative 100% Condom Use Programme for commercial sex has become known as one of the most effective HIV prevention measures ever. The programme required that condoms be used in all sex

work establishments—a tactic that helped prevent clients moving on to locations where condom use was not insisted on. After being adopted as a national policy by the Prime Minister in 1991, and expanded nationwide, the programme resulted in more than 90% of sexual encounters with sex workers by 1994 being protected by condoms (compared with a pre-programme rate of 14%). The programme worked with sex workers and their clients, health authorities and the police, and gained brothel owners' support. At the same time, the Thai Government embarked on large-scale, mass-media, AIDS-awareness campaigns. Recent reviews of the programme credit it with being an “important contributor to large-scale reduction of HIV transmission throughout the country”. Similar strategies have been adopted in Cambodia, and in local interventions in countries such as Cameroon, the Dominican Republic and Myanmar.

Social marketing—the use of commercial techniques such as market research, mass-market distribution and communication to achieve a social goal—has achieved some success. In Cambodia, condom social marketing has been promoted since 1994. ‘Number One’ brand condoms are marketed to young adults, commercial sex workers and their clients, and members of the military and police. Sales of condoms in Cambodia increased dramatically from 99 000 to more than 16 million in 2001, with distribution to all 24 provinces and municipalities.

These types of interventions, though, need to be buttressed by policies that ideally promote, but, at the very least, do not restrict, the distribution and use of condoms. Unfortunately, laws and practices in many countries still make it difficult for young people to get condoms, and allow the possession of condoms to be used as evidence to prosecute sex workers.

Female condoms: some progress...

Pilot programmes in the past few years have shown that the female condom is a viable HIV prevention option for women (and, in some contexts, men).

Made of polyurethane plastic, it requires no special storage. It can be inserted into the vagina several hours before sex, and it can be used with oil-based or water-based lubricants. For these reasons, the female condom can be of particular value in HIV prevention among sex workers.

In Viet Nam, an acceptability study carried out in Hanoi during 2000 found that 320 of the 428 women who tried the female condom said they would continue using it, provided it was free or affordable. Acceptability was strongest among sex workers, 84% of whom said they would want to keep using the female condom.

Since 1999, UNAIDS has worked closely with the female condom manufacturer, the Female Health Company, to increase the interest of government and nongovernmental agencies in female condom programmes. Ghana is one of the countries that now has a national programme to boost female condom use, including high-level political commitment (notably, in the person of the former First Lady, Nana Konadu Agyeman Rawlings), social marketing, and distribution by both the public and private sectors.

Controlling sexually transmitted infections

The World Health Organization estimates that over 300 million people are infected each year with curable sexually transmitted infections, a large share of which occur among young people. The presence of such infections magnifies the risk of HIV transmission during unprotected sex as much as tenfold (since the infection creates additional entry points for the virus or facilitates viral replication).

Many of these infections (including the four most common: syphilis, gonorrhoea, *Chlamydia* and trichomoniasis) can be cured relatively easily with antibiotic treatment. But lack of services, poor availability of drugs, limited access to diagnosis, and disparaging attitudes by service providers are barriers to more effective detection and treatment of sexually transmitted infections as part of HIV/AIDS prevention.

These problems are surmountable. A great deal has been learned about making services more user-friendly, and adapting them to suit specific groups. In addition, research in low- and middle-income countries has confirmed the effectiveness of syndromic management in resource-poor settings. Syndromic management involves recognizing clinical signs and patient symptoms (or syndrome) and prescribing treatment for the major causes of that syndrome. It enables health workers who lack specialized skills and access to sophisticated laboratory tests to effectively treat most symptomatic infections during a patient's first clinic visit.

A study of community-based syndromic management of sexually transmitted infections in Mwanza, United Republic of Tanzania,

showed that the number of new HIV infections in the study population was cut by 42%. However, another intervention, based on mass treatment of sexually transmitted infections with antibiotics in Rakai, Uganda, did not reduce HIV incidence. This suggests that efforts to treat and control sexually transmitted infections are more likely to also reduce HIV transmission if they form part of broader, comprehensive HIV/AIDS prevention programmes.

Several recent studies highlight the likely importance of the Herpes Simplex Virus-2 (HSV-2) as a co-factor of HIV susceptibility. A study in South Africa has found that HSV-2 was the most significant factor associated with HIV among both men and women, and that men infected with HSV-2 were seven times more likely to be HIV-positive than those without it. HSV-2's co-occurrence with HIV indicates that HSV-2 control (both prevention and treatment) may be a valuable part of HIV prevention. But many obstacles must first be overcome. There is no cure for HSV-2 and vaccines are still in Phase II trial, so infection is life-long and ulcers will reappear periodically throughout an infected person's life. Treatment for the ulcers requires relatively expensive drugs, only one of which (acyclovir) is available in generic form. Moreover, testing for HSV-2 is difficult in poorer countries, because affordable testing kits are not as accurate as the laboratory-based tests used in wealthier countries. In such conditions, early sexual education and promotion of consistent condom use remain the best prevention methods.

Reaching those in need

HIV/AIDS epidemics in many countries are concentrated in specific populations that are often marginalized and vulnerable to a broad range of health and psychosocial difficulties apart from, or in addition to, HIV/AIDS. Complex and interlinked factors influence their vulnerability. Firstly, their socioeconomic circumstances (such as poverty, lack of education, displacement, separation from families, etc.) may hinder their ability to protect themselves, and may reduce their access to HIV prevention and care information, services and commodities. Secondly, HIV prevalence among their social networks may be higher than in the general population. Thirdly, they may engage in specific high-risk behaviours such as sharing drug-injecting equipment or having unprotected sex with persons whose serostatus is unknown.

Such populations include injecting drug users, sex workers (and their clients), men who have sex with men, prisoners, marginalized young people, refugees and displaced persons, trafficked persons, socially excluded indigenous populations, and itinerant and mobile workers (such as seafarers, long-distance truck drivers and seasonal workers). Reaching these groups is vital for the success of an AIDS response. As many of these populations do not have access to mainstream HIV/AIDS services, outreach and peer network approaches must bring services to where they work, live and socialize. The most effective interventions and programmes are those that are tailored to the specific realities and needs of the people for whom they are intended.

Men who have sex with men

In varying degrees, male-to-male HIV transmission is a factor in all HIV epidemics. It has been the predominant mode of transmission of HIV in most high-income countries. In the USA, male-to-male sex accounted for the largest proportion (42%) of annual new infections in 2000, while, in Australia, it accounted for 85% of infections in 2000. Significant HIV prevalence among men who have sex with men has been detected in countries around the world, as shown in Figure 23.

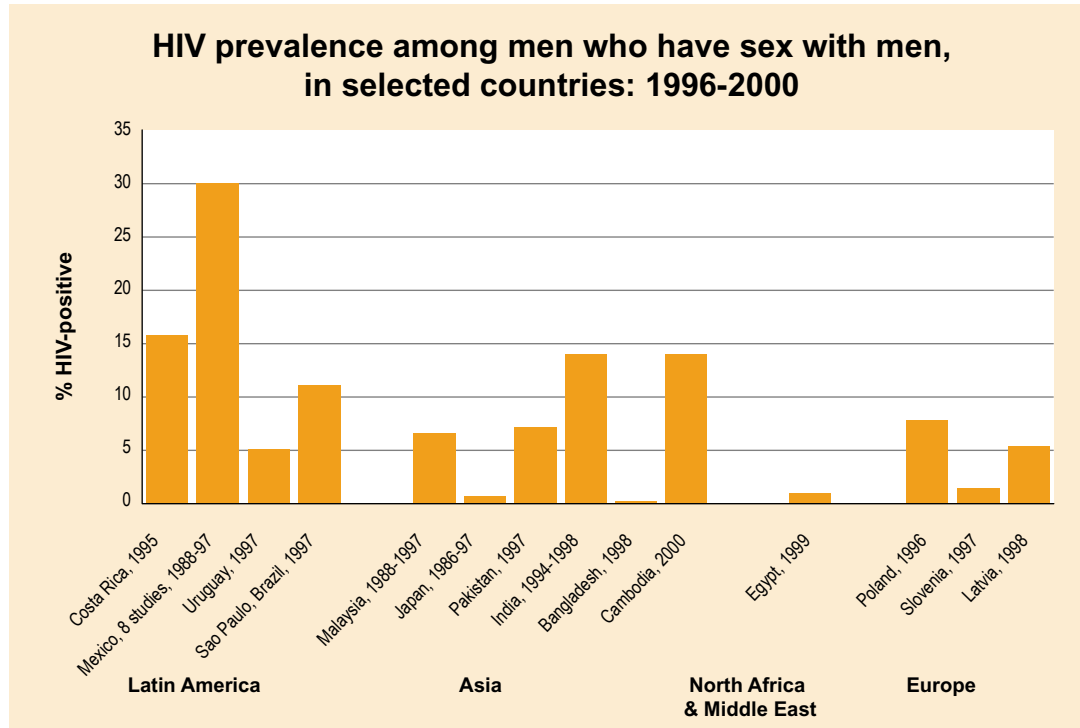
Where male-to-male sex is repressed legally or through strong social sanctions, men who have sex with men are at especially high risk of HIV infection, since they are harder to

identify and reach with preventative services. Countering the discrimination and violence endured by men who have sex with men is therefore a vital part of an effective AIDS response.

Underground, not isolated

Reliable data from countries as diverse as Brazil, Colombia, India, Mexico, Pakistan and Thailand confirm that many men who have unprotected sex with other men also have unprotected sex with women. In Latin America and the Caribbean, the population of men who have sex with men is diverse, many of the men also have sex with women, HIV rates are sig-

Figure 23



Sources: Country data compiled by US Census Bureau (1996-2000); Cambodia data reported in: *Monitoring the AIDS Pandemic (MAP): the status and trends of HIV/AIDS/STI epidemics in Asia and the Pacific (2001)*

nificant and, as a result, the epidemic is steadily reaching their female partners. A recent study by the Senegalese National AIDS Commission in Dakar, Senegal, reported that 88% of surveyed men who have sex with men also had sex with women, and 15% were married. Only 14% said they used condoms the last time they had sex. In addition, 37% of the men surveyed reported that they had been raped in the previous year, some by policemen.

Gay communities in high-income countries have been at the forefront of the response to HIV/AIDS, and have mounted very successful prevention efforts, although a resurgence of unsafe sex among men who have sex with men (see 'Global overview' chapter) shows the need to constantly renew and reinforce such efforts. In much of Africa and Asia, however, prevention efforts among men who have sex

with men have barely begun. In many middle- and low-income countries, male-to-male sex and HIV transmission tend to be statistically hidden and officially denied. In much of Africa, for example, male-to-male sex is scarcely acknowledged, although self-identified gay groups have been in existence for several years in South Africa and Zimbabwe. Similar groups have recently been formed in Kenya and Senegal.

The Bandhu Social Welfare Society (in Dhaka, Bangladesh) and Sahodaran (in Chennai, India) are community-based agencies providing both outreach and on-site services to men who have sex with men. 'Safe spaces' in their central offices offer stigmatized and marginalized men an opportunity to socialize and to access a range of services. Bandhu Social Welfare Society has an innovative clinic service

Male sex workers

Male sex work occurs in every region of the world but is often deliberately ignored or heavily repressed. Many men who sell sex have commercial and non-commercial male and female partners; they therefore represent a potential for both heterosexual and homosexual transmission. Importantly, they might not see themselves as homosexual or as sex workers.

Despite these formidable obstacles, prevention programming can be successful among this highly vulnerable group, as Morocco's *Association de Lutte contre le SIDA* (ALCS) has shown. As in many other countries, male sex work in Morocco is typically but mistakenly associated mainly with tourism. In fact, it is also prevalent among Moroccans, even in smaller cities, despite the fact that homosexuality in Morocco is a punishable offence. Action research by ALCS found that about two-thirds of male sex workers relied on paid sex as their main source of income, and more than a third (of the total) practised the trade only with other Moroccans. Armed with this information, ALCS set up a drop-in centre and outreach projects, offering peer education, condoms and referrals to local health services for diagnosis and treatment of sexually transmitted infections, and HIV counselling and testing. Surveys later showed that 93% of the men preferred to get condoms from outreach workers, and that regular use of condoms increased. More men also used the voluntary counselling and testing services.

for sexually transmitted infection diagnosis and treatment and Sahodaran has contributed strongly to national advocacy. Similarly, recent years have seen a series of prevention projects established in Eastern Europe and Central Asia by gay organizations in collaboration with local authorities, with support from UNAIDS Cosponsors and the UNAIDS Secretariat. The projects are established in Minsk, Belarus; Bishkek, Kyrgyzstan; Karaganda and Almaty in Kazakhstan; and Tashkent in Uzbekistan.

As in high-income countries, the solidarity of highly-placed or well-known individuals can be very helpful in fighting the stigma faced by this vulnerable population. In Haiti, for example, the country's First Lady recently gave public support to GRASADIS (*Groupe de Recherches et d'Action Anti-SIDA et Anti-Discrimination Sexuelle*), which provides outreach and peer education for men who have sex with men.

Injecting drug users

The illicit drug trade has, over the past 25 years, grown into a multi-billion-dollar industry that spans the planet. By the end of 1999, injecting drug use was being reported in 136 countries; in 114 of them, HIV cases result-

ing from injecting drug use had been reported. Drug trafficking is now a global phenomenon, touching some 170 countries and territories. It is estimated that up to 10 million people worldwide inject drugs.

The case of Temirtau

In parts of Eastern Europe and Central Asia, jolting socioeconomic change, marked by high unemployment, has created a sense of despair for millions, including the young.

A generation ago, the Kazakhstan city of Temirtau hosted a steel plant that was one of the largest steel producers in the former Union of Soviet Socialist Republics. In 1995, the plant was sold off, production was slashed, and thousands of workers were sacked. Livelihoods disappeared, and services (including schools and hospitals) were shut down. Injecting drug use soared, together with outbreaks of HIV/AIDS. By 2000, an estimated 3000 of the 32 000 young people (15–29-year-olds) in Temirtau were injecting drugs. In the late 1990s, the Government of Kazakhstan and various United Nations agencies set up a multisectoral programme in Temirtau and the surrounding Karaganda region to reverse drug use and reduce HIV levels. By 2000, the effects were becoming visible, with surveillance studies showing that HIV infection among recent users in the city had dropped from 15% in 1997 to 5%.

4 Asia is estimated to have the largest number of injecting-drug-related HIV cases. Injecting drug use is also a major factor in HIV epidemics in North America, Western Europe and in parts of Latin America, the Middle East and North Africa. In some Eastern European countries, especially in countries of the former Soviet Union, injecting drug use is driving major HIV/AIDS epidemics among young people, and many outreach programmes report rising numbers of sexually active teenage drug users.

Drug users are part of society

Injecting-drug-related HIV epidemics do not remain limited to injecting drug users. Most injecting drug users are young, male and sexually active. They are likely to acquire or transmit the HIV virus not only by sharing injecting equipment but also through sexual intercourse with regular or casual partners. Injecting drug use also overlaps profoundly with the sex trade, with users often buying sex, or selling sex to finance their drug dependencies. In 2000, in Hanoi, Viet Nam, 20% of street-based

female sex workers reported recent drug injection, while 23% of male injecting drug users bought sex; in Bangladesh, the corresponding figures were 14% and 50–75% respectively.

Preventing HIV infection

Stopping the spread of HIV among injecting drug users requires a comprehensive approach, including drug-dependency treatment and rehabilitation; HIV/AIDS education; access to clean needles/syringes and condoms; legal and social services; and voluntary HIV testing and counselling and psychosocial support. It also requires efforts to deter people (especially young people) from initiating injecting drug use.

There is strong evidence to show that effective and humane drug treatment not only reduces drug abuse, but also diminishes HIV risk. A basic ethical principle is that drug control policies must reduce, not augment, the HIV risk faced by drug users, and HIV-prevention activities must not inadvertently promote drug abuse.

Disproving the myth that needle-exchange increases drug use

One of the most closely studied issues in the history of HIV-prevention programmes is whether needle and syringe provision is effective in limiting the spread of HIV, or whether it just encourages drug use. The evidence points to effectiveness, rather than to increased drug use.

When clean-needle services were offered in California in the 1990s, the percentage of new initiates into injecting drug use fell (from 3% to 1%), regular users injected less frequently, and needle-sharing decreased by more than 70%.

A global review of clean-needle/syringe programmes implemented between 1988 and 1993 found that, in 29 cities with needle-exchange programmes, HIV prevalence among injecting drug users fell by an average of 5.8% a year, and the number of users did not increase. In contrast, in 52 cities lacking such programmes, HIV prevalence among injecting drug users rose by almost 6% each year.

Research in Canada has highlighted the limitations of some needle/syringe-exchange programmes. For example, studies in Vancouver and Montreal, where cocaine injection is prevalent, have demonstrated the importance of tailoring programmes to meet local conditions. Cocaine injectors tend to inject much more frequently than heroin injectors, and therefore require much greater quantities of sterile needles and syringes than usually provided by most needle-exchange programmes.

Another major limitation of needle-exchange and other interventions targeting drug users is that they often miss occasional or recreational drug users. This is an increasingly important issue, especially among young people, as this population is missed by many programmes targeting self-identified injecting drug users.

Small, isolated prevention efforts might slow the pace of the epidemic, but not for long, as Nepal's experience has shown. Needle-exchange programmes there began as early as 1991; by 1995, some researchers were claiming that the interventions had averted a HIV epidemic among injecting drug users. But, by 1997, almost half the users tested in Kathmandu were infected with HIV. The needle-exchange programme was too limited and too localized to have a powerful, lasting impact. It had to be expanded. Needle and syringe programmes have also been expanded elsewhere, notably in some countries in Europe and in Australia. In 2000, in England and

Wales, there were 420 syringe-distribution programmes, distributing 27 million syringes, equivalent to 180–540 syringes per injecting drug user per year.

Dealing with the law

Evidence from high- and low-income countries shows that effective prevention and care programmes can be mounted despite the marginalization, social stigma and legally-penalizing environment that mark injecting drug users' lives. But the programmes tend to be most successful when laws and police practices facilitate outreach work and service provision to injecting drug users.

4

For many years, Manipur in India was emblematic of a region in the grip of a rising injecting-drug-related HIV epidemic. By the late 1990s, there were already an estimated 40 000 injecting drug users in Manipur, as many as 60% of whom were HIV-positive. To many observers, it seemed a 'lost cause'. But, after studies had revealed that most of the users shared injecting equipment because they feared arrest if caught with needles and syringes, the Society for HIV/AIDS and Lifelines Operations (SHALOM) took the bold step of setting up a needle- and syringe-exchange programme in Churachandpur township. Police were consulted and persuaded not to harass SHALOM workers or users found with injecting equipment. HIV incidence among users dropped from almost 77% in 1997 to just under 59% in 2001—still high, but a marked decrease. Persuaded by the effectiveness of the programme, the Manipur Minister of State for Health integrated the approach into the official State AIDS policy.

Bigger official obstacles were cleared in Ukraine, where, in 1998, the parliament added to a HIV/AIDS law the State's guarantee that it would work to facilitate the provision of needle-exchange services for injecting drug users. This hard-won law reform also abolished the mandatory testing of users. Political and public opinion at first had been fearful that the changes would spur drug use and other social problems. But a strong information campaign and widespread public debate gradually convinced voters and legislators that the reforms were ultimately going to benefit all society. Currently, in 2002, 37 needle-exchange projects operate in the country, and are estimated to reach around 20% of all users.

In Brazil, a law was approved by Congress in 2002, authorizing the Ministry of Health

to establish national policies for specific HIV programmes targeting injecting drug users (although pragmatic public health officials had already been implementing them for many years). A national survey among injecting drug users showed that consistent use of condoms in this population increased from 42% in 1999 to 65% in the year 2000. In the same period, syringe- and needle-sharing decreased from 70% to 41%. As a result, between 1996 and 2000, HIV prevalence among injecting drug users dropped in several cities. In Santos, Sao Paulo State, the drop was from 65% to 42%; in Salvador, from 49% to 7%; and in the city of Rio de Janeiro, from 25% to 8%.

Changing habits

Drug substitution programmes, along with a range of other health and referral services, have been successfully introduced in some places. An example is the Mexican nongovernmental organization, Companeros AC, which has run a programme since the mid-1990s, promoting detoxification and rehabilitation alongside specific HIV-prevention efforts targeting injecting drug users. It helps injecting drug users make behavioural changes that are realistic for them and that are most likely to be sustained—from outright cessation of drug use to adopting less harmful habits. Fieldwork is carried out in prisons as well as in the wider community. Information leaflets are distributed, along with packages containing condoms, bleach, and education leaflets. Rehabilitation services incorporate complementary treatments such as acupuncture and herbal medicine. Education and support are provided to the families and partners of people who inject drugs.

Prevention for prisoners

Removed from society, prisoners can be at special risk of HIV infection—mainly through injecting drug use, voluntary or forced sex, unsafe tattooing practices, and insufficient HIV-prevention information, education and services.

Many countries report at least some injecting drug use in prisons. Because needles are very difficult to obtain in these situations, sharing is particularly common and the potential for the spread of HIV significant. In Australia, about a quarter of prisoners inject drugs while incarcerated, according to a 2000 study. A study of 3200 imprisoned injecting drug users in seven European Union countries (Belgium, France, Germany, Italy, Portugal, Spain and Sweden) revealed that 45% of the respondents had injected drugs in prison, and 7% had started to inject while behind bars. Comparable statistics from low- and middle-income countries are less readily available. But some recent findings confirm anecdotal evidence that the risk of HIV infection through injecting drug use can be high. In Iran, for example, 10 prisons had reported HIV infection among injecting drug users by 2001, with one site reporting prevalence as high as 63%. HIV prevalence of jailed injecting drug users in a prison in Bali, Indonesia, was reported at 53% in 2000.

In an environment designed to administer legal punishments, it is not surprising that drug use by inmates is often met with further punishment. Yet this may backfire—and even increase injecting drug use among prisoners. Research into mandatory drug screening in United Kingdom prisons found that inmates shifted from smoking marijuana (which is

detectable in urine for several weeks) to injecting heroin (which disappears from urine after one or two days). Countries that, in the past, tried to counteract HIV transmission in prison with compulsory testing and isolation of HIV-positive inmates are now revisiting those policies. Ukraine, for example, recently introduced a new policy based on extensive education, the introduction of voluntary counselling and testing, the integration of HIV-positive prisoners, and confidentiality regarding HIV status.

Some prison systems are moving beyond offering information on HIV risks, towards safer injecting drug use by providing bleach to sterilize needles and syringes, making sterile needles available, and offering methadone maintenance treatment. Programmes addressing the specific needs of injecting drug users have also been supplemented with condom provision to reduce the sexual transmission of HIV.

Sex in prisons

Sex—consensual or forced—among inmates is another source of risk of HIV infection, especially in countries where HIV spread is already substantial. In a survey conducted among 1100 male prisoners in Russia, only 10–15% of them reported having had no sexual contacts while incarcerated. A survey in Brazil found that 73% of male prisoners had had sex with other men in penal institutions. Forced sex was widespread. Consensual and forced sex with men is also the experience of many female inmates. Prisoners taking part in a study of New York State prisons and city jails, for example, reported frequent unpro-

Reducing harm behind bars

Needle- and syringe-exchange programmes are still rare, but on the increase. Since the first prison-based syringe-exchange programme was set up at the Oberschöngrün prison for men in Switzerland in 1992, studies in similar programmes have confirmed their effectiveness. Needle-sharing declined dramatically, no cases of inmates acquiring HIV, hepatitis B or C were reported in any of the programmes, and no serious unintended consequences were encountered. By 2001, sterile needles were being distributed in seven Swiss prisons. German and Spanish prison authorities have successfully introduced needle-exchange schemes in several prisons, while Greece, Italy and Portugal are considering similar initiatives. HIV prevalence among Spanish prisoners has declined from 23% in 1996 to 17% in 2001, due largely to innovative programmes to prevent the spread of HIV among prisoners. Spanish prisons provide substitute programmes for heroin users (methadone programmes), and nine of the country's prisons have begun introducing needle- and syringe-exchange programmes. Education, counselling and condom distribution complement these activities.

4 tected sex in prison, including between male prison officers and female inmates.

Condom provision to prisoners is rare, except in Europe. By 2000, 16 high-income countries (together with Brazil and Costa Rica)

provided condoms in prisons. In Europe, the proportion of prison systems that had made condoms available rose from 53% in 1989 to 81% in 1997. In the most recent survey, condoms were available in all but four systems.

Sex workers and their clients

Sex work is clandestine and illegal in most societies, which makes it difficult to gauge the numbers involved in it. But it is a global phenomenon and a powerful social and economic factor in many countries. By the International Labour Organization's estimates, the sex work industry accounted for more than 2% of gross domestic product in four South-East Asian countries by the late 1990s.

In countries where heterosexual intercourse is the main mode of HIV transmission, HIV epidemics tend to be concentrated initially among sex workers and their clients before becoming established in the wider population.

A steep rise in HIV prevalence among sex workers is an alarm signal that HIV rates in the wider population are very likely to increase unless effective prevention efforts are introduced. In Abidjan, Côte d'Ivoire, for example, HIV prevalence rates among female sex workers went from 38% in 1987, to 69% in 1990, and 80% in 1992–1994. Major shifts in HIV prevalence among antenatal clinic attendees lagged about half a decade behind, rising from 3% in 1986, to 13.8% in 1999.

Where sex work is widespread but clandestine, this often reflects entrenched gender inequalities. In such places, men's social, economic

and political status eclipses that of women, double standards encourage multiple partners for men but not for women, and women's limited educational and livelihood opportunities compel many into some form of sex work. While economic necessity is often the driving motivation for many in sex work, it is not necessarily the only one. Research in the Philippine sex industry, for instance, has found that some sex workers operating out of bars and clubs had worked in formal employment (and still had that option), but opted instead for the slightly lower earnings and risks of the sex trade over the long hours working on assembly lines. Others are coerced into sex work through violence, debt bondage, or trafficking.

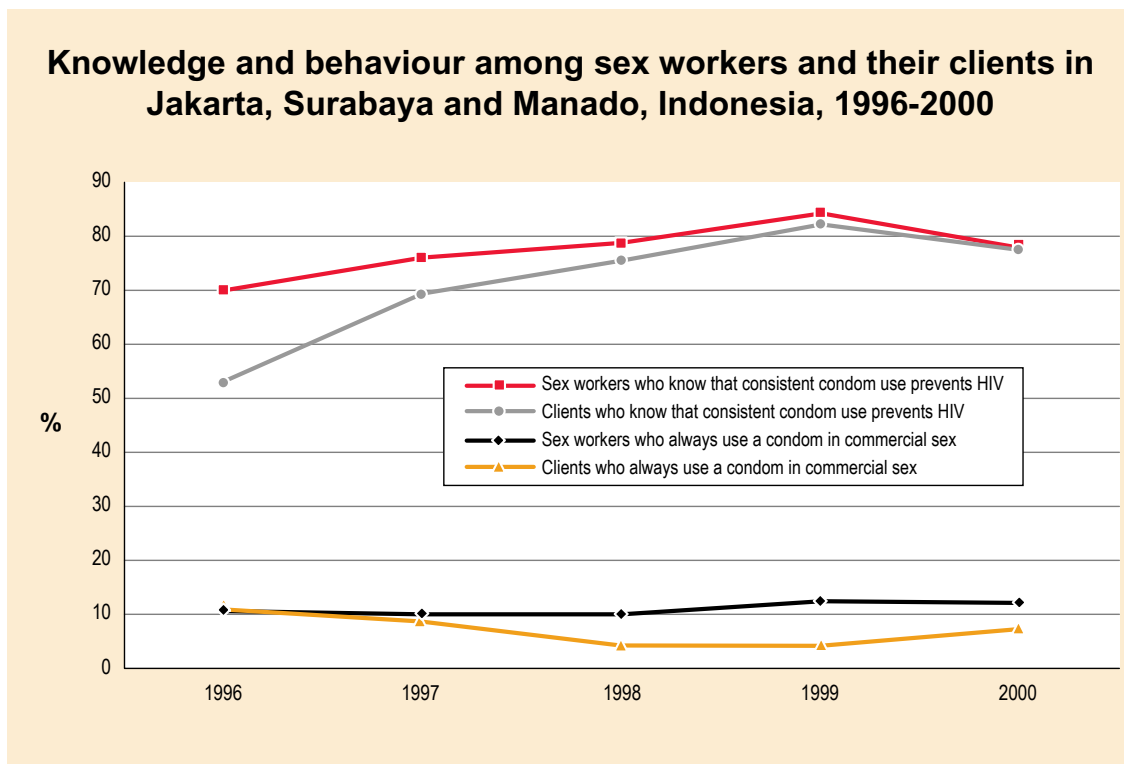
The gap between knowing and doing

It can be difficult or impossible for sex workers to insist on safe sex. Reluctant clients might react with violence or simply move on to someone willing to forego a condom. A recent analysis of condom use by sex workers in Kolkata, India, has found that clients were willing to pay almost double the fee for sex without a condom.

In parts of Indonesia, research shows that almost all sex workers know about HIV/AIDS and over three-quarters know it can be avoided by using condoms. However, as Figure 24 shows, there is a significant mismatch between these women's knowledge and practice. Male



Figure 24



Source: FHI (2001) *What drives HIV in Asia? A Summary of Trends in Sexual and Drug-Taking Behaviours*

clients were even less likely to always use condoms with sex workers, even though most knew that condoms could protect them from HIV and other sexually transmitted infections. The differences were consistent across the country.

Getting prevention right

Effective HIV prevention among sex workers addresses the social, economic and legal environments in which they live and work. Sex workers must be involved and empowered through the projects. Efforts must win the cooperation and support of control points in the sex industry, such as brothel owners, bar managers, pimps and the police. It is essential to tackle the prejudice that sex workers endure, and to weave other concerns into the programmes, such as care for their families and children.

The Sonagachi sex worker project in Kolkata, India remains a benchmark example of this

approach. About one-third of the 5000 sex workers operating there come from Bangladesh and Nepal. Most work out of brothels. Extensive surveys were done of sex workers, clients, boyfriends and sex workers' children's needs. Sex workers themselves took part in the project's design and operation. Gradually, the scale and impact of the project grew, as women's groups, legal rights organizations and some government agencies backed the sex workers' bids to reform the social system in which they worked.

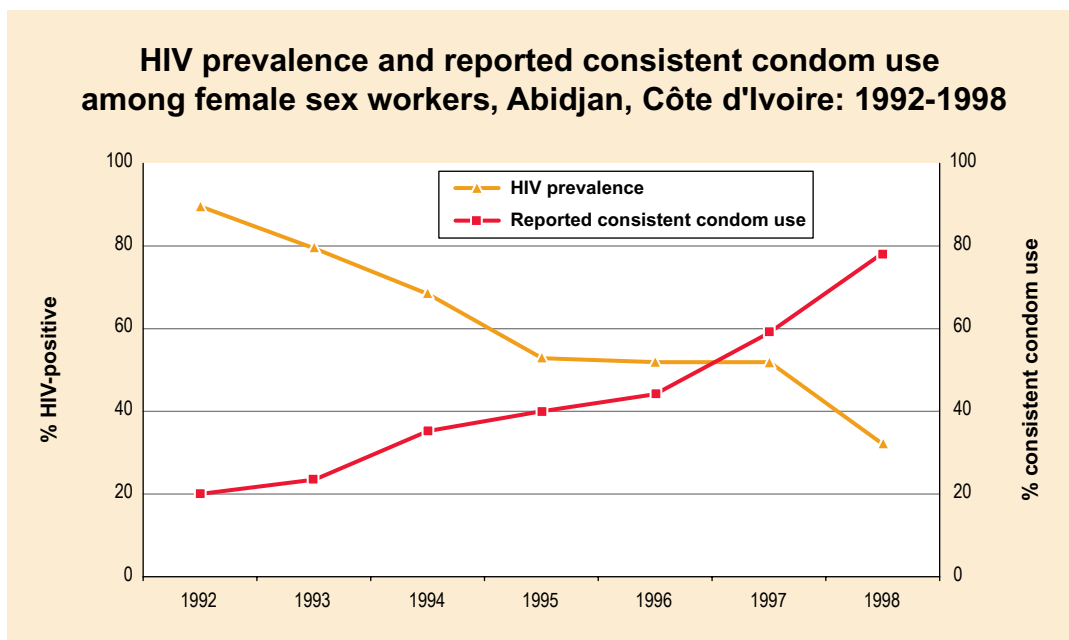
Sonagachi has been replicated in 30 red light districts reaching more than 31 000 sex workers in the state of West Bengal, and covering almost the entire state. The Sonagachi principle has also spread to Bangladesh, where both brothel- and street-based workers have been mobilized. Increasingly, in all these sites, sex workers' communities have been involved in community development, non-formal education, community banking schemes, vocational training, and children's schooling.

Peer education among sex workers

In West Africa, fairly large programmes using peer education have shown signs of success. In Abidjan, Côte d'Ivoire, the *Programme de Prévention et de Prise en Charge des MST/SIDA chez les Femmes Libres et leurs Partenaires* has worked closely with the *Clinique de Confiance* since 1991. In newly published findings of community-based surveys, 91% of sex workers reported using a condom with their most recent client, compared to 63% in 1991. Peer educators have also referred other sex workers to the *Clinique de Confiance* for confidential services such as diagnosis and treatment of sexually transmitted infections, as well as for HIV counselling and testing and health education. The overall prevalence of HIV infection among first-time attendees at the clinic decreased from 89% in 1992 to 32% in 1998, while reported consistent condom use increased from 20% to 78%.

Higher rates of condom use in sex work can be achieved. Recently-published findings of a study among sex workers in Cotonou, a low-HIV-prevalence city in Benin, show a significant rise in condom use (from 6% in 1993 to almost 81% in 1998/99) and a considerable drop in the prevalence of all sexually transmitted infections (including HIV, which fell from 53% in 1993 to just over 40% in 1998/99). The decade-long community prevention work undertaken among sex workers is credited with having helped achieve these reductions.

Figure 25



Source: Ghys PD et al. (2002) *AIDS*

Protecting rights, providing programmes

When sex work is illegal, it is driven deeper underground, and prevention efforts become more difficult. Sex workers (unlike their clients, usually) may be subject to police harassment, and carrying condoms can lead to arrest, fines or imprisonment.

However, important victories have been won for the protection of sex workers' human rights. Sex workers involved in Bangladesh's SHAKTI project helped achieve an important court decision recognizing sex work as a legal form of income-generation. In Papua New Guinea, the Transex project used a mixture of lobbying and activism to change the attitudes of the local police force, reducing its power over sex workers' lives and preventing it from obstructing the project.

In Caracas, Venezuela, the *Asociación de Mujeres por el Bienestar y Asistencia Reciproca* has been able to improve lives and safeguard the civil and political rights of sex workers since 1995. Recruited and trained as health promoters, a group of 40 sex workers have provided education in human rights, sexual and reproductive health, and HIV/sexually transmitted infection prevention to other women. They have also become the catalysts for a long-term programme that involved club, hotel and bar owners in the social marketing of condoms and information distribution. The association has made legal and psychological counselling available, and set up a system for channelling sex workers' claims of harassment to other non-governmental organizations capable of taking them up. Since the association began its work, police harassment has decreased, and bar and club managers now sell condoms in their establishments at affordable prices.

Uniformed services

International and national uniformed services, including peacekeepers, peace observers, national defence and civil defence forces, generally rank among the population groups most affected by sexually transmitted infections, including HIV/AIDS. In peacetime, sexually transmitted infection rates among armed forces are generally two-to-five times higher than in the general populace. This difference can be much greater in times of conflict, with infection rates increasing as much as 50 times.

ing mission in Cambodia found that 45% had sexual contact with prostitutes or other members of the local population during their deployment.

In some cases, the high level of HIV/AIDS in the military can undermine its overall preparedness and, thus, increase the risk of insecurity. Ministries of Defence of countries in sub-Saharan Africa report HIV prevalence averages of 20–40% within their armed ser-

Declaration of Commitment

By 2003, have in place national strategies to address the spread of HIV among national uniformed services [...] and consider ways of using personnel from these services who are educated and trained in HIV/AIDS awareness and prevention to assist with HIV/AIDS awareness and prevention activities [...] (paragraph 77).

United Nations General Assembly Special Session on HIV/AIDS, June 2001, New York

The military environment

Several aspects of the military environment put its armed forces personnel at risk, including the fact that most soldiers are in the age group at greatest risk of HIV infection (15–24 years), as well as the ethos of risk-taking that characterizes the military. Yet, one of the most important factors that increase the risk of infection is the practice of posting personnel away from their own communities and families. Not only does this free soldiers from the discipline they might be subject to in their own communities, but it also removes them from their spouses or regular sexual partners. The resulting loneliness, stress and sexual tension increase risk-taking. A study of Dutch soldiers on a five-month peacekeep-

ing mission in Cambodia found that 45% had sexual contact with prostitutes or other members of the local population during their deployment. In some cases, the high level of HIV/AIDS in the military can undermine its overall preparedness and, thus, increase the risk of insecurity. Ministries of Defence of countries in sub-Saharan Africa report HIV prevalence averages of 20–40% within their armed ser-

vices, and rates of 50–60% in countries where HIV/AIDS has been present for more than a decade. According to a US National Intelligence Council document, the military cost of AIDS is likely to be highest among the more modernized armed forces in sub-Saharan Africa, and especially in their officer ranks. As more officers and key personnel fall ill, the combat readiness and capability of such military forces are expected to deteriorate.

HIV/AIDS also jeopardizes the families and communities of military personnel. In many countries, a large number of young males either volunteer for, or are conscripted into, military services. When defence and civil defence forces are demobilized, there is a risk of broadening the spread of HIV.

Defending against AIDS

Military and other uniformed services need to address HIV/AIDS within their ranks and among those they have a mandate to protect. Changing the perception and behaviour of soldiers, police officers, border and customs officials can produce significant benefits for the general population. This is especially true in countries affected by war or civil unrest. Uniformed services also represent a unique opportunity for providing HIV prevention and education to a large ‘captive’ and influential audience—particularly the new young recruits, who represent an important peer group both within the uniformed services and their own wider communities.

An increasing number of countries (including Botswana, Chile, the Philippines, Thailand and Zambia) have successfully implemented prevention measures within their armed forces. In February 2000, Ukraine’s Ministry of Defence launched a prevention programme to increase the HIV-related knowledge and skills, as well as to alter the behaviour, of its military personnel. Prevention training and counselling were provided to more than 200 military psychologists, who subsequently

reached 20 000 soldiers and officers; material was developed for military educational institutions; and 180 000 condoms were distributed to the soldiers and officers. The US Department of Defense, as part of the ‘LIFE’ project, has also been a key player in promoting AIDS awareness among uniformed services personnel, in collaboration with the United Nations Population Fund and the UNAIDS Secretariat.

An important first step in defending against AIDS is to create a non-stigmatizing and non-discriminatory environment. This begins with full confidentiality for HIV testing—something not every country supports. Nevertheless, an Expert Panel, convened by the Executive Director of UNAIDS in early 2002, concluded that mandatory testing is not the most effective means of preventing the transmission of HIV in the context of peacekeeping, and that HIV tests, in and of themselves, do not efficiently prevent the transmission of HIV. The Panel stressed that voluntary counselling and testing should be provided to peacekeeping personnel and should be offered as part of a comprehensive range of integrated HIV prevention and care services.

Botswana shows the way

UNAIDS believes that military personnel who test positive for HIV should continue to perform the tasks for which they have been trained and can still execute. In addition, armed forces should provide care and support for personnel and family members living with HIV/AIDS, including continuity of care when they return to civilian life.

Among the uniformed services that have adopted this position is the Botswana Defence Force. It treats its HIV-positive military personnel in the same way as uninfected personnel. They are deployable within Botswana and are not discharged from service until they fail to meet certain performance standards. Even then, full medical benefits are extended to them and their beneficiaries. HIV testing is voluntary and confidential, and military personnel selected for training in countries that have mandatory HIV screening can refuse the training, with no penalties to the advancement of their careers. In addition, all Botswana Defence Force members and their families receive HIV-prevention counselling and education.

New prevention technologies

Potential technologies currently being pursued also hold the promise of radically changing the landscape of HIV/AIDS prevention. Most prominent are microbicides and vaccines against HIV.

Microbicides: the ultimate in female-initiated prevention?

As a form of ‘chemical condom’ that can be self-administered, microbicides could increase the options for women and men who find it difficult or impossible to persuade their partners to use a condom. Acceptability studies in South Africa, Uganda and Zimbabwe suggest that women who seldom or never use condoms could reduce their overall risk of infection if an effective microbicide were available to them at low cost.

Applied inside the vagina or rectum, a microbicide is intended to prevent infection with HIV and, possibly, other bacterial and viral sexually transmitted infections. It can be produced as a gel, cream, suppository, sponge or in other forms, and may also have contraceptive (spermicidal) properties. The ideal product would be odourless and colourless, and therefore undetectable to partners who refuse other forms of protection.

After the disappointment of the Phase III trial of nonoxynol-9 gel, an estimated 56 new products are in various stages of development, from pre-clinical stages to Phase III effectiveness trials. While no major pharmaceutical company has thus far invested in the development of a microbicide, research into this preventive option has recently been spurred by several grants from the Bill and Melinda Gates Foundation. The International Working Group on Microbicides, which includes public agencies from around the world among its members, continues to promote and facilitate the development of microbicides.

Vaccines: preparing for their arrival

Research to find a vaccine against HIV has been making steady progress in the past 10 years. Unfortunately, ‘steady’ is not fast enough for all the people who could benefit from it. Even if current attempts to speed up the research process and programmes for the introduction of vaccines are successful, there is little chance that vaccination against HIV will be available on a large scale before the end of the decade.

Declaration of Commitment

Encourage increased investment in HIV/AIDS-related research nationally, regionally and internationally, in particular for the development of sustainable and affordable prevention technologies, such as vaccines and microbicides, and encourage the proactive preparation of financial and logistic plans to facilitate rapid access to vaccines when they become available (paragraph 89).

United Nations General Assembly Special Session on HIV/AIDS, June 2001, New York

Why is finding a HIV vaccine so difficult?

An estimated US\$400–500 million is currently spent on HIV vaccine research annually, with most of this going into basic research. Institutions involved in the global HIV vaccine effort include the US National Institutes of Health, the International AIDS Vaccine Initiative (IAVI), the US Centers for Disease Control and Prevention, the French *Agence Nationale de Recherches sur le SIDA* (ANRS), the European Community (through the EUROVAC programme), and several biotechnology and pharmaceutical companies. National AIDS vaccine research programmes are ongoing in Australia, Canada, Japan, Sweden, the United Kingdom and the United States of America. Low- and middle-income countries (including Brazil, China, Cuba, Haiti, India, Kenya, South Africa, Thailand, Trinidad and Tobago, and Uganda) are also actively involved in vaccine development and trials. WHO and UNAIDS have been actively supporting these national AIDS vaccine programmes.

Despite all this activity, the peculiarities of the HIV virus make finding a vaccine difficult and expensive. HIV differs from most other infectious diseases in that the virus directly attacks white blood cells that are central to directing the body's immune responses, leaving them incapable of controlling infection or preventing disease. 'Classical' vaccines, based on an entire microorganism (viruses or bacteria) that has been killed or rendered harmless, may not be safe enough to use against HIV as they could lead to HIV infection. Experimental HIV vaccines are therefore primarily based on parts of the virus, which makes the development of a vaccine even more challenging.

The multiple variants of HIV pose a further complication. Ten subtypes of the HIV-1 virus have been identified, and are distributed in different parts of the world. Researchers do not yet know whether a broadly protective vaccine will be possible or if a separate vaccine will be needed for each subtype. The most prevalent HIV subtypes are A and C, present in different regions in Africa, but the majority of the vaccines currently in trials are modelled on the genetic profile of subtype B—the one predominant in high-income countries.

Finally, HIV vaccine research remains a 'high-risk/low-return investment' for private sector industry. This is only partly because the greatest need for the vaccine is among low-income countries. An even greater obstacle—at least currently—is the inadequate scientific understanding of the mechanisms by which the virus evades the body's natural immune responses. Consequently, it is not known exactly what immune responses are necessary to prevent or control HIV infection.

Where are we now?

Developing a HIV vaccine is an arduous process. Experimental vaccines are first tested on animals, and the best vaccine candidates are then selected for possible testing on humans. Testing is then carried out on healthy volunteers in three phases. Phase I trials are done on 20–40 volunteers to confirm the vaccine's safety and whether it triggers useful HIV-specific immune responses. Phase II tests involve hundreds of volunteers to further check safety and assess the potency of immune responses. Phase III tests can last up to four years and involve field trials with thousands of volunteers, some of whom receive the vaccine while others form a control group. Extremely complicated from the logistical, sci-

entific and ethical points of view, these trials assess whether the candidate vaccine protects against HIV infection or the onset of AIDS.

Definitive results of the first Phase III trials of a candidate vaccine based on gp120 (an external protein of HIV) are expected in 2003. The first Phase III trial, with 5400 volunteers, has been ongoing in the United States, Canada and the Netherlands since 1998, and is based on subtype B. The second Phase III trial began in 1999 in Thailand, and is based on the B and E subtypes prevalent there, involving 2500 volunteers. Planning is under way to initiate a Phase III trial of another approach in Thailand in 2003, and additional candidate vaccines are entering Phase I/II trials.

An African AIDS Vaccine Programme, announced in Nairobi in June 2000, is bringing together African scientists, governments and institutions. They aim to complete at least one efficacy trial by 2007.

Providing the vaccine

While a useable vaccine is still many years away, discussion has begun on how to implement vaccination programmes once one exists. Usually, vaccines only arrive in low- and middle-income countries many years after they have recouped their costs in high-income countries. This cannot be allowed to occur with effective HIV vaccines, which need to be rapidly available and affordable to all who need them.

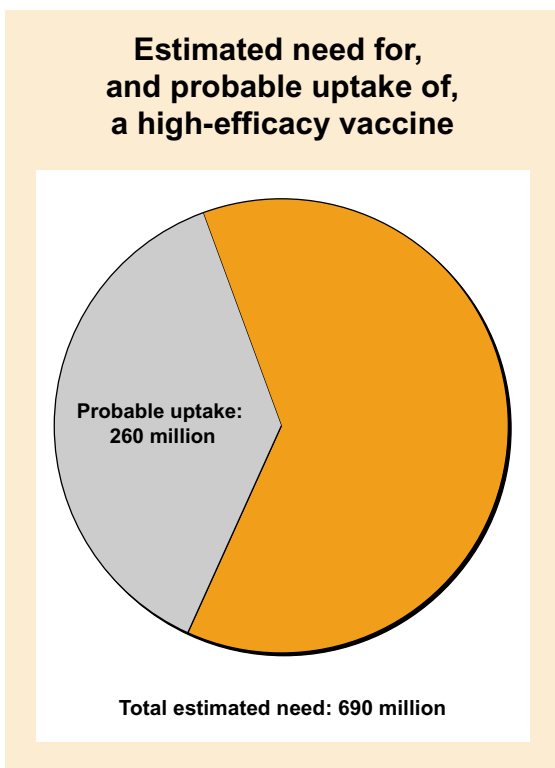
Mechanisms to ensure simultaneous access to AIDS vaccines in both low- and high-income countries must be prepared long before a vaccine is developed, in order to provide quick access to those who need it. The International AIDS Vaccine Initiative and others are propos-

ing significant changes to existing approaches to vaccine production, licensing, pricing, purchasing and distribution. Among other issues is the need to harmonize national regulations and international guidelines governing vaccine approval and use. An important technical challenge will be that of creating the necessary production capacity, and supporting it with reliable estimates of demand for specific vaccines.

Many of the challenges in ensuring that a vaccine is available—and affordable—are similar to those relating to expanding access to antiretroviral drugs. Differential pricing, together with financial support from donors, will almost certainly be necessary for low-income countries. Technical assistance and coordination by international agencies will be needed. There are policy conundrums, too. Since the vaccination will not immediately be available to everyone, costs and benefits have to be calculated to determine where the initial focus should be. Policy-makers must also decide what to do if the first available vaccines are only marginally effective or have significant side effects.

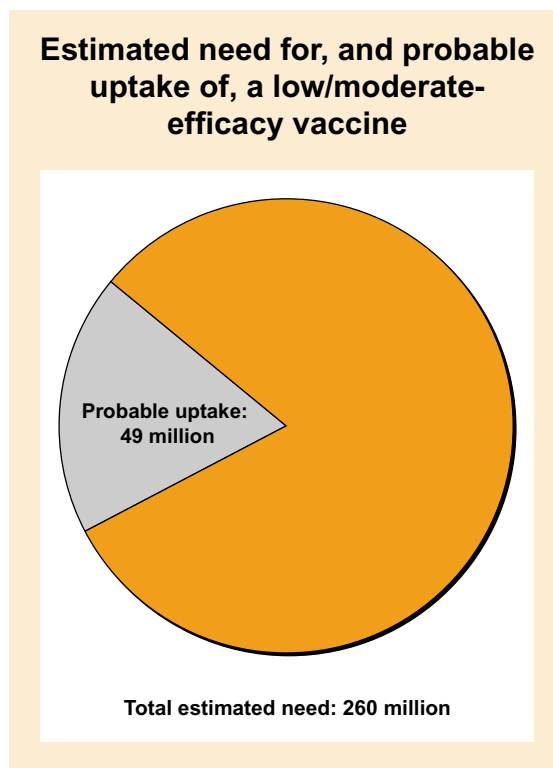
WHO, UNAIDS and IAVI have collaborated on a study aimed at estimating the need for, and probable uptake of, preventative vaccines based on two potential scenarios: a low/moderate-efficacy vaccine (30–50% effective) and a high-efficacy vaccine (80–90% effective). A vaccination programme using a low/moderate-efficacy vaccine would need to be accompanied by intensive positive-behaviour counselling, so as not to undermine existing prevention efforts. Furthermore, it would be likely to have the most benefit if vaccination were targeted at populations most vulnerable to HIV infection. A high-efficacy vaccine could be delivered to larger segments of the general population.

Figure 26



Source: UNAIDS/WHO, 2002

Figure 27




Source: UNAIDS/WHO, 2002

Although it is difficult to predict the uptake of vaccines, in the absence of information on the cost of the vaccine itself and on the requirements for delivery (such as whether a vaccine requires cold storage, oral delivery versus delivery by injection, etc.), the study concluded that the probable uptake would be far less than the estimated need, both for a low/moderate- and a high-efficacy vaccine.

The unique stigma associated with HIV/AIDS may significantly hinder the uptake of HIV vaccination, once it becomes available. Discrimination faced by many of the communities most vulnerable to HIV infection may

prevent individuals from coming forward for vaccination, particularly if programmes are focused only at individuals who might be at high risk of infection.

When an effective HIV vaccine is available, the international community and affected countries will have to make many critical decisions on how to use it. Extra investment in HIV/AIDS prevention and control will be necessary. Ultimately, however, this extra investment could yield a significant pay-off after a number of years, resulting, finally, in the reversal of the epidemic. 

Focus:

AIDS and the world of work

Declaration of Commitment

By 2005, strengthen the response to HIV/AIDS in the world of work by establishing and implementing prevention and care programmes in public, private and informal work sectors, and take measures to provide a supportive workplace environment for people living with HIV/AIDS (paragraph 49).

United Nations General Assembly Special Session on HIV/AIDS, June 2001, New York

4

A crucial workplace issue, AIDS holds serious implications for entire national and regional economies (see ‘The mounting impact’ chapter). In all countries, it poses a threat to livelihoods and to basic rights at work, undermining efforts to guarantee decent, productive work to women and men. Examples of discrimination against HIV-positive persons (or even against people suspected of being seropositive) include actions such as compulsory testing to deny employment, promotion or health insurance. But the world of work is also an ideal site for fighting back against AIDS. It was in recognition of this that the International Labour Organization (ILO) became UNAIDS’s eighth Cosponsor in October 2001.

The ILO Code of Practice on HIV/AIDS and the World of Work

In June 2001, the International Labour Organization adopted a Code of Practice on HIV/AIDS and the World of Work. It was finalized by a Meeting of Experts from all regions, made up of representatives from government, and employers’ and workers’ organizations. The fundamental aim of the Code is to help safeguard conditions of decent work and protect the rights and dignity of workers and all people living with HIV/AIDS.

Based on international standards, the Code is intended to help prevent the spread of the epidemic, lessen its impact on workers and their families, and offer care and support, including social protection. It provides practical guidance to the main stakeholders—governments, employers and workers’ organizations—for developing national and workplace HIV/AIDS policies and programmes, while recognizing the contribution that can be made by other parts of civil society.

The Code presents a variety of important preventive actions that can be taken, including information, education and gender-awareness programmes. It deals with the protection of workers’ rights, including employment security, gender equality, entitlement to benefits and non-discrimination. Guidance on care and support is also provided.

Workplace programmes

In recent years, more and more employers and trade unions have set up workplace programmes. The most effective programmes involve workers and representatives from management, health services and local communities in the planning and monitoring processes. The recommended components of a workplace AIDS programme include:

- widely communicated and properly implemented equitable HIV/AIDS policies to counter stigmatization and discrimination;
- ongoing formal and informal HIV/AIDS preventive education for all staff, particularly through peer education;
- promotion and distribution of condoms;
- diagnosis, treatment and management of sexually transmitted infections, for employees and their sexual partners; and
- HIV/AIDS voluntary counselling and testing.

Increasingly, and where resources permit, workplace programmes are integrating care and support services for HIV-positive employees and their families.

Adapting programmes to local conditions

It is essential that workplace programmes be adapted to local conditions, and draw on local strengths and opportunities. In Kenya, for instance, all the companies belonging to the Kenya Tea Growers Association have AIDS coordinators and committees, and some offer voluntary counselling and testing onsite. A

particular feature of these committees is the appointment of a 'Mama Condom' and 'Baba Condom' at every workplace. These are workers who are already figures of trust among their workmates, whom people can approach for condoms, advice and counselling.

Since few employers or trade unions have in-house expertise on AIDS, collaboration with specialist nongovernmental organizations or health authorities is a good option when setting up workplace AIDS programmes. In the Philippines, the Remedios AIDS Foundation has launched several workplace AIDS programmes within large companies. The first was with the Pilipinas Shell Petroleum Company, which embarked on its HIV/AIDS workplace effort in 1993 as part of an occupational health programme. The Foundation helped it develop corporate policy and provide worker education, of which peer education has become an important part.

Similarly, in Côte d'Ivoire, the Abidjan Centre for Bioclinical Research and Care has provided AIDS prevention training for employers since the late 1990s. While its first clients were governmental institutions (including the army and police), the centre has also worked with large private sector clients, including the telecommunications company Ivoire Telecom.

Most companies have so far decided that they cannot afford antiretroviral therapy, although this may be starting to change, with major reductions in price (see 'Care, treatment and support' chapter). The ILO Code of Practice encourages employers to offer information, counselling and cheaper medication, where possible, and urges governments to regard

Swaziland pushes voluntary counselling and testing in the workplace

In high-prevalence areas or in industries where workers are at particular risk, voluntary counselling and testing are especially important. This has been recognized in Swaziland, where an employers' anti-AIDS coalition has been set up to include not only the larger companies (who generally find it easy to set up HIV/AIDS programmes once they have decided to commit sufficient resources), but also small and medium-size enterprises. The coalition has adopted a slogan to promote voluntary counselling and testing among employees: 'Know your status; the sooner you know it, the sooner we can help.' Nongovernmental organizations have been enlisted to provide voluntary counselling and testing and condom distribution. The Swazi Business Coalition has also developed a one-page policy statement for use by all its members, based on the 10 key principles of the ILO Code of Practice.

care as part of a wider package of social protection. The employers' association Business South Africa reports that increasing numbers of its members are offering drugs for opportunistic infections, as well as 'Healthy Living' programmes that offer information about nutrition, exercise and stress as part of a positive approach to living with HIV.

Reaching outside the formal economy

Workers outside the formal economy are too often ignored in public health efforts. Yet, in many low- and middle-income countries, the informal economy employs far more people than do the public or formal private sectors. These workers typically lack income security, health insurance and other benefits, and seldom enjoy labour law protection. Because of the obstacles to their entry into the formal job market, women often represent the majority of those in informal work, making them even more vulnerable to the economic effects of the epidemic.

Enterprises in the informal economy are usually small and labour-intensive, relying heavily on one or a few operators. When a worker

falls sick and eventually dies, it can be very difficult for these small enterprises to stay in business. The precarious nature of informal employment, the lack of social protection and limited access to health services also worsen the impact of the epidemic for individual workers.

Workers in the informal economy are often organized into associations or groups, and the ILO works with several of these. Increasingly, this assistance includes training for AIDS prevention and social protection measures such as health insurance. Work among micro- and small enterprises includes a business awareness programme for sex workers and the 'Start and Improve your Business' programme, which is integrating HIV/AIDS into training in Africa. Other programmes offer technical support for the setting up and strengthening of local micro-insurance schemes in order to increase access to health care. A pilot project is under way in Burkina Faso to adapt this approach to HIV/AIDS-related needs.

Reaching out to specific groups

Prevention activities often need to be tailored to particular populations. This is also true in the

world of work, where miners, transport workers, migrant labourers and members of unformed services can be especially vulnerable to HIV/AIDS. The workplace is also an ideal site for outreach work among young people who work for a living. It offers possibilities not only for peer education, but for the creation of positive peer pressure to support behavioural change. The Youth Committee of the Confederation of Mexican Workers, for example, has developed programmes on reproductive health, contraceptive use, and HIV/AIDS, which are aimed at young workers and, in an interesting innovation, also at workers' children.

Innovative workplace programmes in South Africa's goldmines

Workplace programmes on HIV/AIDS tend to be more effective when they take into account the wider realities of workers' lives and communities. The gold-mining districts of South Africa are good examples. These attract thousands of workers, often from poor and remote regions. Most live in hostels, separated from their families. As a result, a thriving sex industry operates around many mines, and high HIV prevalence rates are common. In recent years, mining companies have been working with trade unions, nongovernmental organizations and health authorities to implement prevention programmes for the miners. These have included mass distribution of condoms, medical care and treatment for sexually transmitted infections, and awareness campaigns. However, work and social conditions make it difficult to achieve and sustain reductions in HIV and other sexually transmitted infection levels.

Targeting the male mineworkers is only half the job. Collaboration between Family Health International and the Harmony Gold Mining

Company in the Free State Province revealed that the sexual health of miners could also be safeguarded through the provision of care and treatment for sexually transmitted infections and other health services to sex workers and women in surrounding communities. Results were impressive. Prevalence of sexually transmitted infections among women receiving the services dropped by as much as 85% in nine months. At the same time, routine annual examinations among miners revealed 43% lower rates of gonorrhoea or chlamydial infection and 78% fewer genital ulcers. In an effort to tackle the root causes of risky sexual behaviour, trade unions in the mining sector are now negotiating with employers over the provision of accommodation for families.

The programme is being replicated in other South African mining communities by a variety of partners, including Goldfields Ltd, Joel Mine, branches of the National Union of Mineworkers, and local, state and national health structures.

Bolstering multisectoral approaches

National coordinating bodies are also realizing the importance of bolstering the response through the workplace, and of including organizations with specific expertise in this area. Recently, India's National AIDS Control Organization (NACO) set up a technical resource group at the V.V. Giri National Labour Institute to develop research and training resources for workplace AIDS programmes. The Institute's partners in this effort include trade unions, employers' organizations, companies, NGOs undertaking HIV projects in the informal sector (notably with truck drivers and migrant workers), State or district AIDS Control Societies, and ILO.

Playing to company strengths

Over the past five years, the UNAIDS Secretariat and some of its Cosponsors have worked closely with Music Television (MTV) in an effort to reach out to young people and talk to them in their language about issues that interest and involve them. This unique partnership has built on MTV's strengths as a global television network and leading multimedia brand for young people, using their distribution platform and rights-free distribution to other broadcasters to reach some 900 million households worldwide with HIV/AIDS messages. The partnership has included the production of an award-winning series, 'Staying Alive', focussing on the lives of individual young adults living with HIV/AIDS around the world. In addition to being shown on all MTV channels, the series has been aired by many major networks, including China Central Television, South African Broadcasting Corporation, TV Africa, Channel News Asia and RTR Moscow, to name a few. Together with UNAIDS, MTV has encouraged many celebrities to record prevention messages that have been widely distributed and used in public service announcements in many countries. A booklet for MTV presenters and celebrities, entitled *Talking about AIDS*, has also been produced.


International collaboration

In a growing number of countries, companies have formed business coalitions to pool resources and help each other to respond better to the crises in their workplaces and communities. This has also been done at the international level, with the creation of the Global Business Council in 1997. The Council works to help businesses combat AIDS in a wide range of ways, beginning with protecting and supporting workers, harnessing their commercial strengths to make existing AIDS programmes more effective, and demonstrating their leadership and advocacy for AIDS causes. The Council has undertaken a variety of publications, media campaigns and direct advocacy efforts to help keep HIV/AIDS at the top of national and international agendas. With a membership of 32 companies, the Council is supported by its members and also receives funding from the Open Society Institute, the United Nations Foundation, the Bill and Melinda Gates Foundation, and the UNAIDS Secretariat.

In late 2001, the Council published a set of guidelines—*Employees and HIV/AIDS: Action for Business Leaders*—in which it called on companies to implement comprehensive prevention, voluntary counselling and testing, and care programmes. Using concrete examples of programmes from Africa, Asia and Latin America, the Guide is targeted at chief executives and senior company directors, demonstrating that employee HIV programmes make strong business sense and are cost-effective and feasible.

Trade unions are also working on global responses through their own international structures. The International Transport Workers' Federation (ITF) has become involved in individual projects. Following a detailed study, the ITF developed a project for truck drivers in Uganda, mainly focused on prevention. It includes innovative features such as negotiating with government authorities to reduce formalities at borders, thereby shortening the waiting times for drivers and their crews, and thus reducing their opportunity to purchase

sex while at the stop. The International Confederation of Free Trade Unions, meanwhile, mobilizes national trade union centres against AIDS through its regional offices, while other initiatives are taking place within specific industries. One such example can be seen in the work of Education International—the international union federation for teachers and workers in edu-

cation. The secretariat has been active on AIDS issues since 1993, building up an alliance with WHO, UNESCO, the UNAIDS Secretariat and other partners. Reacting to requests for materials from both unions and governments, the secretariat consulted WHO and teachers in eight countries to develop its *Training and Resource Manual on School Health and HIV/AIDS Prevention*. 

Focus:

AIDS and mobile populations

Declaration of Commitment

By 2005, develop and begin to implement national, regional and international strategies that facilitate access to HIV/AIDS prevention programmes for migrants and mobile workers, including the provision of information on health and social services (paragraph 50).

United Nations General Assembly Special Session on HIV/AIDS, June 2001, New York

Migration and mobility play important roles in the HIV/AIDS epidemic. But the relationship is complex. Not all migrants or people on the move face special risks of infection. Still, the links between mobility and AIDS are evident in most parts of the world, as these examples show:

- **Migrant workers:** Of the Filipinos reported to be living with HIV/AIDS, 28% are workers who have returned home after working in other countries. About 41% of HIV-positive Bangladeshis have been migrant workers.
- **Mobile professions:** Research among truck drivers at five South African truck stops revealed an overall prevalence of 56%—well above the national adult prevalence rate.
- **Migrant and trafficked sex workers:** Research in the Terai area of Nepal revealed that the 17% of sex workers who had worked in India accounted for three-quarters of all HIV cases. About 30% reported that they had been coerced; testing revealed that these women were three times more likely to be HIV-infected than other women.
- **Partners of migrant workers:** The beginning of the HIV epidemic in rural Mexico can be traced to the return of agricultural labourers who had been working in the United States of America.

Understanding migration

Never before in human history have more people been on the move. Recent estimates suggest that some 150 million migrants (people who take up residence or who remain for an extended stay in a foreign country) cur-

rently live outside their country of citizenship. One-in-ten of these are liable to be refugees and asylum-seekers. Even greater numbers of people move within their countries each year. In fact, economic migration from rural to urban areas is probably the largest single category of modern migration.

The International Organization for Migration (IOM) has devised a useful framework for research and HIV/AIDS programming whereby migration is characterized as a process with four stages. Effective HIV/AIDS responses must address each stage:

- **Source:** where people come from, why they leave, and what relationships they maintain at home while they are away.
- **Transit:** the places people pass through, how they travel and their behaviour while they travel.
- **Destination:** where people go, the attitudes they encounter, and their new living and working conditions.
- **Return:** the changes that have occurred in people's lives, and the conditions they find upon their return.

People move for a variety of reasons—some voluntary, some not. Economic migration is largely (but not entirely) a question of supply and demand. Prosperous countries, notably in North America, Western Europe and the Gulf States, attract people looking for work; others, in poorer regions, are highly dependent on the income earned by citizens who work in other countries. The Philippines, for instance, has about 8% of its citizens working overseas (out of a total population of 77.1 million), the majority of them women.

Tragically, a significant proportion of today's population movement is involuntary. This includes refugees and internally displaced people pushed from their homes by conflict or disaster. The Office of the United Nations High Commissioner for Refugees has estimated that there are currently some 40 mil-

lion people worldwide who have been driven from their homes by emergencies caused by natural disasters such as earthquakes, drought or floods, or else by war and civil strife, and who are living as refugees in foreign lands or as displaced persons within their own countries. Some have remained in these precarious situations for 20 years or more, and the camps to which they retreated have become more or less permanent settlements.

Also involuntarily on the move are people who are trafficked—as many as 1–2 million annually, according to some estimates—mostly for prostitution and forced labour. Of these, the overwhelming majority are women and children. Such trafficking is thought to be one of the biggest sources of profits for organized crime, following drugs and firearms.

Mobility and vulnerability

Vulnerability is often related to a particular stage of the migration process. For example, some migrants are most vulnerable at their destination, as is often the case with men who work far from home in men-only camps or barracks. For others, the greatest risk occurs in transit, as with women who have to trade sex in order to survive or complete their journeys.

Also vulnerable are the partners of those who become infected while away, especially married women. Their vulnerability is worsened when they lack the right or ability to deny their partner sex or insist he use a condom, even if they suspect he may have had unsafe sex while away.

Nevertheless, it would be incorrect to assume that migrants generally bring AIDS with them. Comparison of forced migrations in Africa reveals that, in some cases, such as Somali

refugees in Ethiopia, prevalence among the migrants is less than that of the host population. The same can be true of labour migration. In India, the more industrialized states of Maharashtra, Gujarat and Andhra Pradesh attract both male and female workers from all over the country, but particularly from those states with lower income levels. Some of these lower-income states have lower levels of HIV infection than the destination states. The fact that migrating men generally leave their wives and families behind increases the likelihood that they will visit sex workers while away from home—a risk factor for both them and their families when they return home.

Action research needed

Efforts to tackle the link between migration and AIDS are complicated by the fact that few countries collect information or do research about the HIV-related needs of migrants. This is true even in countries that have mounted generally successful AIDS responses. For instance, neither Uganda nor Thailand has collected data on HIV among their substantial forced-migrant populations. Yet Uganda hosts about 185 000 refugees, Thailand about 188 000, and both have large numbers of undocumented migrants. Most of what is known about these populations is the result of research by nongovernmental organizations and international agencies.

An important part of a response, then, even before prevention or care programming is planned, is the collection of information. The methodologies for rapid situation assessment already exist. An example is a study carried out by CARE, Family Health International, the Thailand Business Coalition on AIDS, and World Vision Thailand, which looked at the maritime industry in Thailand's Ranong Port.

After identifying risk conditions for HIV and for substance use in the area, the researchers were able to pinpoint opportunities to tailor interventions for the various fishing fleets, routes and type of vessel.

Prevention begins at home... but can not stop there

One of the basic rules of HIV prevention is that it is best to start early. This means reaching people before they depart for work overseas or away from home.

The Philippines provides a good example of what can be done. Knowledge levels about HIV are now relatively high among Filipino overseas workers, compared to those of other countries. This is partly due to national programmes (such as the Pre-Departure Orientation Seminars) that include sexually transmitted infections and AIDS in their curricula. A recent study indicated that Filipina maids working in Malaysia were well aware of the risk of AIDS and how to prevent it. In contrast, the study found that, among Bangladeshi women working in Malaysia, the level of AIDS-related awareness was low.

Such findings have led CARAM Asia (Coordination of Action Research on AIDS and Mobility), a partnership of seven nongovernmental organizations in the region, to link programmes in source and destination countries. CARAM Bangladesh now provides pre-departure training for women going to Malaysia, with returned migrants helping to provide the training. Upon arrival, CARAM Malaysia offers them support in protecting their reproductive health. A similar arrangement exists between CARAM Cambodia and CARAM Viet Nam.

Prevention along migration routes in West Africa

Originally launched along the heavily-travelled corridor between Abidjan in Côte d'Ivoire, and Ouagadougou in Burkina Faso, USAID's programme, AIDS Prevention on the Major Migratory Routes of West Africa (*Prévention du SIDA sur les Axes Migratoires de l'Afrique de l'Ouest*), now spans four countries, including those with the highest rates of HIV prevalence in the region. Strategies employed by the project include social marketing, mass media campaigns, and the use of peer education among the target groups, including truck drivers, sex workers and seasonal migrant workers in plantations. Evaluations suggest that safer sexual practices have increased since the beginning of the interventions in 1998. A comparison of data from studies conducted in Burkina Faso in 1997 and 2000 revealed that reported condom use among truckers during their last sexual act with an occasional partner had increased from 69% to 90%.

Prevention at destination

In the case of international migration, destination countries sometimes assume that migrants are particularly hard to reach with HIV/AIDS programming. Reasons cited generally include language barriers, cultural differences, suspicion of government authorities (including health services), and concerns about legal status. However, it seems more useful to recognize that some migrant communities have to be reached in different ways.

As with other vulnerable groups, health authorities have to carefully balance more focused programming with programming for the wider population. One non-stigmatizing approach is to focus programming on situations and geographical zones where substantial numbers of migrants live, work or socialize, rather than targeting specific individuals or groups. For example, programmes aimed not at migrant agricultural workers but at the communities that surround farms have the potential not only to reach migrant farm workers but also sex workers, traders and sales people, and the local men and women who live and work in the area. The South African experience with communities sur-

rounding gold mines is instructive (see 'Focus: AIDS and the world of work').

A good example of partnership is *Ikambere* (the 'welcoming house' in Kinyarwanda, the Rwandan language) in Paris. Since 1997, *Ikambere* has provided a locale where HIV-positive women from sub-Saharan Africa (who also run the initiative) can offer mutual support, exchange information, and work together on items they can sell. *Ikambere* also cooperates with hospitals and outpatient clinics where people from their communities receive AIDS treatment, helping these health facilities extend their outreach.

Care and support

Although authorities in destination countries may initially balk at the prospect of providing care for foreign nationals, migrants have the same rights to care as those of other citizens. AIDS thrives on exclusion; in contrast, including vulnerable people in all available responses is a way of increasing society's total resistance to the epidemic. As with other populations, voluntary counselling and testing represent an excellent entry point to care, provided they are offered in the migrants' language and with iron-clad confidentiality.

Provision of care and support to migrant communities and workers, such as prevention activities, requires specific training for host-country officials. This holds true for health-care staff, as well as those in social services and immigration authorities, all of whom need to be sensitized to migrants' perceptions of HIV/AIDS, their legal problems and other concerns.

Efforts by international agencies to provide reproductive health services to refugees and internally displaced persons have grown considerably in recent years. The United Nations High Commissioner for Refugees spearheads efforts to provide reproductive health care for refugees. The United Nations Population Fund has also been active, particularly in addressing the health needs of adolescents.

Policy and legal environments

Some laws and regulations governing people on the move can have disastrous effects on

public health. People who enter countries as immigrants or workers are often subject to mandatory HIV testing, despite the fact that this is not an effective form of prevention. Regulations aimed at barring HIV-positive people from entry remain in place in several countries, although it has been found that such restrictions have no public health justification (see 'Entry and residence restrictions based on HIV status' box).

Some migrant and immigrant groups are mobilizing effectively around HIV/AIDS issues. In the United Kingdom, the African Policy Network lobbies government officials to change legislation and policies that discriminate against HIV-positive asylum-seekers. The Network performs its lobbying work in collaboration with other organizations such as the Terrence Higgins Trust, the National AIDS Trust and the All Parliamentary Group on AIDS.

HIV and migration in Europe: access and care to the fore

Epidemiological data from Europe show that the proportion of people newly diagnosed with AIDS who are non-national migrants is increasing. In France, for example, where the numbers of new AIDS cases have been decreasing since 1996, rates have been decreasing more slowly among people who live in France but who are citizens of other countries. One-quarter of the non-nationals diagnosed as having AIDS are women, whereas women represent only 16% of the AIDS cases among French nationals. The situation is similar in Switzerland, where data on newly diagnosed HIV infections show that women from sub-Saharan Africa are particularly vulnerable.

Migrants have not benefited to the same extent as nationals from access to antiretroviral therapy and other care. Evidence from Belgium, France and the United Kingdom shows that migrant populations tend to seek both HIV testing and care later than the rest of the population. In France, a survey has found that women of North-African origin received less HIV counselling when they went to a prenatal clinic (despite the fact that they were found to be less knowledgeable about HIV than the general population), and therefore had a greater need for information. The survey also found that immigrant women were also more likely to be tested for HIV without their permission.

Entry and residence restrictions based on HIV status

HIV-related restrictions on entry and residence should be repealed or modified, based on guidance provided by the *International Guidelines on HIV/AIDS and Human Rights*, issued in 1998 by the Office of the United Nations High Commissioner for Human Rights and the UNAIDS Secretariat. The guidelines state that, “There is no public health rationale for restricting liberty of movement or choice of residence on the grounds of HIV status [...] Where States prohibit people living with HIV/AIDS from longer-term residence due to concerns about economic costs, States should not single out HIV/AIDS, as opposed to comparable conditions, for such treatment and should establish that such costs would indeed be incurred in the case of the individual alien seeking residence. In considering an entry application, humanitarian concerns, such as family reunification and the need for asylum, should outweigh economic considerations”.

Regional responses: spreading out

Given that HIV/AIDS responses for migrant populations must address all stages of the migration process—origin, transit, destination and return—some programming for migrant populations must extend beyond borders. Major regional AIDS and migration initiatives include the following:

- UNAIDS’ Inter-Country Team for West and Central Africa has a special focus on mobility, with five partially overlapping programmes: West African countries, Gulf of Guinea coastal countries, Lake Chad Basin, Congo River Basin, and the Great Lakes Initiative on AIDS.
- The HIV and Migration Project in Central America and Mexico, organized by Mexico’s National Institute of Public Health with a variety of nongovernmental organizations, governments and other institutions, works in 11 transit stations in Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.
- The European project ‘AIDS & Mobility’ has national focal points in 14 countries,

and fosters cooperation between community-based, governmental and nongovernmental organizations.

- The Association of Southeast Asian Nations (ASEAN) is working towards a five-year workplan to tackle HIV among mobile populations. The regional plan will comprise two components, one of which will concentrate on seafarers and truck drivers (and will include the countries of the Greater Mekong area), while the other will focus on preventing HIV/AIDS among migrant workers.

All these initiatives use a variety of approaches including ethnographic research, mapping, surveys and other techniques. Focus areas include understanding the dynamics of specific population movements between countries or regions, the effects of cross-border movements on communities of origin and destination, factors that promote vulnerability and resilience to HIV, and migration policies and health policies in areas of origin and destination. All place a strong emphasis on linking, networking and knowledge-sharing. 