

INTENSIFYING PREVENTION: THE ROAD TO UNIVERSAL ACCESS

In 2005, there were close to five million new HIV infections worldwide, 3 200 000 of these in sub-Saharan Africa alone. In the same year, three million people died of AIDS-related diseases; more than half a million (570 000) were children. Today the total number of people living with HIV stands at 40.3 million, double the number (19.9 million) in 1995. Despite progress made in a small but growing number of countries, the AIDS epidemic continues to outstrip global efforts to contain it.

The inescapable fact is that, as more people become infected with HIV, more people will die of AIDS. The number of people receiving HIV antiretroviral therapy in low and middle income countries has tripled since the end of 2001. Yet, at best, only one person in ten in Africa and one in seven in Asia in need of antiretroviral treatment were receiving it in mid-2005. Efforts to rapidly expand and sustain access to antiretroviral treatment and care will be undermined if the spiralling cycle of new HIV infections is not broken.

To get ahead of the epidemic, there is growing recognition that HIV prevention efforts must be scaled up and intensified (UNAIDS, 2005), as part of a comprehensive response that simultaneously expands access to treatment and care. Only through these fundamental efforts coupled with increased global and national commitment will the world be able to achieve universal access, and truly begin to get ahead of AIDS.

HIV PREVENTION WORKS—BUT NEEDS INTENSIFYING

The challenges are immense. Worldwide, less than one in five people at risk of becoming infected with HIV has access to basic prevention services (UNAIDS, 2004). Of people living with HIV only one in ten has been tested and knows that he or she is infected.

There is ample evidence that HIV does yield to determined and concerted intervention. Sustained efforts in diverse settings have helped bring decreases in HIV incidence among men who have sex with men in many Western countries, among young people in Uganda, among sex workers and their clients in Thailand and Cambodia, and among injecting drug users in Spain and Brazil. Now there is new evidence that prevention programmes initiated some time ago are currently helping to bring down HIV prevalence in Kenya and Zimbabwe, as well as in urban Haiti.

But too often, prevention strategies are lacking sufficiency of scale, intensity and long-term vision. For prevention interventions to give the results necessary to get ahead of the epidemic, projects with short-term horizons must translate into long-term programmatic strategies.

microbicides and the improvement of existing products such as the female condom—that will provide additional options for the response and should become part of comprehensive prevention strategies. Longer-term vaccine development is also necessary.

Where intensive efforts have worked

Studies show that HIV prevention efforts work best when they are intensive, i.e. comprehensive and long term. For example, intensive prevention programmes in the Mbeya region of Tanzania led to an increase in the use of condoms and the treatment of sexually transmitted infections between 1994 and 2000. Those changes were accompanied by a decline in HIV prevalence among 15–24 year-old women from 21% to 15% in the same period (Jordan-Harder et al., 2004). But in the Mwanza region of the country, less intensive and isolated HIV prevention efforts did not yield similar results; in fact, HIV prevalence increased in this area from 6% in 1994-1995, to 8% in 1999-2000 (Mwaluko et al., 2003).

There is no single AIDS epidemic. Even within a country itself, epidemics can be extremely diverse. Therefore prevention strategies need to address the diversity of epidemics and must be evidence informed, through accurate epidemiological and behavioural information.

A broad approach across all prevention strategies also requires that stigma and discrimination is addressed, that those most at risk of HIV infection are effectively reached, and that people living with HIV are engaged more fully in the AIDS response.

To ensure a comprehensive response to HIV, treatment and prevention efforts should be accelerated simultaneously.

However, fundamental to all settings are comprehensive prevention strategies that include scale, intensity, consistency and sustainability as core requirements. All strategies must also recognize that HIV prevention and treatment are interlinked and that both should be simultaneously accelerated.

There are other basic approaches that can be applied to all HIV prevention efforts. First is the need to acknowledge that HIV prevention is a classic “public good” intervention that requires national governments to take the lead (including resource allocation) in building a strong response to the epidemic.

Second is the need to ensure that all HIV prevention strategies take into account the growing linkages between AIDS and factors that put people at greater risk of HIV infection, such as poverty, gender inequality, and social marginalization of specific populations.

Equally important is the development and implementation of new technologies—such as

PREVENTION AND TREATMENT ARE ESSENTIAL PARTNERS

To ensure a comprehensive response to HIV, treatment and prevention efforts should be accelerated simultaneously. Mathematical modelling comparing a range of scenarios shows that in the scenario in which effective prevention and treatment are scaled up jointly, the benefits, both in terms of new HIV infections and deaths averted are greatest (Salomon et al., 2005) The conclusions are clear:

- successful HIV treatment can create a more effective environment for HIV prevention;
- intensified HIV prevention is needed to make HIV treatment affordable and sustainable; and
- sustained progress in the response against AIDS will only be attained by intensifying HIV prevention and treatment simultaneously.

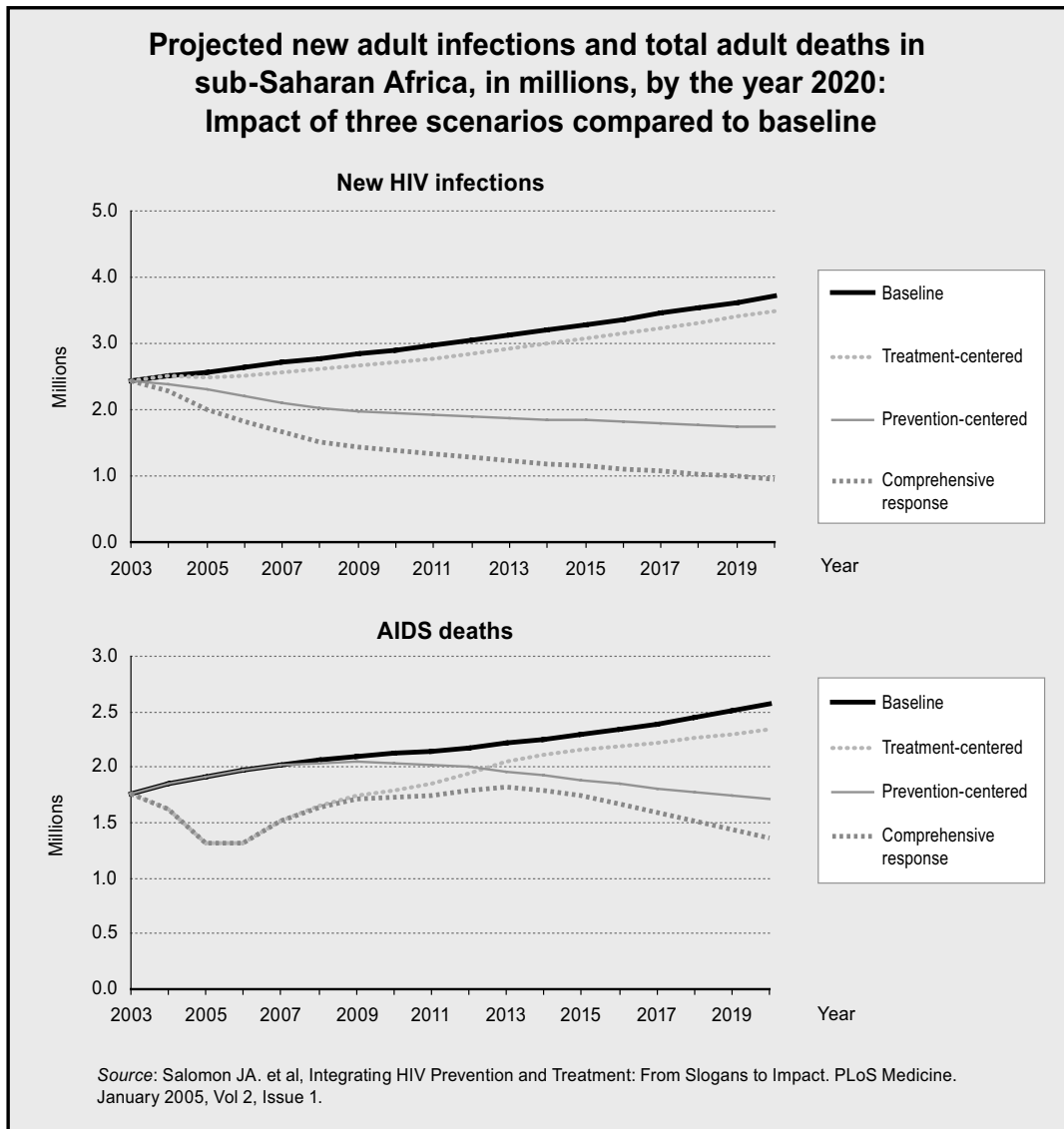


Figure 2

In sub-Saharan Africa, a comprehensive prevention and treatment package would avert 55% of the new infections that otherwise could be expected to occur until 2020 (see Figure above from Salomon et al., 2005).

Evidence and experience show that rapidly increasing the availability of antiretroviral therapy leads to greater uptake of HIV testing. Kenya, for example, has seen a dramatic increase in testing and counselling uptake in 2000–2004, while in Brazil uptake increased more than threefold in 2001–2003 (WHO, “3 by 5” Progress Report, June 2005). Uganda has had similar experiences. After being forced to close due to a lack of clients, a counselling and testing clinic in Masaka, Uganda, reopened in 2002 when an antiretroviral treatment programme began at the same hospital. Within a few months, more than 5000 people had sought

and received voluntary counselling and testing—a seventeenfold increase over the figure for the year 2000 (Mpiima et al., 2003). This provided health workers with opportunities to educate people about HIV prevention, tailored to their HIV test results.

Availability of treatment and enhanced community outreach can lead to more openness about AIDS, which can help break down stigma and discrimination. A health survey conducted after the introduction of an antiretroviral programme in Khayelitsha, South Africa, found higher condom use, willingness to join AIDS clubs, and readiness to be tested for HIV than in any of the seven other sites surveyed (WHO, 2003).

But greater treatment access also brings new challenges. There is evidence of increases in

unsafe sexual behaviour coinciding with wide-scale antiretroviral access in several high income countries (U.S. Centers for Disease Control and Prevention, 2002; Stolte et al., 2004). There is a need for stronger operational research to improve our understandings of changing prevention needs, challenges and opportunities.

PUTTING HIV INTO CONTEXT

To be effective, HIV prevention programmes must address the contexts in which people live their lives.

The rights and status of women and young girls deserve special attention. Around the world—

are women (WHO Regional Office for Africa, 2003; Reproductive Health Research Unit and Medical Research Unit, 2004), while in sub-Saharan Africa overall, young women between 15 and 24 years old are at least three times more likely to be HIV-positive than young men (UNAIDS, 2004).

In many countries, marriage, and women's own fidelity are not enough to protect them against HIV infection. Among women surveyed in Harare (Zimbabwe), Durban and Soweto (South Africa), 66% reported having one lifetime partner, 79% had abstained from sex at least until the age of 17 (roughly the average age of first sexual encounter in most countries in the world). Yet, 40% of the young women were HIV-positive (Meehan et al.,

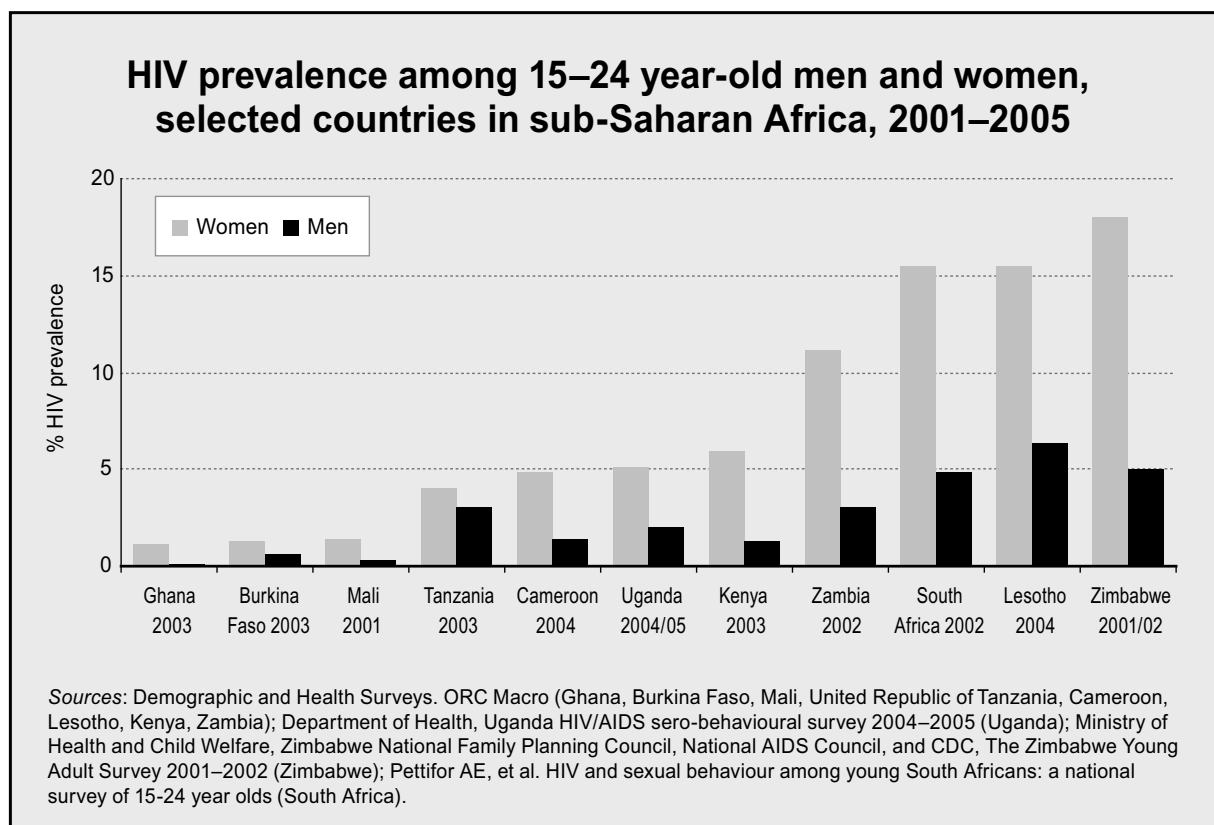


Figure 3

from sub-Saharan Africa and Asia to Europe, Latin America and the Pacific—an increasing number of women are being infected with HIV. It is often women with little or no income who are most at risk. Widespread inequalities including political, social, cultural and human security factors also exacerbate the situation for women and girls.

In several southern African countries, more than three quarters of all young people living with HIV

2004). Many had been infected despite staying faithful to one partner. In Colombia, 72% of the women who tested HIV-positive at an antenatal site reported being in stable relationships. In India, a significant proportion of new infections is occurring in women who are married and who have been infected by husbands who (either currently or in the past) frequented sex workers. (see Asia chapter following).

Evidence suggests that sexual and other forms of abuse against women and girls—whether at the hands of intimate partners or strangers—increase their chances of becoming infected with HIV. High levels of sexual violence against women and girls have been reported in countries around the world. When surveyed, between one third and one half of women in Bangladesh, Brazil, Ethiopia, Namibia and Thailand, for example, said their partners had physically and/or sexually assaulted them (WHO, 2005). If HIV-prevention activities are to succeed, they need to occur alongside other efforts, such as legal reform (including property rights) and the promotion of women’s rights that address and reduce violence against women and girls (Maman et al., 2000).

since 1999, but among their counterparts 25 years and older, prevalence has been rising constantly since 1992 and reached 43% when last measured in 2003. Infection levels among older men and women in Botswana were unexpectedly high: 29% for those 45–49 years old and 21% for those in their early 50s.

STIGMA AND DISCRIMINATION: THE UNDERMINING FACTOR

HIV stigma and the resulting actual or feared discrimination have proven to be perhaps the most difficult obstacles to effective HIV prevention. Stigma and discrimination simultaneously

HIV stigma and the resulting actual or feared discrimination have proven to be perhaps the most difficult obstacles to effective HIV prevention.

It is equally important to engage men and boys in HIV prevention efforts for a long-standing impact on gender inequalities. Involving men is important not only because they often control women’s and girl’s degrees of vulnerability to HIV but also because societal norms about masculinity and gender may heighten men’s vulnerability to HIV if they encourage men to engage in behaviours that put their health at risk and deny them needed protective information and services. Men, like women, are influenced by traditional gender norms. These need to be challenged and changed if both men and women are to be protected from HIV infection and if men are to be encouraged to play a more responsible role in HIV prevention. Special attention needs to be paid to boys in terms of their socialization towards gender norms (UNAIDS, 2005).

Prevention programme efforts must also address people of all ages to be fully effective. An emerging trend of rising infection rates among older generations in some countries may point to an important gap in prevention efforts with this age group. In South Africa, the rise in HIV prevalence among women older than 34 years is particularly striking and in Botswana, similar patterns are emerging—among pregnant women aged 15–24, HIV infections have remained steady

reduce the effectiveness of efforts to control the global epidemic and create an ideal climate for its further growth.

HIV stigma stems from fear as well as associations of AIDS with sex, disease and death, and with behaviours that may be illegal, forbidden or taboo, such as pre- and extramarital sex, sex work, sex between men, and injecting drug use. Stigma also stems from lack of awareness and knowledge about HIV. Such stigma can fuel the urge to make scapegoats of, and blame and punish, certain people or groups. Stigma taps into existing prejudices and patterns of exclusion and further marginalizes people who might already be more vulnerable to HIV infection. Fear of stigma can also dissuade people living with HIV from playing a vital front role in HIV prevention efforts.

Stigma prompts people to act in ways that directly harm others and deny them services or entitlements—actions that take the form of HIV-related discrimination. Stigma prevents many people from negotiating safer sex, taking an HIV test, disclosing their status to their partners or seeking treatment, even when prevention services are made available. In Uganda, for example, more than half the women and just under half the men surveyed indicated that they would prefer not to

Involvement of people living with HIV in prevention efforts

People living with HIV are some of the greatest champions for HIV prevention. Since the beginning of the epidemic prevention strategies have been more effective when they have meaningfully involved people living with HIV in their design, implementation and evaluation. The principle of the Greater Involvement of People Living with HIV/AIDS (GIPA) in the AIDS effort was formally recognized at the 1994 Paris AIDS Summit, when 42 countries agreed that ensuring their full involvement at national, regional and global levels will stimulate the creation of supportive political, legal and social environments. HIV prevention strategies have, however, often failed to address the distinct prevention needs of people diagnosed with HIV or to build capacity for their meaningful participation. Their involvement has often been relegated to little more than tokenism. An effective response requires that this should change.

The aim of prevention for people living with HIV is to empower them to avoid acquiring new sexually transmitted infections, delay HIV disease progression and avoid passing HIV to others. Prevention counselling strategies increase knowledge of HIV transmission and improve safer sex negotiation skills. Other HIV prevention strategies also include scaling up, focusing and improving services and commodity delivery; services for serodiscordant couples; protecting human rights; strengthening community capacity for mobilization; and supporting advocacy, policy change and community awareness (International HIV/AIDS Alliance, 2003). These strategies do not stand alone, but work in combination.

disclose their HIV status to a family member (Ministry of Health Uganda, 2005). A survey of young people in Nairobi, Kenya, and in Kampala and Masaka, Uganda, indicated that real and perceived lack of confidentiality was as much a deterrent to using voluntary testing and counselling services as affordability.

PREVENTING HIV AMONG MARGINALIZED GROUPS

Those pushed to the margins of society are at particular risk. Preventing infections here can play a significant role in stemming the rate of spread in many parts of the world. Key marginalized populations include sex workers, injecting drug users, prisoners, and men who have sex with men.

Sex-worker projects such as those pioneered in the Sonagachi area of Kolkata, India, have shown that intensive, targeted programming can lead to the reduction of risk of HIV infection (see pages 33 to 34). On a larger scale, Thailand managed to reduce new HIV infections from 140 000 in 1991 to 21 000 in 2003 by focusing its HIV strategy on reducing risky commercial sex (see page 40). Similar, though less dramatic accomplishments are evident in Cambodia (where adult national HIV prevalence declined from 3% in 1997 to 1.9% in 2003) and Senegal (where HIV prevalence

has been kept low and steady for a decade now) where intensive programming for sex workers was also implemented. However, despite islands of success, global prevention coverage for sex workers is low. In the Eastern Mediterranean, for example, only 0.5% of sex workers are covered by any HIV-prevention programme (USAID et al., 2004).

Injecting drug use is propelling epidemics in numerous countries, including India, Indonesia, Iran, Libya, Pakistan, Spain, Ukraine, Uruguay and Viet Nam. Overlapping networks of sex workers and clients and injecting drug users are providing additional momentum in some countries. However, despite some evidence of the success of harm-reduction programmes in countries such as Brazil and Spain, prevention strategies for injecting drug users are not being implemented on a wide enough scale to make a lasting difference in many countries. Comprehensive strategies that include elements such as condom provision and substitution therapy, aimed at injecting drug users as well as their sexual partners, need to be scaled up urgently.

Approximately 10 million people are in prisons across the world today. In most countries, the levels of HIV infection among prison populations tend to be significantly higher than in the general population. In the Russian Federation, the prison system has been disproportionately affected by

the epidemic. HIV prevalence in the country's prisons is estimated to be at least four times higher than in the wider population. In Iran, incarceration appears to be the biggest risk factor for HIV infection. These findings underscore the need to introduce a comprehensive response to HIV within prisons (see the following Eastern Europe and Central Asia chapter).

The prominent role that sex between men plays in many epidemics—including in Latin America, the Caribbean, Asia, Central Europe and, possibly to a lesser extent, in Eastern Europe and Africa—is not adequately studied or addressed.

Public information campaigns about sexually transmitted infections and the spread of HIV should be strengthened.

Most parts of the world lack the epidemiological and behavioural data needed to inform effective prevention programmes for men who have sex with men. What data do exist indicate high levels of infection levels among men who have sex with men. HIV prevalence as high as 17% has been found in men who have sex with men in Bangkok, Thailand, and Mumbai, India, for example, while in Bogotá, Colombia, prevalence of 20% has been found (Montano et al., 2005). Even in places where data exist indicating men who have sex with men are severely affected by HIV, their prevention needs have been largely ignored in many countries.

Other populations including young people, women and girls, people living in poverty, migrant labourers, people in conflict and post-conflict situations, and refugees and internally displaced persons also need scaled-up interventions that increase their access to prevention, treatment and care information and services, taking into account their special vulnerabilities.

SEXUALLY TRANSMITTED INFECTIONS AND THE SPREAD OF HIV

Preventing and treating sexually transmitted infection reduces the risk of HIV transmission. This is especially true for members of populations who are most likely to have a high number of sex partners, such as sex workers and their clients. Yet

prevention and treatment of sexually transmitted infections remain a poorly exploited element of potentially successful prevention strategies, not least in sub-Saharan Africa.

Infection with other sexually transmitted infections—such as syphilis, gonorrhoea, Chlamydia, trichomoniasis and genital herpes—increases the chance that HIV will be transmitted during unprotected sex between an infected and an uninfected partner. In sub-Saharan Africa, for example, infection with the viral HSV2 (herpes simplex virus type 2) appears to be strongly associated with HIV infection (Auvert et al.,

2001; Hayes et al., 1998; McFarland et al 1999). HSV2, which is incurable, causes periodic genital ulcers throughout life. Studies in Zimbabwe and Tanzania suggest that the two viruses favour each other, with each boosting the odds that a person will contract and transmit the other (McFarland et al., 1999; Del Mar et al., 2002). Some studies have also suggested an association exists between infection with bacterial vaginosis (a common vaginal infection in women of childbearing age) and HIV. New research from South Africa suggests that infection with bacterial vaginosis could double a woman's susceptibility to HIV infection (Myer et al., 2005).

The male latex condom is the most efficient available technology to reduce the sexual transmission of HIV and other sexually transmitted infections (UNAIDS/UNFPA/WHO, 2004). Most genital infections can be prevented by using condoms and many bacterial sexually transmitted infections (such as syphilis, gonorrhoea and Chlamydia) are easily and inexpensively treatable with antibiotics (UNAIDS, 2004a). Unfortunately, treatment programmes for sexually transmitted infections are in uneven operation in much of sub-Saharan Africa; most countries in the region are therefore not benefiting from the potential containing effect of sexually transmitted infection diagnosis and treatment on HIV infection rates. Young people in particular tend to know very little about sexually transmitted infections. Those who suspect they might be infected are often

reluctant to seek treatment—for a multitude of reasons that include embarrassment, fear that their confidentiality would not be respected, anticipation of a reproaching and judgmental response from healthcare providers, and occasionally high treatment cost.

Public information campaigns about sexually transmitted infections and the spread of HIV should be strengthened, especially those directed at young people. Steps need to be taken to: ensure confidentiality at sexually transmitted infection treatment clinics; promote youth-friendly services; increase the numbers of treatment sites; and to integrate diagnosis and treatment of sexually transmitted infections into family planning and reproductive health services.

FOCUSING ON CHILDREN: STARTING LIFE FREE OF HIV

Without HIV prevention measures, about 35% of children born to HIV-positive women will contract the virus. The key to protecting children is preventing infection in parents. Prevention of mother-to-child transmission is a crucial entry point for primary prevention, treatment, care and support for mothers, their children and families. Ensuring availability of family planning services, provision of antiretroviral medicines to the mother and the newborn, safe delivery options, infant feeding counselling, and support are the key components of prevention of mother-to-child transmission programmes. Implementation of such a comprehensive approach has virtually eliminated HIV transmission from mothers to their infants in industrialized countries. In high-prevalence countries, however, AIDS is responsible for an increasing share of under-five mortality. In Africa, its share rose from 2% in 1990 to 6.5% in 2003 (WHO, 2005a).

Prevention of mother-to-child transmission services coverage is improving in many places (including Barbados, Botswana, Thailand, Ukraine, Uruguay and Zambia). However, it still falls far short in most of sub-Saharan Africa where prevention service coverage was about 5% in the 30 African countries with the highest HIV prevalence in 2003.

Obstacles to expanding prevention of mother-to-child transmission include inadequate prenatal care services, low knowledge of HIV status among pregnant women, and stigma and discrimination (UNAIDS, 2004a). Inadequate access to antiretroviral prophylaxis remains a major concern. In South Africa, for example, of some 33 000 pregnant women testing HIV-positive only 18 857 received antiretroviral prophylaxis. In Kenya and Mozambique, the proportion was similar. By contrast, in Uganda, Zambia and Zimbabwe almost all the women testing positive were reported to have received antiretroviral prophylaxis.

Other hurdles are even more basic. Large proportions of women offered prevention of mother-to-child transmission services are not receiving pre-test counselling. In Ghana and Tanzania, roughly one half the women received the counselling, while in Nigeria only one quarter did. In Burkina Faso, the proportion was a mere 18% and in Zambia just 13%. Notable exceptions were Benin, Kenya, Rwanda, South Africa, Uganda and Zimbabwe—where upwards of 70% of women offered prevention of mother-to-child transmission services also received pre-test counselling. In addition, considerable numbers of women in high-prevalence countries still do not know that HIV can be passed from mother to child. Such lack of knowledge complicates counselling, often in circumstances where health providers are already overburdened and short of time.

To avoid new infections among children, prevention of mother-to-child transmission services should be scaled up to ensure that there is high-quality national coverage.

ACCESS FOR ALL

In recent years, international consensus on the need for a comprehensive response to HIV comprising prevention, treatment and care has strengthened. Political will has increased, as has advocacy by civil society groups. International and national funding available to the response to AIDS has greatly increased. These advances present an important opportunity to further intensify efforts and increase the momentum towards universal

access to prevention, treatment and care for all countries affected by AIDS.

In June 2005, the UNAIDS governing Board comprising member states, cosponsoring UN agencies and civil society endorsed a policy position paper for intensifying HIV prevention

with the ultimate aim of achieving universal access to HIV prevention, treatment and care. This policy position paper included a compendium of proven programmes and actions that could be used to close the prevention gap as well as 12 essential policy actions that would be needed to ensure universal access (see below).

The UNAIDS Policy Position Paper for Intensifying HIV Prevention details essential policy and programmatic actions for HIV prevention.

Essential policy actions for HIV prevention

1. Ensure that human rights are promoted, protected and respected and that measures are taken to eliminate discrimination and combat stigma.
2. Build and maintain leadership from all sections of society, including governments, affected communities, nongovernmental organizations, faith-based organizations, the education sector, media, the private sector and trade unions.
3. Involve people living with HIV, in the design, implementation and evaluation of prevention strategies, addressing the distinct prevention needs.
4. Address cultural norms and beliefs, recognizing both the key role they may play in supporting prevention efforts and the potential they have to fuel HIV transmission.
5. Promote gender equality and address gender norms and relations to reduce the vulnerability of women and girls, involving men and boys in this effort.
6. Promote widespread knowledge and awareness of how HIV is transmitted and how infection can be averted.
7. Promote the links between HIV prevention and sexual and reproductive health.
8. Support the mobilization of community-based responses throughout the continuum of prevention, care and treatment.
9. Promote programmes targeted at HIV prevention needs of key affected groups and populations.
10. Mobilizing and strengthening financial, and human and institutional capacity across all sectors, particularly in health and education.
11. Review and reform legal frameworks to remove barriers to effective, evidence based HIV prevention, combat stigma and discrimination and protect the rights of people living with HIV or vulnerable or at risk to HIV.
12. Ensure that sufficient investments are made in the research and development of, and advocacy for, new prevention technologies.

Essential programmatic actions for HIV prevention

1. Prevent the sexual transmission of HIV.
2. Prevent mother-to child transmission of HIV.
3. Prevent the transmission of HIV through injecting drug use, including harm-reduction measures.
4. Ensure the safety of the blood supply.

5. Prevent HIV transmission in healthcare settings.
6. Promote greater access to voluntary HIV counselling and testing while promoting principles of confidentiality and consent.
7. Integrate HIV prevention into AIDS treatment services.
8. Focus on HIV prevention among young people.
9. Provide HIV-related information and education to enable individuals to protect themselves from infection.
10. Confront and mitigate HIV-related stigma and discrimination.
11. Prepare for access and use of vaccines and microbicides.

The UNAIDS Board's view has been underscored by recent global political commitments. At the 2005 G8 Summit in Gleneagles, members committed to develop and implement a package of HIV prevention, treatment and care, with the aim of achieving as closely as possible universal access to treatment for all those who need it by 2010. The United Nations General Assembly 2005 World Summit Outcome Document also adopted the concept of scaling up towards universal access.

These statements reinforce the view that intensifying prevention efforts while expanding treatment and care goals must happen simultaneously, not sequentially or one in isolation from the other.

The sustained availability of a comprehensive range of programmes and tools known to be effective is key to ensuring universal access. Programmes should be selected and implemented based on in-country experience and evidence, as well as the adaptation of "best practice" approaches

from other countries. It has been estimated that implementation of comprehensive HIV prevention programmes could avert 29 million (or 63%) of the 45 million new infections expected to occur between 2002 and 2010 (Stover et al., 2002)). Comprehensive HIV prevention programmes, when jointly undertaken with comprehensive provision of treatment and care, have the greatest impact in terms of averting new HIV infections and deaths (Salomon et al., 2005).

AIDS requires an intelligent, forceful and exceptional response. Uncoordinated efforts or those that provide only partial solutions will not bring about a significant reduction in the number of new infections. Slowing and stopping the spread of this global epidemic urgently requires universal access to prevention, treatment and care together. If the world mobilizes in this way to simultaneously and aggressively expand HIV prevention, treatment and care, we could achieve a truly comprehensive approach to AIDS that could contain and reverse the epidemic.

New prevention methods: innovation for Universal Access

Female condoms

Although shown to be effective in prevention of pregnancy and acceptable to users, the female condom has not achieved its full potential in national programmes because of its relatively high cost. A new version of the Reality® female condom is made of synthetic nitrile, which makes it considerably less expensive. The new device has the potential for wider acceptability and utilization. It is hoped that, if high utilization rates of the new device can be achieved, it will make a substantial contribution to prevention of unwanted pregnancy and sexually transmitted infections, including HIV. In addition to the new female condom, trials are also under way to test the effectiveness of diaphragms and other methods of protecting the cervix for HIV/STI prevention. Results are expected in 2006.



Male circumcision

A recent study in South Africa found that circumcised men were at least 60% less likely to become infected than uncircumcised men. These promising results must be confirmed in ongoing studies in Kenya and Uganda before male circumcision can be promoted as a specific HIV prevention tool. If proven effective, male circumcision may help increase available proven options for HIV prevention, but should not cause the abandonment of existing effective strategies such as correct and consistent condom use, behavioural change and voluntary testing and counselling. Male circumcision does not eliminate the risk of HIV for men and the effects of male circumcision on women's risk of HIV are not known. It also remains to be demonstrated whether and to what degree circumcision could reduce HIV transmission in cultures where it is not currently practised.

Microbicides

Microbicides offer the best promise of a prevention tool women can control. They could have a substantial impact on the epidemic. Currently, the HIV microbicide field has four candidate microbicides entering or in phase III trials, five in phase II, and six in phase I. They include soaps, acid buffering agents, seaweed derivatives and anti-HIV compounds. Modelling indicates that even a 60%-efficacious microbicide could have considerable impact on HIV spread. If used regularly by just 20% of women in countries with substantial epidemics, hundreds of thousands of new infections could be averted over three years (Rockefeller, 2001).

Pre-exposure prophylaxis

Pre-exposure prophylaxis (PrEP) to prevent sexual—and possibly parenteral—transmission of HIV holds promise for serodiscordant couples, sex workers, men who have sex with men and injecting drug users who may be exposed to HIV despite using precautions. Small-to-medium sized phase II trials are under way in Atlanta and San Francisco, with larger phase II/III studies under way or planned in Botswana, Ghana, and possibly Thailand. Some of these studies have been dogged by controversy. The main issues were the adequacy of pre-trial community consultation and informed consent, linkages to HIV treatment programmes for those found to be infected at baseline or in the course of the study, and—in the case of Thailand—the lack of access to sterile needles in a study designed to examine HIV transmission among injecting drug users. Two PrEP studies were cancelled (Cambodia, Nigeria) and another (Cameroon) postponed. A consultation in Seattle and a series of consultations led by UNAIDS in two African regions, Asia and Geneva involving community activists, researchers, sponsors and others helped identify the problems in trial design in this promising research area. Trials have moved forward in six other sites.

Vaccines

A vaccine to overcome HIV is our most compelling hope. But developing a vaccine remains an enormous challenge for reasons related to inadequate resources, clinical trial and regulatory capacity concerns, intellectual property issues and scientific challenges. There are now 17 vaccine candidates in phase I trials and four vaccines in phase I/II (including the promising Merck adenovirus vector vaccine now in phase IIb, which may stimulate anti-HIV cell-mediated immunity). There is only one in phase III (the NIH/Department of Defense's ALVAC vCP 1521 canary pox vector/AIDS VAX prime-boost vaccine trial now under way in Thailand). The Global HIV Vaccine Enterprise has rallied scientists, activists, funders and others worldwide around a Strategic Scientific Plan to rapidly advance progress towards effective HIV vaccines, the world's best long-term hope for bringing the global HIV epidemic under control.