HIV/AIDS

at a glance

Why address HIV/AIDS?

The HIV/AIDS epidemic has spread with ferocious speed. Virtually unknown 20 years ago, HIV has infected more than 60 million people worldwide. Each day, approximately 14,000 new infections occur, more than half of them among young people below age 25. At the end of 2002, of the over 42 million people people living with HIV/AIDS (PLWHA), 30 percent were co-infected with tuberculosis (TB). Over 95 percent of PLWHA are in low- and middle-income countries. More than 20 million have died from AIDS, over 3 million in 2002 alone. AIDS is now the leading cause of death in Sub-Saharan Africa and the fourth-biggest killer globally. The epidemic has cut life expectancy by more than 10 years in several nations.

HIV/AIDS is not just a public health problem. Once generalized, the epidemic has far reaching consequences to all social sectors and to development itself. It can decimate the workforce, create large numbers of orphans, exacerbate poverty and inequality, and put tremendous pressure on health and social services. Annual basic care and treatment for a person with AIDS, even without antiretroviral drugs (ARV), can cost as much as 2-3 times per capita gross domestic product (GDP) in the poorest countries. HIV/AIDS already causes a measurable fall in annual per capita growth in the hardest-hit countries of Sub-Saharan Africa and threatens to reverse their development achievements of the last 50 years.

This fact sheet provides a summary of the issues of and interventions for HIV/AIDS epidemic from the public health perspective.

How does HIV/AIDS spread?

The major modes of transmission are sexual inter-course, unsafe injecting practices, mother-to-child (in utero, during birth or through breastfeeding), and transfusion of contaminated blood or blood products. Heterosexual transmission accounts for more than 70% of all HIV infections worldwide. Certain groups are more likely to contract and spread HIV, such as commercial sex workers (CSWs) and their clients, injecting drug users (IDUs), men who have sex with men (MSM), and highly mobile workers. HIV/AIDS is initially concentrated in these groups who engage in high-risk behavior, and then spills over into the wider population.

Can HIV/AIDS be brought under control in developing countries?

There are success stories in the fight against HIV/AIDS on a national scale among developing countries. Thanks to prompt, vigorous and large-scale implementation of effective intervention programs, which are enabled by **adequate funding, favorable policy environments, strong political leadership** and **popular support,** countries such as Thailand, Uganda, and Brazil have been able to control the spread of HIV/AIDS. For example, Thailand has reduced annual new HIV infections from 140,000 a decade ago to 30,000 in 2001. This provides strong evidence that the epidemic can be subdued in developing countries. The potential exists to prevent extensive new infections despite the severity of the global pandemic, therefore, the international community has set the target of reducing HIV prevalence among 15-24 year-olds by 25% in the most affected countries by 2005 and globally by 2010.

What are the effective interventions to prevent HIV/AIDS?

No cure or effective vaccine has yet been developed, but the tools to prevent HIV infection already exist. A core set of prevention interventions have effectively reduced the spread of HIV/AIDS. These include:

- Promoting behavior change through communication programs, peer education, and voluntary counseling and testing (VCT)
- Increasing condom use through condom promotion and distribution

- Diagnosing and treating sexually transmitted infections (STI)
- Ensuring a safe blood supply
- Preventing mother-to-child transmission (MTCT) through short courses of ARV and providing infant feeding options
- Supporting harm reduction among injecting drug users (IDUs), which includes providing clean injecting equipment, counseling, and drug abuse treatment.

Prevention averts suffering and death, and pays vast dividends in future savings to the health system and the public sector at large. The cost of averting an HIV infection through cost-effective interventions can be a fraction of the cost of treatment and care for an AIDS patient.

What is targeted prevention?

Evidence strongly suggests that irrespective of the stage of the epidemic, the most efficient method to reduce the spread of HIV (or any STI) in the general population is to reduce its transmission among groups at high risk. This targeted prevention approach, in which well-trained peers (such as former CSWs or IDUs) are used to disseminate information and safer sex supplies, organize skill building sessions and conduct referrals to other HIV/AIDS services, has been proven effective in many settings. For this reason, interventions and resources should be directed more strongly to groups at high risk. Targeted prevention is more effective when combined with programs to change social norms and reduce stigma.

What about treatment, care and mitigation of HIV/AIDS?

AIDS is a fatal disease, but there are interventions which can prolong and improve the quality of life for PLWHA. These include psychosocial support including counseling, clinical management of common opportunistic infections (OIs) (including TB), Highly Active Anti-retroviral Therapy (HAART), and palliative care. Community and home-based care can complement traditional hospital-based care and help ease the pressure on the health system, especially in countries with generalized HIV/AIDS epidemics. A social safety net for poor households affected by AIDS, as well as for AIDS orphans and vulnerable children, can help alleviate their suffering. Treatment and care can be cost-effective and have spillover effects in strengthening commitment to prevention. As HIV infection progresses, the care and treatment interventions for PLWHA need to change. While a basic treatment and care package can be developed to meet the changing needs of PLWHA, the challenge remains to develop services on a scale which will reach the largest numbers of those in need.

Treatment and care can be cost-effective and have spillover effects in strengthening commitment to prevention. They are indispensable in countries with a high-prevalence epidemic, where a basic treatment and care package for PLWHA could be defined and implemented. However, they can also be expensive and difficult to manage.

What should be done about HAART?

Although HAART is not a cure and its impact on population transmission is still uncertain, it reduces and prevents many opportunistic infection and prolongs life. Because of high cost, treatment complexity and the lack of infrastructure to administer and monitor the therapy, HAART is currently not widely available outside high-income countries. Yet experience from developing countries has shown that rates of adherence to HAART are at least as high (and typically higher) in developing countries than in industrialized countries. Thanks to discounts and generic manufacturers, the cost of drugs for HAART has been reduced to less than US$ 500 per patient per year in some developing countries. Although this is a fraction of what it costs in developed countries, many low-income countries are still unable to afford this price.

Currently, five to six million people infected with HIV in the developing world need access to antiretroviral therapy (ART) to survive. Only 300,000 have this access. The failure to deliver ART to millions of people who need them is a medical emergency.

Choosing interventions Choosing the right mix of interventions for implementation is very important in a setting with limited resources and implementation capacity. An appropriate balance among prevention, treatment, care and mitigation should be based on:

- specific epidemiology of HIV/AIDS, including who are at risk and stage of the epidemic
- cost-effectiveness of interventions
- implementation capacity
- level of public resources available
- extent to which intervention is a "public good"

In all cases, the most important interventions are: behavior change promotion, condoms, STI management, blood safety, VCT, and harm minimization among IDUs. Care, treatment, support and MTCT prevention will have least impact in countries of low prevalence (less than 5% in any high-risk group), be more relevant where the epidemic is concentrated (prevalence over 5% in a high-risk group, but less than 1% in the general population) and become increasingly important in countries with a generalized epidemic (population prevalence over 1%).

Core HIV/AIDS interventions, their intended beneficiaries, and indicators to track achievements of primary objectives

Core Interventions	Beneficiaries/Target Groups	Indicators
Prevention activities		
Promote behavior change ✓ Promote behavior change at both individual level (e.g., through peer education for individuals at high risk) and community/ societal level (e.g., through communication campaigns to change social norms and attitudes, which would in turn help reinforce safe behaviors at individual levels) ✓ Tailor behavior change messages to specific audiences such as groups at high risk, men, women, young people ✓ Address stigma ✓ Involve motivated PLWHA, members of vulnerable groups in public information efforts ✓ Promote HIV/AIDS/STI programs, services and products	Groups at high risk (priority) General population	✓ Indicators of behavior change in groups with high-risk behavior and in young people, for example: % of respondents (i) having high risk sex in the last year, (ii) using condoms at last high-risk sex ✓ % of respondents with (i) knowledge of HIV prevention methods, (ii) no incorrect belief about HIV/AIDS ✓ % of respondents with accepting attitudes towards PLWHA ✓ % of formal employers with non-discriminatory practices in recruitment, benefits and advancement for HIV-positive employees
Increase condom availability, acceptability and quality ✓ Ensure a guaranteed supply of quality male and female condoms and a condom dissemination system ✓ Distribute condoms through different approaches (targeted, community-based, outlet-based) ✓ Popularize and increase acceptability of condoms through condom promotion and social marketing campaigns ✓ Control the quality of condoms through sampling and testing	Groups at high risk (priority) General population	✓ Total number of condoms available for distribution nation-wide ✓ % of retail outlets and other service delivery points with condoms in stock ✓ % of condoms that meet quality control standards
Establish a comprehensive STI management program ✓ Develop a national protocol for STI case management ✓ Include STI drugs in the essential drug list ✓ Make syndromic management of STI available at first point of contact in the health care system ✓ Link STI services to counseling and other HIV/AIDS services ✓ Educate people how to avoid STIs, recognize common STI symptoms and seek treatment	Patients with STIs and their sexual contacts	✓ % of STI patients who are appropriately diagnosed and treated according to national guidelines ✓ % of STI patients who are given advice on condom use, partner notification and referred for HIV testing
Offer voluntary counseling and testing service ✓ Establish/strengthen a highly accessible VCT system which offers anonymous VCT service (testing, pre-test and post-test counseling) to anyone who needs it ✓ Publicize the existence of VCT services ✓ Ensure the affordability of VCT, especially for high-risk and vulnerable groups ✓ Link VCT to other HIV/AIDS and STI services	Groups at high risk (priority) General population	✓ % of people aged 15-49 who voluntarily requested testing and received their results ✓ % of districts with VCT services

Ensure blood safety ✓ Exclude paid donors and high-risk donors. Rely instead on voluntary donors from low-risk populations for blood supply ✓ Avoid unnecessary blood transfusions ✓ Screen all blood for HIV antibody and other blood-borne infectious agents	General population	✓ % of blood units transfused in the last 12 months that were adequately screened for HIV ✓ % of districts/regions with access to blood banks which do not pay blood donors
Prevent mother-to-child transmission (MTCT) ✓ Provide VCT service to antenatal clinic attendees ✓ Provide HIV-positive pregnant women with short courses of zidovudine or nevirapine where possible. Counsel them on infant feeding options ✓ Improve family planning services and incorporate HIV prevention activities	All pregnant women HIV-positive pregnant women and their babies Women of reproductive age	✓ % of pregnant women counseled and tested for HIV ✓ % of HIV-positive women receiving anti-retroviral therapy during pregnancy
Harm minimization among IDUs ✓ Improve access to sterile injecting equipment and condoms ✓ Promote safe injecting practices as well as safe sex behavior ✓ Offer counseling and drug abuse treatment	IDUs and their sexual contacts	✓ % of IDUs sharing injecting equipment at last injection

Treatment, care and mitigation activities

Core Interventions	Beneficiaries/Target Groups	Indicators
Provide treatment of opportunistic infections (OIs) and palliative care ✓ Develop a HIV/AIDS treatment and care strategy (including HAART) ✓ Develop and implement clinical guidelines for management of common OIs, including TB. ✓ Ensure an adequate supply of drugs for OIs treatment and palliative care ✓ Strengthen the capacity of the health system to provide treatment and care to HIV-positive patients (e.g., ensure adequacy of diagnostic and treatment facilities for common OIs, train medical personnel in treatment and care for HIV-related conditions) ✓ Develop linkages between HIV/AIDS, STI and TB programs	People living with HIV/AIDS	✓ % of health facilities with the capacity to deliver appropriate care to HIV-infected patients ✓ % of PLWHA receiving screening and prophylactic treatment for TB ✓ TB program indicators (where there is a dual epidemic of HIV and TB) ✓ % of health professionals receiving training in treatment and care of HIV-related conditions
Provide community-based and home-based care to complement traditional hospital care ✓ Provide funding and training for communities and NGOs to provide care for and support PLWHA	People living with HIV/AIDS and their families	✓ % of households with a chronically ill adult (15-49 years) receiving external help to care for the patient or to replace lost income
Strengthen the safety net for poor households affected by AIDS, including AIDS orphans ✓ Provide assistance to poor households affected by AIDS and to AIDS orphans	Poor People living with HIV/AIDS and their families, poor AIDS orphans	✓ % of poor households receiving external help to care for an AIDS orphan
Provide counseling and prevention services for PLWHAs and their families	People living with HIV/AIDS and their families	✓ % of clinics offering HIV/AIDS counseling and prevention interventions for PLWHAs and their families

Indicators adapted from: *National AIDS Programmes: A Guide to Monitoring and Evaluation. UNAIDS.* Geneva 2000

Efforts are underway to make HAART more affordable and feasible for low- and middle-income countries with the goal of having 3 million people on treatment by the end of 2005. While continuing to give the highest priority to prevention and the basic package of AIDS treatment and care, where necessary and possible, governments might wish to (i) prepare a HAART strategy, which includes public and private mechanisms to finance HAART; (ii) evaluate and prepare the capacities of the health system for HAART. Such steps would enable sustained, safe and effective use of HARRT in the future.

UNAIDS supports a comprehensive treatment and care approach that includes voluntary counseling and testing, psycho-social support, palliative care, prevention and treatment of opportunistic infections, good nutrition, strengthening of health systems, fair and sustainable financing, and, where possible, access to HAART.

Lessons learned

- **Act early.** No country is insulated from the risk of HIV/AIDS. Governments should intervene as soon as possible as the more widely HIV/AIDS spreads, the more difficult and costly prevention, care and treatment become.
- **Increase government commitment, attention, and funding.** This is key to success in every country that has made headway against the epidemic. Leaders need to overcome taboos and stigma, speak openly about the disease, and place a multi-sectoral HIV/AIDS program high in their development agendas. To ensure adequate funding for HIV/AIDS, it is necessary for governments to re-examine spending priorities, reallocate accordingly, and mobilize donor support.
- **Create an enabling policy environment.** An enabling environment with regard to legal, social, and gender policies is essential for the success of a national HIV/AIDS program, as it facilitates the participation of key stakeholders and helps reduce risk-taking behaviors, stigma and discrimination.
- **Prevent infection among those most likely to contract and spread HIV.** Effective, low-cost prevention interventions for groups at high risk already exist. However, such groups are often the most marginalized and stigmatized and thus unable to compete for attention and resources themselves. To identify groups at high risk, their social networks and then target them with sustained, effective prevention interventions should be the priority of a national HIV/AIDS program.
- **Prioritize interventions by their proven effectiveness.** Prioritizing interventions based on their effectiveness can maximize the number of new HIV infections averted in the presence of resource and capacity constraints. Budget allocation among different components of a national HIV/AIDS program should reflect a strategic choice of effective interventions.
- **Address gender inequality.** There are more women getting infected than men in many developing countries. Women now account for 55% of adults living with HIV/AIDS in Sub-Saharan Africa. Gender inequality is a contributing factor to the epidemic and needs to be addressed in the long term through measures such as improving education and labor force participation of women.
- **Use a multi-sectoral approach with active involvement of all relevant sectors, civil society, NGOs, and private entities.** This would generate greater commitment, mobilize additional resources, and improve the sustainability of interventions and their chance for success. Different sectors such as education, transport, defense, tourism, etc., can play a role in the fight against HIV/AIDS. Local communities and NGOs are often capable of understanding local cultural and social contexts, mobilizing people, and reaching out to marginalized high-risk groups. They therefore can successfully implement many HIV/AIDS interventions and need to be provided with direct financial and technical support to act

at the local level, where the public sector is often less effective.

- **Integrate HIV/AIDS in poverty reduction strategies.** It is still not clear whether poverty increases the likelihood of HIV infection. However, there is strong evidence that HIV/AIDS causes and worsens poverty. The integration of HIV/AIDS into national antipoverty programs and development instruments such as PRSPs and HIPC would help ensure the priority of HIV/AIDS control in the development agenda and facilitate actions to mitigate the impact of AIDS on the poor.
- **Develop a good monitoring, evaluation (M&E) and surveillance system.** A realistic M&E plan with clearly-defined input, output, outcome and impact indicators helps track the performance of the national AIDS response and evaluate its impact on the epidemic. A Second Generation Surveillance System, recommended by WHO and UNAIDS, monitors trends in the epidemic and in contributing risk behaviors.

For more information

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Resources

Available at http://www.unaids.org:

UNAIDS, December 2002, *AIDS Epidemic Update.*

UNAIDS, 2002, *Report on the Global HIV/AIDS Epidemic*

UNAIDS, *Epidemiological Fact Sheets by Country*

UNAIDS, *Best Practice Series*

Adeyi O et al. *AIDS, Poverty Reduction and Debt Relief: A Toolkit for Mainstreaming HIV/AIDS Programmes into Development Instruments,* UNAIDS and World Bank, Geneva, 2000

Available at http://www.worldbank.org/aids:

World Bank, *Confronting AIDS: Public Priorities in a Global Epidemic,* 1997

World Bank, *Intensifying Action Against HIV/AIDS in Africa: Responding to a Development Crisis,* 1999

World Bank, *Costs of Scaling HIV Program Activities to a National Level in Sub-Saharan Africa: Methods and Estimates,* 2000

Other:

Merson MH et al., Effectiveness of HIV Prevention Interventions in Developing Countries, *AIDS:* 14 Suppl 2:S68-84, 2000

Ruiz MS et al. (eds), *No Time to Lose: Getting More from HIV Prevention,* Institute of Medicine, Washington D.C., 2001

Lamptey, P et al. (eds), *Strategies for an Expanded and Comprehensive Response (ECR) to a National HIV/AIDS Epidemic: A Handbook for Designing and Implementing HIV/AIDS Programs.* Family Health International, Arlington, 2001.

Jha P et al., *The Evidence Base for Interventions to Prevent HIV Infection in Low and Middle-income Countries,* Commission on Macroeconomics and Health, Geneva, 2001

Expanded versions of the "at a glance" series, with e-linkages to resources and more information, are available on the World Bank Health-Nutrition-Population web site: www.worldbank.org/hnp