



IPPF Medical Bulletin

Contents

IMAP statement on HIV/AIDS: an overview	1
Correction	4

IMAP statement on HIV/AIDS: an overview

The statement below was developed by the International Medical Advisory Panel (IMAP) at its meeting in April 2005. For details on management of HIV infection, see "IMAP statement on the management of HIV infection within sexual and reproductive health services", IPPF Med Bull 2005; 39 (1): 1-6.

The challenge

HIV/AIDS represents one of the most devastating epidemics in human history. More than 90% of HIV-infected individuals live in the developing world and countries in economic transition. Furthermore, 95% of all AIDS deaths so far recorded have been in developing countries – mostly among young adults. Widespread poverty, gender inequality, and social and political inertia have contributed to high HIV prevalence rates in these countries, resulting in grave social and economic repercussions. These include:

- Reduced child survival
- Reduced life expectancy
- Increased orphanhood
- Increased demand on formal healthcare services and communities for care and support
- Decreased productivity leading to economic losses.

These effects threaten development gains in some of the world's poorest countries.

IPPF is committed to the fight against the HIV epidemic. HIV/AIDS is one of IPPF's five strategic priorities adopted in 2003. All IPPF Member Associations have a major role to play in addressing HIV/AIDS, irrespective of prevalence rates in their own countries. As the main point of contact for sexual and reproductive health services in many countries, Member Associations are well placed to integrate HIV/AIDS into their information programmes and service delivery systems.

The strategies adopted by Member Associations in helping to reduce the spread of HIV will depend on national contexts, prevalence rates, epidemiological trends, the groups being infected, existing services, and resources. The introduction/integration of HIV services into IPPF Member Associations' activities requires systematic planning and preparation.

Epidemiology

Figure 1 gives estimated numbers of adults and children infected in different parts of the world. The main characteristics of the HIV epidemic in various regions of the world are described below. More information on the global epidemic can be had from the *UNAIDS Annual Report*.

Sub-Saharan Africa

This is the worst affected region, having about 70% of the total global burden. The predominant mode of transmission is heterosexual.

Asia and the Pacific

HIV epidemics are emerging rapidly throughout Asia, where the predominant mode of transmission is heterosexual. Intravenous drug use also makes a substantial contribution in Northern Malaysia, Vietnam, Thailand, Southern China, Myanmar, and Manipur State.

High income countries (Northern America, Western Europe, Australia)

Early in the epidemic, HIV infection mainly affected men who have sex with men, before spreading to women, minority groups, and the disadvantaged; but in recent times an increasing proportion of new cases has been attributable to heterosexual transmission and intravenous drug use.

Eastern Europe and Central Asia

This region is experiencing the fastest growing HIV epidemic in the world. HIV infection in intravenous drug users is particularly important.

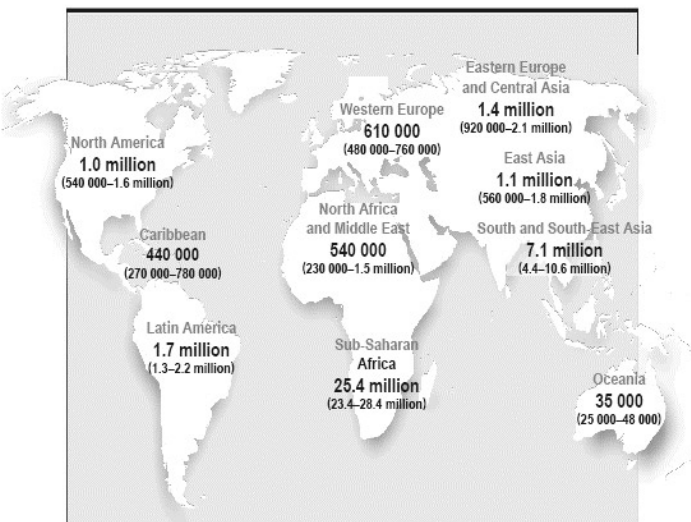
Latin America and the Caribbean

The rates of infection are highest in the Caribbean. The predominant mode of transmission in these areas is heterosexual, but intravenous drug use and sex between men are also important.

North Africa and the Middle East

HIV infection was introduced relatively late into North Africa and the Middle East and rates remain low. The principal mode of transmission is heterosexual.

Figure 1. Estimated numbers of adults and children living with HIV/AIDS, end 2004



Source: UNAIDS, HIV/AIDS Epidemic Update, Global summary of the HIV and AIDS epidemic in 2004 (December 2004).

Modes of transmission and risk factors

HIV is transmitted:

- Via sexual contact
- Via infected body fluids that come into contact with mucous membranes, non-intact skin, or the bloodstream
- From mother to child.

Even when a person is receiving highly active antiretroviral therapy and/or has an undetectable virus load, HIV can still be transmitted; therefore preventive measures need to be continued.

Risk of transmission

Any event or behaviour in which HIV-containing body fluids come into contact with the blood system or mucous membranes of an uninfected person poses a risk of transmission. The magnitude of the risk varies with the exposure (Table 1).

Table 1. Approximate risk of acquiring HIV. Risks are for a single exposure, except with mother-to-child transmission where exposures are in utero, at birth, and during breastfeeding

Exposure	Approximate risk
Vaginal intercourse	0.1%
Anal intercourse	1.0%
Needle-stick injuries	0.3%
Needle-sharing among intravenous drug users	1.0%
Mother-to-child	20–40%
Blood transfusion	100%

(After Royce et al, *N Engl J Med* 1997; 337:799).

Sexual transmission

Unprotected sexual intercourse (penetrative oral, anal, or vaginal without a condom) between male and female, or between males, accounts for 75–85% of HIV infection in adults. Factors that are associated with increasing the risk of sexual transmission include:

- The amount of virus circulating in source partner
- One or both partners having a sexually transmitted infection, especially genital ulcer disease or *Herpes simplex* virus type II
- Lack of circumcision in men (retention of foreskin).

HIV transmission may take place in the absence of damage to genital or rectal mucosal membranes.

Bloodborne transmission

Bloodborne transmission of HIV occurs via blood-contaminated needles and other sharp instruments, and via blood transfusion and organ transplantation. People at risk include healthcare providers, recipients of blood, blood products, and organs, and injecting drug users.

Healthcare workers

Healthcare workers are continually at risk of acquiring bloodborne infections – in particular, hepatitis B, hepatitis C, and HIV. The risk of occupational infection with HIV is influenced by:

- The prevalence of HIV infection in the patient population
- The type and frequency of exposure events
- The efficacy of HIV transmission following exposure.

Activities with the greatest risk of injury include: disposal of waste, linen, and used procedure trays; administration of parenteral injections or medication via intravenous lines and catheters; surgery; and phlebotomy. The risk of transmission after exposure is influenced by the severity of the exposure and the concentration of the virus in the source material. The estimated overall seroconversion rate following exposure to blood from infected individuals is 0.3%.

Injecting drug users

The sharing of injection equipment among injecting drug users is a highly efficient route of HIV transmission. In many parts of the world injecting drug use accounts for a growing proportion of all adult infections.

Recipients of blood, blood products, and transplanted organs

Blood transfusion accounts for a small percentage of all adult cases of HIV infection worldwide. The introduction of routine screening procedures substantially reduced this risk in many countries.

Unsafe medical practices

Reuse of needles and medical equipment without sterilisation can spread HIV infection. Elimination of such practices requires vigilance and better training of healthcare workers.

Mother-to-child transmission

Mother-to-child transmission is the most important route of HIV infection in children. It can occur during pregnancy, labour, and delivery or during breastfeeding. In 2004, about 700 000 children were newly infected with HIV, 90% of these in Sub-Saharan Africa.

The provision of sexual and reproductive health services is vital in prevention of mother-to-child transmission – especially contraception to enable HIV-positive women to avoid pregnancy if they so wish.

Interventions focusing on prevention of mother-to-child transmission need to be complemented by efforts at primary prevention of HIV infection (especially among women of childbearing age and their partners), prevention of unintended pregnancies, and support for HIV-infected women and their families.

In the absence of any intervention, the risk of mother-to-child transmission from an HIV-infected pregnant woman is 15–30% in non-breastfeeding populations. Breastfeeding by an infected mother increases the risk by 5–20% to a total 20–45%. The risk of mother-to-child transmission can be reduced to below 2% by interventions that include use of antiretroviral drugs in the woman during pregnancy and labour and in the infant during the first weeks of life, obstetrical interventions such as elective caesarean delivery (before the onset of labour and membrane rupture), and complete avoidance of breastfeeding.

In many resource-constrained settings, elective caesarean section is not available and alternatives to breastfeeding may not be acceptable. In addition, the costs of replacement feeding are often prohibitive and access to clean water cannot be guaranteed.

The offer of counselling and testing for HIV should become standard practice in antenatal care. Failing that, the offer can be made soon after delivery – an important entry point for prevention of mother-to-child transmission and other measures for prevention, treatment, and support.

How HIV is *not* transmitted

Many myths and incorrect perceptions exist about the transmission of HIV. Evidence shows that HIV is *not* transmitted in the following ways;

- Simple casual contact such as kissing, hugging, or shaking hands
- Living in a household where members drink or eat from common dishes or utensils
- Through the air, food, or water, or by touching any object handled or breathed on by a person infected with HIV
- In swimming pools or hot tubs
- Through the bites of mosquitoes or bed bugs or contact with other insects or rodents.

IPPF Member Associations should engage in a range of activities (education, advocacy, outreach, etc) to dispel the myths surrounding HIV transmission since they contribute to the stigma and discrimination suffered by HIV-positive individuals. Similarly, Associations should actively dispel myths concerning alleged cures for HIV/AIDS: there is no cure.

Counselling and testing

Counselling and testing (CT) is the process by which an individual learns his or her HIV status and takes appropriate action. The goals of CT are to:

- Identify HIV-infected individuals for further management as part of their continuum of care
- Determine individual risk and provide risk reduction counselling
- Provide counselling and advice about ways to reduce HIV transmission, improve quality of life, and ensure health seeking behaviour.

CT need not be confined to clinics. With rapid testing kits it can be practised in any setting where personnel are suitably trained and follow-up or referral services are available.

CT should not take place in isolation but be part of a continuum including prevention, treatment, and care. A critical component is the ability to refer infected individuals to a primary level treatment site: individuals are less likely to come forward for testing if there is little perceived benefit for them. Linkage of CT with care and support services helps reduce this barrier to testing.

CT services must adhere to local and national protocols, laws, and regulations governing the provision of HIV services. Counselling should be confidential and non-judgmental, and should be tailored to the needs and realities of a client.

In both high and low prevalence areas, Member Associations can take a lead in expanding access to CT for HIV. The nature of the intervention will be shaped by the needs of clients and the community and the capacity of the organisation itself. Where CT is not available, Associations can participate in providing or developing a referral service, and by raising additional support to ensure this component of their integrated prevention strategy is not neglected.

Diagnosis of HIV infection

Any laboratory-based or point-of-care test for HIV, whether performed on blood or other fluids, should be considered an invasive test the results of which may have far-reaching implications for the client – in terms not only of that person's health but also of matters as diverse as employment, insurance, and family and personal relationships. Diagnosis of HIV infection can be established by:

- Detection of antibodies to the virus after seroconversion
- Detection of viral proteins such as p24 (the core protein of the virus)
- Detection of viral nucleic acid (the genome of the virus in its RNA or DNA form)
- Isolation of the virus in cell culture.

In clinical practice the most widely used tests for HIV antibody are enzyme-linked immunosorbent assays (ELISAs). Reactive or positive results are generally confirmed with the 'western blot', which detects specific antibodies. In Africa, the western blot has lost popularity partly because it is costly and difficult to interpret and partly because the ELISA tests have become progressively more specific. Thus, in settings where resources are limited, multiple ELISAs are used for screening and confirmation.

Other ways to test for HIV include culture and DNA or RNA amplification. DNA-PCR (polymerase chain reaction) is useful for testing of newborn babies who are antibody-positive because of transplacental passage of maternal antibodies. It can also detect early infection before antibodies become detectable – the "window period".

Rapid tests

Rapid tests for HIV are based on the detection of HIV antibodies and can be performed on small amounts of blood or saliva. Because the results are available within minutes, they are increasingly popular in counselling and testing services. However, the accuracy of rapid tests needs to be demonstrated in the particular community in which they will be introduced. Where rapid tests are positive, a confirmatory ELISA is recommended.

Rapid tests can be especially useful in settings where follow-up is difficult because clients live far away and may not return for results, or when an intervention is necessary – for example, to

prevent mother-to-child transmission or to provide post-exposure prophylaxis after occupational exposure. Most rapid tests are applications of the ELISA principle.

Timing

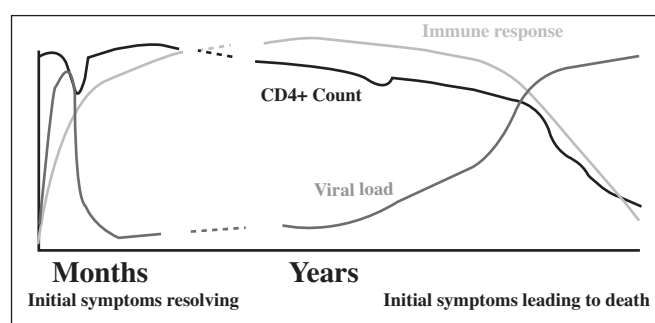
The latest generation of ELISA tests detect antibodies from about 4 weeks post exposure but in some individuals antibodies develop as late as 12 weeks; therefore retesting is advisable in those who have negative or indeterminate test results.

Course of disease

About 2–5 weeks after HIV infection a substantial minority of persons experience effects such as fever, tiredness, swollen lymph nodes, sore throat, joint and muscle aches, diarrhoea, rash, headache, encephalitis, and aseptic meningitis. In this phase the infected person is extremely infectious, with high viraemia. Subsequently, the viraemia declines and the infected person becomes symptom-free, sometimes for many years. In this phase, virus counts and the number of CD4 cells in blood (the T-lymphocytes that are the primary target of HIV) give some indication of the state of disease. The higher the viral load and lower the CD4 levels, the faster the progression to AIDS (Figure 2). A rapid decline of the immune system signal is followed by the onset of opportunistic infections (e.g., tuberculosis), tumours, wasting, and neurological complications that ultimately lead to death.

In the absence of treatment, the median interval from HIV infection to development of severe immunodeficiency is about 8 years. When the CD4 count falls below 200/μL the median survival without treatment is 2–4 years in most developed countries and six months or less in developing countries; the reasons for this shorter survival include lack of treatment for concurrent opportunistic infections.

Figure 2. Viral load and immune response in HIV infection



CD4 testing

Once HIV infection has been diagnosed, a CD4 count will help in decisions about when to start antiretroviral drugs and prophylaxis against opportunistic infections such as *Pneumocystis carinii*. Both testing and prescription of antiretroviral therapy should follow national treatment plans and policies. In resource-poor settings, surrogate clinical markers such as wellness, appetite and energy, and hair growth can be used, together with laboratory indices such as haemoglobin and erythrocyte sedimentation rate.

Antiretroviral therapy

The primary goal of an antiretroviral therapy programme is to decrease HIV-related morbidity and mortality. Antiretroviral drugs can keep an individual in the symptom-free phase or return an individual to that phase. In developing countries, two years' antiretroviral treatment has increased survival by as much as 85%. The latest regimens are now becoming more widely available in resource-poor countries. Wherever possible, antiretroviral drugs should be offered in sexual and reproductive health services and provided at primary care level.

Providers should be aware that HIV drug treatment is complex and adverse events can take many forms. When antiretrovirals are prescribed, national treatment guidelines should be followed. Close adherence to prescribed therapy is essential, since drug resistance tends to develop when doses are skipped.

Strategies: what IPPF Member Associations can do

IMAP supports the inclusion of HIV/AIDS as an essential part of IPPF's Strategic Plan. Strategies addressing HIV/AIDS should take into account national contexts and circumstances, existing services, and available resources.

Associations working in this field should:

- Clearly define a strategy and their role, as well as undertake the planning necessary for introduction of any new service
- Ensure that service providers are adequately trained and have the skills to address HIV/AIDS
- Undertake efforts to network and collaborate with other organisations and partners.

As outlined in the Strategic Plan, Associations' strategies should focus on four main areas – advocacy, prevention, care and support for HIV-positive people, and mainstreaming of HIV into sexual and reproductive health services.

Advocacy

Member Associations have an important contribution to make in raising awareness of HIV/AIDS and carrying out advocacy in both the policy and programme areas. Associations should mainstream/integrate HIV/AIDS in their sexual and reproductive health programmes and identify resources for these activities, in collaboration with other partners and organisations.

Efforts should be undertaken to:

- Ensure the mainstreaming of HIV into sexual and reproductive health services
- Address stigma and discrimination in the workplace (developing a workplace policy on HIV), and at the community and household levels
- Make governments aware of, and campaign for relaxation of, laws and policies that are discriminatory
- Increase access to good-quality voluntary and confidential HIV testing and counselling
- Urge the inclusion of medications for opportunistic infections on the essential drug list and support proposals for price reduction on such treatments as well as antiretrovirals
- Support the global efforts to develop topical microbicides and vaccines
- Educate young people about sexual and reproductive health, including HIV/AIDS
- Strengthen condom promotion, with special targeting of young people and other vulnerable groups
- Increase the availability and accessibility of the female condom
- Reach the private sector and community leaders who have a critical role in prevention and care efforts.
- Increase access to antiretroviral drugs and services by building on existing sources of support for services including funding available under the Global Fund and PEPFAR programmes
- Counter incorrect negative propaganda and dispel myths and misunderstandings

Prevention

Integrated prevention is a cornerstone of any HIV strategy. HIV incidence can be slowed by expansion of prevention efforts. These efforts have maximum impact when they form part of a comprehensive strategy involving care, treatment, and support. A narrow prevention-only focus can alienate individuals already infected with the virus and thus lose important allies for delivery of prevention messages. Prevention efforts take account of the fact that most individuals are not infected; the challenge is to keep them this way.

Prevention activities Member Associations can undertake include:

- Supporting global prevention initiatives targeting young people. Messages should emphasise safer sexual behaviour, promotion of condom use (male and female), negotiation skills, dual protection, and diagnosis/treatment of sexually transmitted infections

- Supporting harm-reduction strategies such as needle-exchange programmes
- Countering myths and misinformation (as above)
- Targeting interventions for vulnerable groups (truck drivers and other men on the move, sex workers, men who have sex with men, imprisoned populations).

Care, support, and treatment

IMAP recognises that some Member Associations do not provide clinical services. Where this is the case, the Association should strive to develop a comprehensive referral service. Where clinical services are provided, the following services may be offered:

- Providing counselling and testing services that emphasise couple counselling
- Taking blood for HIV testing, performing rapid HIV testing, and reporting the results with post-test counselling
- Providing initial assessment and clinical staging (should form the basis for individual planning and provision of long-term care)
- Laboratory monitoring of patient's immune status (CD4, virus counts)
- Diagnosis and treatment of opportunistic infections
- Preventing mother-to-child HIV transmission by MTCT Plus programmes that include care and treatment for the mother as well as the infant
- Integrating prevention of mother-to-child transmission into maternal and child health programmes; introducing more effective antiretroviral interventions; providing linkages to care and treatment for mothers, infants, and family members
- Prevention and treatment of sexually transmitted infections
- Initiating and supplying prophylactic medication to prevent opportunistic infections
- Referral, where necessary, for investigation, treatment, and palliative care
- Training of medical and nursing personnel in HIV/AIDS care (basic as well as in-service training).

Tasks for family planning and abortion services are to:

- Make sexual and reproductive health services and information available and accessible to HIV-positive individuals
- Provide contraceptive options, support, and counselling
- Provide information and support for HIV-positive women and HIV-discordant couples desiring a pregnancy
- Provide information and support on maintenance of a healthy and fulfilling sex life
- Provide pregnancy termination information and services where permitted.

Mainstreaming of HIV/AIDS and sexual and reproductive health

All Member Associations can make a valuable contribution in the fight against HIV/AIDS in their countries by developing strategic programmes and services along the continuum of care and integrating HIV/AIDS as part of their core activities.

Corrections to Guidelines

As a result of our publication, in the September 2004 *Bulletin*, of an extract from IPPF's *Medical and Service Delivery Guidelines for Sexual and Reproductive Health Services*, new edition, two important errors have been pointed out:

1. Under the heading "Delivery by caesarean section" the last sentence should read "... use of chlorhexidine 0.25% to cleanse the birth canal after each vaginal examination and during labour and delivery has not been shown to be effective in reducing [HIV] transmission."
2. The sections entitled "Desire for pregnancy" and "Options for unintended pregnancy" mistakenly implied that pregnancy might accelerate the course of disease in women with AIDS and/or low CD4 counts. There is no evidence that pregnancy accelerates the course of HIV infection.