Acquired Immunodeficiency Syndrome (AIDS)

Acquired immunodeficiency syndrome (AIDS) is the late stage of the spectrum of disease caused by the human immunodeficiency virus (HIV). Currently in New Zealand, AIDS is a notifiable condition while HIV is not.

Epidemiology of HIV and AIDS in New Zealand

In New Zealand, the number of people developing AIDS declined in the mid-1990s, as it did in many developed countries as a result of improved treatments for people with HIV infection. The majority of people currently meeting AIDS criteria have tested late for HIV and therefore have not previously been on anti-retroviral treatment.

The survival of those people who do progress to AIDS is also longer due to treatment, and the annual number of deaths is now consistently lower than the number notified with AIDS.

For the most up-to-date information on the epidemiology of HIV and AIDS in New Zealand, refer to AIDS – New Zealand, the six-monthly newsletter produced by the AIDS Epidemiology Group (www.otago.ac.nz/aidsepigroup) which is also posted on the Ministry of Health website (www.health.govt.nz/aids).

Case definition of AIDS

For surveillance purposes in New Zealand, and in most other developed countries, a person with HIV infection is said to have developed AIDS when one or more of a list of 25 AIDS-defining illnesses first develop. A CD4 count of less than 200 cells per cubic millimetre of blood, which is used in the United States as a criterion for AIDS, is not used in New Zealand.

AIDS-defining diseases (CDC 1993) are:
- candidiasis of bronchi, trachea or lungs
- candidiasis, oesophageal
- cervical cancer, invasive
- coccidioidomycosis, disseminated or extrapulmonary
- cryptococcosis, extrapulmonary
- cryptosporidiosis, chronic intestinal (> 1 month duration)
- cytomegalovirus disease (other than liver, spleen or nodes)
• cytomegalovirus retinitis (with impairment of vision)
• herpes simplex: chronic ulcer(s) (> 1 month duration), bronchitis, pneumonitis or oesophagitis
• histoplasmosis, disseminated or extrapulmonary
• HIV-related encephalopathy
• HIV-related wasting
• isosporiasis, chronic intestinal (> 1 month duration)
• Kaposi’s sarcoma
• lymphoma, Burkitt’s (or equivalent term)
• lymphoma, immunoblastic (or equivalent term)
• lymphoma, primary, of brain
• *Mycobacterium avium* complex or *M. kansasii* infection, disseminated or extrapulmonary
• *Mycobacterium tuberculosis* infection, any site (pulmonary or extrapulmonary)
• *Mycobacterium*, other species or unidentified species, infection, disseminated or extrapulmonary
• *Pneumocystis jiroveci* pneumonia
• pneumonia, recurrent
• progressive multifocal leukoencephalopathy
• *Salmonella* septicaemia, recurrent
• toxoplasmosis of brain.

For children, additional AIDS-defining conditions are:

• serious multiple or recurrent bacterial infections, that is, at least two culture-confirmed infections (septicaemia, pneumonitis, meningitis, bone or joint infection, or abscess of an internal organ or body cavity) within a 2-year period
• lymphoid interstitial pneumonitis (CDC 1994).

**Laboratory testing for diagnosis**

AIDS is a clinical diagnosis. Although there is laboratory testing available for HIV, there is no laboratory testing for AIDS.

**Case classification**

- **Under investigation:** Not applicable.
- **Probable:** Not applicable.
- **Confirmed:** HIV infection with an AIDS-defining disease (as above).
- **Not a case:** A case that has been investigated and subsequently found not to meet the case definition.
Spread of infection

Incubation period
Without treatment, the time from initial infection with HIV to clinical onset of AIDS in an untreated patient is variable, averaging 8–10 years in developed countries.

Mode of transmission
HIV is transmitted from person to person in four main ways:

- through anal and vaginal sex
- through the sharing of contaminated injecting equipment (needles and syringes)
- from an infected mother to her baby during pregnancy or childbirth or through breastfeeding
- through transfusion of infected blood or blood components and the transplantation of infected tissue or organs.

Period of communicability
While transmission of HIV can occur throughout an infected person’s life, the transmissibility varies with the viral load, which is typically high during initial seroconversion and later as the CD4 count falls. Appropriate anti-retroviral therapy that controls the circulating viral load reduces infectivity.

Notification procedure
AIDS is a notifiable condition. Attending medical practitioners must notify all cases to the local medical officer of health, using form H773/1A. A code, not the individual’s name, is used. The medical officer of health should forward the notification to:

  AIDS Epidemiology Group
  Department of Preventive and Social Medicine
  PO Box 913
  University of Otago Medical School
  Dunedin

Although HIV infection without AIDS is not notifiable, surveillance based on laboratory diagnoses is undertaken by the AIDS Epidemiology Group.

Regular quarterly reports are made by the AIDS Epidemiology Group to the Ministry of Health and disseminated widely every 6 months in the AIDS – New Zealand publication.
Management of case

Investigation
Identify the mode of infection in consultation with the attending infectious diseases physician.

Restriction
No isolation precautions other than standard precautions are needed for HIV-positive cases in health care facilities. Staff who are asked to perform an invasive procedure on the case are commonly informed about the case’s infectious status. In almost all cases, there are no restrictions on work, attendance at early childhood service or school or other community activities.

Treatment
The case should be under the care of a physician or paediatrician who has a special interest in HIV and AIDS.

Counselling
People found to be infected with HIV should receive counselling on the implications of the diagnosis from a medical practitioner and/or counsellor. This should include the practical and legal aspects of preventing transmission of HIV. Specific recommendations include:
- not donating blood
- not sharing drug-injecting equipment
- not sharing razors or toothbrushes
- following safe sex practices and informing sexual partners
- informing health care workers (including dentists) of infection.

Management of contacts

Definition
Contacts include:
- sexual or needle-sharing partners of an HIV-infected person
- individuals who have suffered a sharp injury with an object contaminated with HIV-infected blood or body fluid
- newborn babies whose mothers are HIV-positive
- individuals who have received HIV-infected body fluid (for example, blood, semen or cerebrospinal fluid) splashes to a mucosal surface or area of broken skin.
Investigation

All investigation and treatment, including management of HIV-infected pregnant women, should be undertaken under the supervision of an adult and/or paediatric infectious diseases physician with a special interest in HIV.

It is essential that all HIV tests be performed with the informed consent (verbal consent is sufficient in most cases) of the person and with pre-test counselling that includes the reason for the test, the person’s right to decline testing, the date and means by which the results will be made available and an assurance that steps will be taken to maintain confidentiality, including an offer to test under code. More comprehensive pre-test counselling is indicated if the person is at high risk of being HIV-positive.

Prophylaxis

Immediate advice should be sought from the infectious diseases service of the closest tertiary care hospital. Prophylaxis must be authorised by an anti-retroviral prescriber.

Anti-retroviral prophylaxis depends on:

- the period that has elapsed between exposure and the time of availability of appropriate treatment (chemoprophylaxis has been shown to have some protective effect up to 36 hours post exposure)
- the type of exposure and source material, for example, a needle-stick injury versus sexual contact.

Counselling

The contact should be offered comprehensive counselling, ideally in conjunction with the supervising infectious diseases physician. The New Zealand AIDS Foundation is the lead Ministry of Health non-governmental agency for HIV and AIDS. See: www.nzaf.org.nz

Other control measures

Identification of source

If there is a cluster of cases, investigate for a common exposure, including sexual contact, sharing of injecting drug equipment, health care or skin penetration practices (for example, tattooing). If the case could be transfusion-related, contact the New Zealand Blood Service.

Disinfection

Clean equipment and surfaces potentially contaminated with blood or body fluids. For further details, refer to Appendix 1: Disinfection.
Health education and prevention

Information, including frequently asked questions regarding HIV infection and AIDS, is available from the Ministry of Health website: www.health.govt.nz/our-work/diseases-and-conditions/hiv-and-aids and from the New Zealand AIDS Foundation website: www.nzaf.org.nz

Advise injecting drug users on single-use injecting equipment. Needle and syringe exchange programmes exist in pharmacies and community groups throughout New Zealand. A list of outlets is available from the New Zealand Needle Exchange Programme website: www.needle.co.nz

The Ministry of Health offers a screening programme for all pregnant women. Information is available on the National Screening Unit website: www.nsu.govt.nz

References and further information
