HIV INFECTION AND ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)
ADULTS AND ADOLESCENTS ≥13 YEARS OF AGE
CHILDREN 18 MONTHS OF AGE TO <13 YEARS OF AGE
HIV EXPOSURE CHILDREN <18 MONTHS OF AGE

REPORTING INFORMATION

Persons designated by administrative rule shall promptly report every case of AIDS, every AIDS-related condition, and every confirmed positive HIV test to the department of health on forms and in a manner prescribed by the director. In each county the director shall designate the health commissioner of a health district in the county to receive the reports. [Ohio Revised Code 3701.24(B) Effective 02/12/2004].

PERSONS REQUIRED TO REPORT

Persons required to report cases of AIDS, ARC, HIV, confirmed positive tests for HIV, and HIV infections pursuant to divisions (B) and (C) of section 3701.24 of the Revised Code and this rule are as follows: [Ohio Administrative Code 3701-3-12(A-D) Effective 01/01/2009]

Health Care Providers and Facilities

Cases of AIDS, ARC, HIV infections and a CD4 + T lymphocyte count below two hundred (200) cells per micro liter or a CD4 + T lymphocyte percentage of less than fourteen (14) when an HIV infection has not been ruled out as the cause shall be reported by any health care provider with knowledge of the case. In an institutional or health care facility setting, a designated agent, including, but not limited to, an infection control practitioner may make the report for the attending health care provider.

Every health care provider attending a newborn infant or child born to an HIV infected mother shall report promptly every case of such perinatal exposure to HIV and any subsequent test results on every such exposed newborn infant or child until such time that either an HIV infection or a seroreversion status that is negative is confirmed. In an institutional or health care facility setting, a designated agent, including, but not limited to, an infection control practitioner, may make the report for the attending health care provider.

Laboratories

Confirmed positive HIV tests, as defined in rule 3701-3-10 of the Administrative Code, and a CD4 + T lymphocyte count below two hundred (200) cells per micro liter or a CD4 + T lymphocyte percentage of less than fourteen (14) when an HIV infection has not been ruled out as the cause shall be reported by the person in charge of the laboratory performing the test. If a second laboratory is used for additional or confirmatory testing, the person in charge of the laboratory first receiving the specimen shall report the confirmed positive test.

Labs are to be reported for <u>all</u> of the following:

- Positive result from an HIV antibody screening test (e.g., reactive enzyme immunoassay [EIA]*) confirmed by a positive result from a supplemental HIV antibody test (e.g., Western blot or indirect immunofluorescence assay test)
- Positive result or report of a detectable quantity (i.e., within the established limits of the laboratory test) from any of the following HIV virologic (i.e., non-antibody) tests:
    - HIV nucleic acid (DNA or RNA) detection test (e.g., polymerase chain reaction [PCR])

- HIV p24 antigen test, including neutralization assay
- HIV isolation (viral culture)

- CD4 + T lymphocyte count below two hundred (200) cells per micro liter or a CD4 + T lymphocyte percentage of less than fourteen (14) when an HIV infection has not been ruled out as the cause.

Reporting Forms
Refer to Section III "List of Forms and Worksheets" of this manual to download the HIV/AIDS case reporting forms referenced below.

Physicians and Health Care Facilities: are to report on the "*Adult HIV/AIDS Confidential Case Report Form*" (*CDC 50.42A, Rev. 06/2011*) for patients 13 years of age and older; "*Pediatric HIV/AIDS Confidential Case Report Form*" (*CDC 50.42B, Rev. 06/2011*) for patients less than 13 years of age, including reports of perinatal exposure to HIV.

Laboratories: are to report on the "*Positive Laboratory Findings for Reportable Disease*" form (HEA 3333, Rev. 8/05). Laboratories may also use their own reporting form in lieu of ODH form HEA3333 (Rev. 8/05) but if and only if it contains all of the same data elements for reporting. Laboratories, including hospital labs, with the ability to or interest in electronic lab reporting (ELR) should contact the ODH Center for Public Health Statistics and Informatics at (614) 995-5591 for further information on ELR.

Where to Report

Completed forms should be mailed in an envelope marked "*Confidential*" and submitted to the designated local public health department in each of county:

County	**Designated Health Department**
Cuyahoga	Cleveland Department of Public Health
Franklin	Columbus Public Health
Hamilton	Hamilton County Public Health (includes Cincinnati)
Jefferson	Steubenville City Health Department
Lucas	Toledo/Lucas County Health Department
Mahoning	Youngstown City Health District
Montgomery	Combined General Health District of Montgomery
Stark	Canton City Health Department
Summit	Summit County Health District (includes Akron)
All other Counties	County Health Department

The local public health department should forward all forms in an envelope marked "*Confidential*" to the Ohio Department of Health at the following address:

Ohio Department of Health
Attention: HIV/AIDS Surveillance Program
246 North High Street
Columbus, Ohio 43216-0118

Key Reporting Information

Patient Demographics
Sex at Birth
Country of Birth
Date of Birth/Death
Current Gender Identity
Ethnicity
Race
Residence at Diagnosis of HIV/AIDS

Health Care Facility
Facility Name
Facility Phone Number
Facility Street Address
Facility City, County, State and Zip Code
Facility Type (i.e. inpatient, outpatient, screening/diagnostic agency)
Health Care Provider Name
Health Care Provider Phone Number

Patient History
Sex with Male
Sex with Female
Injection Non-Prescription Drugs
Received Clotting Factor for Hemophilia/Coagulation Disorder and Date Received

Laboratory Results
Test Name(s)
Test Date(s)
Test Result(s)
Test Parameter (for quantitative results)

Clinical Status and Treatment of Patient
AIDS Indicator Diseases
Date of Diagnosis
Treatment/Referral Information, if available

Maternal and Birth History
For pediatric HIV and AIDS cases, and perinatal exposures only.

Comments
Use the comments portion of the form to report any other key information (e.g. country of origin for HIV-2; name of city/state recently moved from; other treating physicians; partner's HIVV status).

AGENT
Human immunodeficiency virus (HIV), a retrovirus. Two strains are known, HIV-1 and HIV-2.

CASE DEFINITION (CDC, revised 2008)

HIV Infection, Adults and Adolescents ≥13 years of age

Laboratory criteria for diagnosis:

- Positive result from an HIV antibody screening test (e.g., reactive enzyme immunoassay [EIA]*) confirmed by a positive result from a supplemental HIV antibody test (e.g., Western blot or indirect immunofluorescence assay test), ***OR***
- Positive result or report of a detectable quantity (i.e., within the established limits of the laboratory test) from any of the following HIV virologic (i.e., non-antibody) tests†:
    - HIV nucleic acid (DNA or RNA) detection test (e.g., polymerase chain reaction [PCR])
    - HIV p24 antigen test, including neutralization assay
    - HIV isolation (viral culture)

* Rapid tests are EIAs that do not have to be repeated but require a confirmatory test if reactive. Most conventional EIAs require a repeatedly reactive EIA that is confirmed by a positive result with a supplemental test for HIV antibody. Standard laboratory testing procedures should always be followed.

† For HIV screening, HIV virologic (non-antibody) tests should not be used in lieu of approved HIV antibody screening tests. A negative result (i.e., undetectable or nonreactive) from an HIV virologic test (e.g., viral RNA nucleic acid test) does not rule out the diagnosis of HIV infection.

Case Classification:

Confirmed: meets the laboratory criteria for diagnosis of HIV infection and one of the four HIV infection stages (stage 1, stage 2, stage 3, or stage unknown):

HIV Infection, Stage 1

- No AIDS-defining condition and either CD4+ T-lymphocyte count of >500 cells/µL or CD4+ T-lymphocyte percentage of total lymphocytes of ≥29%.

HIV Infection, Stage 2

- No AIDS-defining condition and either CD4+ T-lymphocyte count of 200-499 cells/µL or CD4+ T-lymphocyte percentage of total lymphocytes of 14-28%.

HIV Infection, Stage 3 (AIDS)

- CD4+ T-lymphocyte count of <200 cells/µL or CD4+ T-lymphocyte percentage of total lymphocytes of <14% or documentation of an AIDS-defining condition. Documentation of an AIDS-defining condition supersedes a CD4+ T-lymphocyte count of ≥200 cells/µL and a CD4+ T-lymphocyte percentage of total lymphocytes of >14%. Definitive diagnostic methods for these conditions are available in Appendix C of the 1993 revised HIV classification system and the expanded AIDS case definition,[2] ***OR***

- Criteria for HIV infection are met and at least one of the AIDS-defining conditions has been documented.

AIDS-Defining Conditions

- Candidiasis of bronchi, trachea, or lungs
- Candidiasis of esophagus†
- Cervical cancer, invasive§
- Coccidioidomycosis, disseminated or extrapulmonary
- Cryptococcosis, extrapulmonary
- Cryptosporidiosis, chronic intestinal (>1 month's duration)
- Cytomegalovirus disease (other than liver, spleen, or nodes), onset at age >1 month
- Cytomegalovirus retinitis (with loss of vision)†
- Encephalopathy, HIV related
- Herpes simplex: chronic ulcers (>1 month's duration) or bronchitis, pneumonitis, or esophagitis (onset at age >1 month)
- Histoplasmosis, disseminated or extrapulmonary
- Isosporiasis, chronic intestinal (>1 month's duration)
- Kaposi sarcoma†
- Lymphoid interstitial pneumonia or pulmonary lymphoid hyperplasia complex*†
- Lymphoma, Burkitt (or equivalent term)
- Lymphoma, immunoblastic (or equivalent term)
- Lymphoma, primary, of brain
- *Mycobacterium avium* complex or *Mycobacterium kansasii*, disseminated or extrapulmonary†
- *Mycobacterium tuberculosis* of any site, pulmonary,†§ disseminated,† or extrapulmonary†
- *Mycobacterium*, other species or unidentified species, disseminated† or extrapulmonary†
- *Pneumocystis jirovecii* pneumonia†
- Pneumonia, recurrent†§
- Progressive multifocal leukoencephalopathy
- *Salmonella* septicemia, recurrent
- Toxoplasmosis of brain, onset at age >1 month†
- Wasting syndrome attributed to HIV

* Only among children <13 years of age[1]
† Condition that might be diagnosed presumptively.
§ Only among adults and adolescents ≥13 years of age[2]
Source: MMWR[3]

HIV Infection, Stage Unknown

- No information available on CD4+ T-lymphocyte count or percentage and no information available on AIDS-defining conditions (Every effort should be made to report CD4+ T-lymphocyte counts or percentages and the presence of AIDS-defining conditions at the time of diagnosis).

Other Criterion (for Cases that Do Not Meet Laboratory Criteria):

- HIV infection diagnosed by a physician or qualified medical-care provider§ based on the laboratory criteria and documented in a medical record.
- Oral reports of prior laboratory test results are not acceptable.
- An original or copy of the laboratory report is preferred; however, in the rare instance the laboratory report is not available, a description of the laboratory report results by a physician or qualified medical-care provider documented in the medical record is acceptable for surveillance purposes. Every effort should be made to obtain a copy of the laboratory report for documentation in the medical record.

Comment

The 2008 HIV infection case definition for adults and adolescents ≥13 years of age replaces the HIV infection and AIDS case definitions and the HIV infection classification system (*2, 4-6*). The case definition is intended for public health surveillance only and not as a guide for clinical diagnosis. The definition applies to all HIV variants (e.g., HIV-1 or HIV-2) and excludes confirmation of HIV infection through diagnosis of AIDS-defining conditions alone.

For public health surveillance purposes, a reportable case of HIV infection among adults and adolescents ≥13 years of age is categorized by increasing severity as stage 1, stage 2, or stage 3 (AIDS) or as stage unknown.

HIV and AIDS, Children 18 months of age to <13 years of age

Laboratory criteria for diagnosis:

- Positive result from a screening test for HIV antibody (e.g., reactive EIA), confirmed by a positive result from a supplemental test for HIV antibody (e.g., Western blot or indirect immunofluorescence assay), ***OR***

- Positive result or a detectable quantity by any of the following HIV virologic (non-antibody) tests***:
    - HIV nucleic acid (DNA or RNA) detection (e.g., PCR)
    - HIV p24 antigen test, including neutralization assay
    - HIV isolation (viral culture)

Case Classification:

HIV Infection

Confirmed: One of laboratory criteria or other criteria listed below is met:

Other Criterion (for Cases that Do Not Meet Laboratory Criteria):

- HIV infection diagnosed by a physician or qualified medical-care provider based on the laboratory criteria and documented in a medical record.

- Oral reports of prior laboratory test results are not acceptable.

AIDS

Confirmed: Criteria for HIV infection are met and at least one of the AIDS-defining conditions has been documented.

Comment

*** For HIV screening among children 18 months of age to <13 years of age infected through exposure other than perinatal exposure, HIV virologic (non-antibody) tests should not be used in lieu of approved HIV antibody screening tests. A negative result (i.e., undetectable or nonreactive) by an HIV virologic test (e.g., viral RNA nucleic acid test) does not rule out the diagnosis of HIV infection.

No changes have been made to the existing classification system for HIV infection among children 18 months of age to <13 years of age (*7*). To classify HIV-infected children in this age group refer to the 1994 revised classification system for HIV infection among children <13 years of age (*7*).

HIV Infection, Children <18 months of age

Laboratory criteria for diagnosis:

HIV Infection

Presumptive: Positive results on one specimen (not including cord blood) from the following HIV virologic tests:

- HIV nucleic acid detection test,
- HIV p24 antigen test, including neutralization assay, for a child age ≥1 month, ***OR***
- HIV isolation [viral culture] for definitively HIV infected) ***AND***
- No subsequent negative results from HIV virologic or HIV antibody tests.

Definitive: Positive results on two separate specimens (not including cord blood) from one or more of the following HIV virologic (non-antibody) tests:

- HIV nucleic acid (DNA or RNA) detection**
- HIV p24 antigen test, including neutralization assay, for a child age ≥1 month
- HIV isolation (viral culture)

HIV Non-infection

Presumptive:

- Two negative RNA or DNA virologic tests, from separate specimens, both of which were obtained at age ≥2 weeks and one of which was obtained at age ≥4 weeks§§, ***OR***
- One negative RNA or a DNA virologic test from a specimen obtained at age ≥8 weeks, ***OR***
- One negative HIV antibody test from a specimen obtained at age ≥6 months, ***OR***
- One positive HIV virologic test followed by at least two negative tests from separate specimens, one of which is a virologic test from a specimen obtained at age ≥8 weeks or an HIV antibody test from a specimen obtained at age ≥6 months ***AND***

- No other laboratory or clinical evidence of HIV infection (i.e., no subsequent positive results from virologic tests if tests were performed, and no AIDS-defining condition for which no other underlying condition indicative of immunosuppression exists).

Definitive:

- At least two negative HIV DNA or RNA virologic tests from separate specimens, both of which were obtained at age ≥1 month and one of which was obtained at age ≥4 months, ***OR***
- At least two negative HIV antibody tests from separate specimens obtained at age ≥6 months **AND**
- No other laboratory or clinical evidence of HIV infection (i.e., no positive results from virologic tests [if tests were performed] and no current or previous AIDS-defining condition).

** HIV nucleic acid (DNA or RNA) detection tests are the virologic methods of choice for the diagnosis or exclusion of infection in children <18 months of age. Although HIV culture can be used, culture is less standardized and less sensitive than nucleic acid detection tests. The use of p24 antigen testing to exclude infection in children <18 months of age is not recommended because of poor sensitivity, especially in the presence of HIV antibody.

Commercial tests for RNA and DNA detection have become widely available. Quantitative RNA tests have been approved by the Food and Drug Administration (FDA) for monitoring HIV infection, and qualitative RNA tests have been approved to aid diagnosis. The quantitative and qualitative RNA tests meet FDA standards for high analytic and clinical sensitivity and specificity. All available tests detect the subtypes of group M and strains of group O. HIV-2 can be diagnosed with HIV-2 DNA PCR. HIV RNA tests sometimes do not detect HIV-2 because the viral loads in some HIV-2 infected persons are below detectable levels. Because of the possibility of mutation or recombination involving the sequences detected by a particular test, occasionally, virus might not be detected in a specimen from an HIV-2 infected individual. If HIV-2 infection seems likely but results are negative, testing with a different assay might be advisable.

§§ If specimens for both negative RNA or DNA virologic tests are obtained at age ≥4 weeks, specimens should be obtained on separate days.

Exposure to HIV

Report only for children less than 18 months of age born to an HIV-infected mother, regardless of the child's HIV status.

Case Classification:

HIV Infection

Presumptive: Meets exposure criteria and presumptive laboratory criteria or at least one of the other criteria below:

Definitive: Meets exposure criteria and definitive laboratory criteria or at least one of the other criteria below:

Other Criteria (for Cases that Do Not Meet Laboratory Criteria for Definitive or Presumptive HIV Infection):

- HIV infection diagnosed by a physician or qualified medical-care provider based on the laboratory criteria and documented in a medical record. Oral reports of prior laboratory test results are not acceptable, **OR**

- When test results regarding HIV infection status are not available, documentation of a condition that meets the criteria in the 1987 pediatric surveillance case definition for AIDS.

Uninfected with HIV

Presumptive: Meets exposure criteria, does not meet criteria for definitively uninfected with HIV, and meets one of the presumptive laboratory criteria for non-infection.

Definitive: Meets exposure criteria, does not meet criteria for presumptive or definitive HIV infection, and at least one of the laboratory criteria of non-infection, or other criteria below.

Other Criteria (for Cases that Do Not Meet Laboratory Criteria for Uninfected with HIV, Definitive or Presumptive):

- Determination of uninfected with HIV by a physician or qualified medical-care provider based on the laboratory criteria and who has noted the HIV diagnostic test results in the medical record. Oral reports of prior laboratory test results are not acceptable **AND**

- No other laboratory or clinical evidence of HIV infection (i.e., no positive results from virologic tests [if tests were performed] and no AIDS-defining condition for which no other underlying condition indicative of immunosuppression exists).

Indeterminate HIV Infection

A child <18 months of age born to an HIV-infected mother is categorized as having perinatal exposure with an indeterminate HIV infection status if the criteria for infected with HIV and uninfected with HIV are not met.

AIDS (A child <18 months of age)

AIDS-Defining Conditions

- Bacterial infections, multiple or recurrent*
- Candidiasis of bronchi, trachea, or lungs
- Candidiasis of esophagus†
- Cervical cancer, invasive§
- Coccidioidomycosis, disseminated or extrapulmonary
- Cryptococcosis, extrapulmonary
- Cryptosporidiosis, chronic intestinal (>1 month's duration)
- Cytomegalovirus disease (other than liver, spleen, or nodes), onset at age >1 month
- Cytomegalovirus retinitis (with loss of vision)†
- Encephalopathy, HIV related
- Herpes simplex: chronic ulcers (>1 month's duration) or bronchitis, pneumonitis, or esophagitis (onset at age >1 month)
- Histoplasmosis, disseminated or extrapulmonary

- Isosporiasis, chronic intestinal (>1 month's duration)
- Kaposi sarcoma†
- Lymphoid interstitial pneumonia or pulmonary lymphoid hyperplasia complex*†
- Lymphoma, Burkitt (or equivalent term)
- Lymphoma, immunoblastic (or equivalent term)
- Lymphoma, primary, of brain
- *Mycobacterium avium* complex or *Mycobacterium kansasii*, disseminated or extrapulmonary†
- *Mycobacterium tuberculosis* of any site, pulmonary,†§ disseminated,† or extrapulmonary†
- *Mycobacterium*, other species or unidentified species, disseminated† or extrapulmonary†
- *Pneumocystis jirovecii* pneumonia†
- Pneumonia, recurrent†§
- Progressive multifocal leukoencephalopathy
- *Salmonella* septicemia, recurrent
- Toxoplasmosis of brain, onset at age >1 month†
- Wasting syndrome attributed to HIV

* Only among children <13 years of age[1]
† Condition that might be diagnosed presumptively.
§ Only among adults and adolescents ≥13 years of age[2]
Source: MMWR[3]

Comment

The 2008 definition takes into account new available testing technologies. Laboratory criteria for children <18 months of age at the time of diagnosis include revisions to one category: presumptively uninfected with HIV. No substantial changes have been made to the remaining three categories (definitively HIV infected, presumptively HIV infected, and definitively uninfected with HIV), and no changes have been made to the conditions listed under the AIDS criteria in the 1987 pediatric surveillance case definition for AIDS for children <18 months of age (*4,5,8*). Because diagnostic laboratory testing for HIV infection among children <18 months of age might be unreliable, children in this age group with perinatal HIV exposure whose illness meets the AIDS case definition on the basis of clinical criteria are considered presumptively HIV infected when the mother has laboratory-confirmed HIV infection. The definitive or presumptive exclusion of HIV infection for surveillance purposes does not mean that clinical HIV infection can be ruled out. For the purposes of calculating the exact timing of tests (e.g., when a specimen was obtained for laboratory testing) based on the surveillance case definition, 1 month corresponds to 30 days.

The exclusion of HIV infection (definitive or presumptive) for surveillance purposes does not mean that clinical HIV infection can be ruled out. These categories are used for surveillance classification purposes and should not be used to guide clinical practice. A child with perinatal HIV exposure should continue to be monitored clinically according to nationally accepted treatment and care guidelines (*9-11*) to 1) monitor for potential complications of exposure to antiretroviral medications during the perinatal period and 2) confirm the absence of HIV infection with repeat clinical and laboratory evaluations.

No changes have been made to the existing classification system for HIV infection among children <18 months of age (*7*). To classify HIV-infected children in this age group, use the 1994 revised classification system for HIV infection among children <13 years of age (*7*).

References

1. CDC. 1994 Revised classification system for human immunodeficiency virus infection in children less than 13 years of age. MMWR 1994; 43[No. RR-12].

2. CDC. 1993 Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR 1992; 41[No. RR-17]. http://www.cdc.gov/mmWR/preview/mmwrhtml/00018871.htm

3. CDC. Appendix A: AIDS-Defining Conditions. *MMWR* 2008:57(RR10):9. http://www.cdc.gov/mmWR/preview/mmwrhtml/rr5710a2.htm

4. CDC. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. MMWR 1987; 36(Suppl. 1):1-15.

5. CDC. Guidelines for national human immunodeficiency virus case surveillance, including monitoring for human immunodeficiency virus infection and acquired immunodeficiency syndrome. MMWR 1999; 48(No. RR-13).

6. Council of State and Territorial Epidemiologists. Revision of surveillance case definition for AIDS among adults and adolescents ≥ 13 years of age (Position Statement 05-ID-04); 2005. http://www.cste.org/ps/2005pdf/final2005/05-ID-04final.pdf

7. CDC. 1994 Revised classification system for human immunodeficiency virus infection in children less than 13 years of age. *MMMR* 1994; 43(No. RR-12). http://www.cdc.gov/mmWR/preview/mmwrhtml/00032890.htm

8. Council of State and Territorial Epidemiologist. Revision of surveillance case definition for HIV infection among children aged <18 months (Position Statement 07-ID-10); 2007. http://www.cste.org/PS/2007ps/2007psfinal/ID/07-ID-10.pdf

9. Working Group on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the use of antiretroviral agents in pediatric HIV infection; 2008. http://aidsinfo.nih.gov/contentfiles/pediatricguidelines.pdf.

10. Perinatal HIV Guidelines Working Group; Public Health Service Task Force. Recommendations for use of antiretroviral drugs in pregnant HIV-infected women for maternal health and interventions to reduce perinatal HIV transmission in the United States; 2008. http://aidsinfo.nih.gov/contentfiles/perinatalgl.pdf.

11. King SM, Committee on Pediatric AIDS (American Academy of Pediatrics), Infectious Diseases and Immunization Committee (Canadian Paediatric Society). Evaluation and treatment of the human immunodeficiency virus-1-exposed infant. Pediatrics 2004; 114:497-505.

SIGNS AND SYMPTOMS

In 50-80% of new cases of HIV, the patient will develop “acute retroviral syndrome.” This occurs 1-3 weeks after exposure and is characterized by a mononucleosis-like syndrome consisting of fever, lymphadenopathy, pharyngitis, rash, myalgias, and sometimes diarrhea, headache, nausea and vomiting. At this time HIV infection can often only be suspected because antibody tests for the HIV virus may sometimes be negative at this very early stage. Patients with known or suspected acute

retroviral syndrome should be immediately referred to an HIV/AIDS specialist.

Unfortunately, in many cases of HIV, the acute retroviral syndrome is misinterpreted as a simple cold or flu for which the patient does not seek medical attention or in which a health care provider fails to consider the diagnosis. The acute retroviral syndrome resolves without treatment, so many people with HIV have no recognizable symptoms up to ten years. In patients who do have symptoms of HIV, they are nonspecific, such as lymphadenopathy, anorexia, unexplained weight loss, chronic diarrhea, night sweats, fever and fatigue. Alternatively, patients can present with neurologic problems. Progression of immunosuppression is indicated by decreasing CD4 levels. Severe immunosuppression or certain opportunistic infections result in a diagnosis of AIDS.

DIAGNOSIS

Diagnosis is based on laboratory evidence of HIV infection. The least expensive and most commonly used tests detect antibodies to HIV. A positive finding is based on repeatedly reactive findings on an EIA or IFA with confirmation by IFA or Western blot. Tests are now available for use on blood, oral fluid and urine. Antigen capture and nucleic acid amplification tests are also widely available.

EPIDEMIOLOGY

Source

HIV has been found in blood and blood products, semen, vaginal secretions, breast milk, saliva and tears. Evidence suggests that saliva and tears are not implicated in transmission of the virus.

Occurrence

Disease caused by HIV was first recognized in the United States in 1981; however HIV, the causative agent, was not identified until 1983. Every state in the United States and every county in Ohio have reported AIDS cases. Persons at risk for HIV infection include men who have sex with men, intravenous drug users, hemophiliacs who have received non-heat-treated blood products, persons who have had sexual contact with persons with HIV, recipients of blood transfusions or transplanted organs not tested for HIV antibody and unborn and newborn children of mothers with HIV infection. HIV disproportionately affects minorities in Ohio as well as the nation.

Mode of Transmission

HIV has been isolated from semen, blood, vaginal secretions, breast milk, saliva and tears. Epidemiologic evidence indicates that HIV can be transmitted: from person-to-person through sexual contact; by percutaneous exposure to contaminated blood, including the sharing of contaminated intravenous needles; by transfusion of contaminated blood or blood products; and from an infected pregnant woman to her unborn child. Although HIV has been isolated from saliva and tears, there is no evidence to support transmission of HIV through casual contact such as sharing of food or sharing eating utensils. Transmission has occurred in unusual circumstances of blood-to-blood contact. These situations include an intentional self-inoculation of contaminated blood, a blood-to-blood exposure after a bite resulting in severe tissue damage and suspected transmission through a blood-contaminated toothbrush and razor. No animal or vector borne transmission has been documented.

Period of Communicability

It appears that once a person is infected with HIV, infection and communicability persist for life. It is unknown when persons with HIV infection are most communicable. Communicability may vary as the body's viral load fluctuates with the stage of disease. Asymptomatic infected persons can transmit infection to others. Persons in any stage of HIV infection must be presumed infectious.

Incubation Period

Information from transfusion-associated cases of AIDS suggest an incubation period from infection to symptomatic AIDS ranging from six months to eight years or longer without HIV related treatment. With available treatments, onset of disease may be delayed beyond 10 years.

PUBLIC HEALTH MANAGEMENT

Case

Investigation

Cases should be interviewed to identify individuals who have had sexual or needle-sharing contact so that these individuals may be encouraged to seek HIV testing. The Ohio Department of Health's (ODH's) Partner Counseling and Referral Services (PCRS) provides this interviewing and contact notification for cases reported to ODH. Call the HIV/STD Prevention Program for details and referrals: 614-466-2446 or 614-644-1838.

Treatment

Anti-retroviral treatment may significantly slow progression of HIV infection. Prophylactic treatment is available to prevent or decrease the severity of opportunistic infections. An ongoing relationship with a physician is essential for management of HIV infection, and an HIV/AIDS specialist should be consulted for current treatment options. Assistance in accessing medical and social services provided for persons with HIV infection is available from HIV case managers throughout Ohio (call ODH's HIV Care Services at 614-466-6374 to locate a case manager near the patient).

Isolation

Isolation is inappropriate, except for protection of patients with severe immunosuppression. However, cases should be counseled about avoiding behaviors that may result in blood or body fluid exposures that could infect others.

Contacts

Sexual/needle-sharing contacts

These individuals should be contacted, informed that they have been named as a contact of someone infected with HIV, encouraged to be tested for HIV, and counseled about avoiding HIV risk behaviors. ODH's Partner Counseling and Referral Services (PCRS) provide this interviewing and contact notification for cases reported to ODH. Call the HIV/STD Prevention Program for details and referrals: 614-466-2446 or 614-644-1838.

Occupational exposures

In biologically significant exposures, the exposed individuals should be offered testing and, if reported within 48 hours of exposure, offered prophylaxis following OSHA guidelines for HIV exposure.

Non-Occupational exposures and post-exposure prophylaxis (PEP)

CDC has recently published PEP guidelines. For example, "for persons seeking care ≤ 72 hours after non-occupational exposure to blood, genital secretions, or other potentially infectious body fluids of a person known to be HIV infected, when that exposure represents a substantial risk for transmission, a 28 day course of highly active antiretroviral therapy (HAART) is recommended."

See other details in: CDC. Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug

Use, or Other Nonoccupational Exposure to HIV in the United States. MMWR 2005; 54 (No. RR-2): 1-20. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5402a1.htm Physician referral is necessary.