Committee on Infectious Diseases

Health Guidelines for the Attendance in Day-Care and Foster Care Settings of Children Infected With Human Immunodeficiency Virus

STATEMENT OF THE PROBLEM

As of Dec 2, 1986, there have been 27,704 adult cases of acquired immunodeficiency syndrome (AIDS) reported in the United States; death has been reported in 56% of these cases. In addition, 394 (1.4%) cases of AIDS have been reported in children younger than 13 years of age, with 240 deaths; 347 (88%) are less than 5 years old. Serologic testing has identified additional children in high-risk groups (eg, hemophiliacs) who have test results positive for human immunodeficiency virus (HIV; formerly called human T-cell lymphotropic virus type III/lymphadenopathy-associated virus [HTLV-III/LAV]) antibody and do not have recurrent or opportunistic infections. Because some of these children are of preschool age, a policy on the placement of HIV-infected children in day-care and foster care settings is required.

Currently available data do not specifically address the risk of transmission of HIV in the day-care setting. Therefore, some recommendations presented in this paper are based on the unlikely, but hypothetical, possibility of transmission in this setting.

Day care is defined in this statement as care provided in a place other than the child’s home in settings that include: family day care, group day care, day-care centers, day nurseries, nursery schools, Head Start programs, and other preschool programs in which attendance is not mandated by state law. The AAP guidelines for placement of HIV-infected children and adolescents in schools are applicable to children in family day-care settings where fewer children are present.

BACKGROUND

These recommendations apply to all symptomatic and asymptomatic children known to be infected with HIV. Children with AIDS, as defined by the Centers for Disease Control for reporting purposes (see Appendix), and children with AIDS-related complex, who are defined as those having an illness due to infection with HIV but who do not meet the case definition, should be evaluated and a definitive diagnosis made. Clinical features of AIDS-related complex may include signs such as unexplained chronic lymphadenopathy, weight loss, fever, chronic diarrhea, anemia, thrombocytopenia, and recurrent bacterial infections.

Most infants and children with AIDS, as defined by the Centers for Disease Control, do not manifest opportunistic infection when first seen. Clinical findings in 92 HIV-seropositive infants, in order of decreasing frequency, included: chronic pulmonary lymphoid hyperplasia, recurrent bacterial infections and sepsis, persistent or recurrent oral thrush, chronic or recurrent diarrhea, lymphadenopathy at two or more sites, hepatosplenomegaly, failure to thrive, developmental delay, encephalopathy, intrauterine growth retardation, thrombocytopenia, salivary gland enlargement, opportunistic infections, Kaposi sarcoma, and B-cell lymphoma. Of these
92 symptomatic HIV-infected children, 25% had opportunistic infection by 3 years of age.

It is important that a positive serologic test (enzyme-linked immunosorbent assay) for HIV be confirmed by additional, more specific tests, such as the Western blot or immunofluorescent antibody tests, to eliminate false-positive enzyme-linked immunosorbent assay results. Some infants who are seropositive by more specific tests also may not actually be infected because these tests may detect maternally acquired antibody for as long as 14 months; additional evaluation of these infants is required to establish the diagnosis. Individuals with confirmed seropositive findings have a high probability of being infected with HIV and, therefore, are potentially capable of transmitting the virus to others.

False-negative antibody test results have been noted in a few HIV-infected infants who were hypogammaglobulinemic. Viral isolation techniques, which are becoming more readily available in academic centers and state health departments, may be useful for establishing the diagnosis late in the course of the disease and in hypogammaglobulinemic patients.

Data from many studies strongly support the concepts that (1) HIV is not a highly infectious organism and (2) the route of transmission is through sexual, blood, or perinatal contacts. None of the reported cases of HIV infection in the United States is known to have been transmitted in school, day-care, or foster care settings. Serologic HIV testing has been performed on 251 household contacts of 94 patients with AIDS or AIDS-related complex. Of the 251 contacts, 18 (6%) were seropositive; 13 of these 18 were children born to infected mothers, and five were adults with a high-risk factor (ie, IV drug abusers or sexual contacts of HIV-seropositive persons). Seventy-one household contacts, who were exposed to 21 infected children less than 5 years of age, were studied for evidence of transmission; 16 of the contacts were 5 years old or younger, nine were 6 to 18 years old, and 46 were adults. None of these 71 contacts was found to be HIV seropositive except for adults or children who also had a high-risk factor. In another study, HIV transmission was not demonstrated among child contacts of HIV-infected adults, even when intimate household activities, such as the sharing of toothbrushes and taking baths together, were included. Consequently, the possibility of transmission is most likely to be extremely low or nonexistent in situations of casual contact and normal school behavior.

HIV infection in adult and adolescent cases, which constitute about 99% of the total, is transmitted primarily through sexual contact (homosexual and heterosexual) and by illicit use of IV drugs. Infection from transfusion with HIV-contaminated blood or blood products accounts for a small percentage of cases. However, epidemiologic data seem to indicate that the incidence of transfusion-associated AIDS is about six times higher in exposed infants than in adults. Approximately 75% of AIDS and AIDS-related complex cases in children are due to maternal and perinatal transmission, and 20% of cases are due to blood and blood product transmission. In approximately 5% of cases, the source of HIV is unexplained due to lack of information regarding the parents. Although HIV has been isolated from saliva, tears, and urine, its presence does not imply that these fluids are involved in the transmission of infection. HIV has been isolated from the breast milk of infected women, and postnatal transmission of the virus has been suggested in a child born to a mother reported to have acquired the infection from a postpartum blood transfusion. Because the child was breast-fed for 6 weeks, the authors suggested breast-feeding as the possible source of transmission.

In a previous statement, this Committee agreed to provide any new information on transmission of HIV or other notable data. In that light, three recent cases of HIV infection are of interest. These three cases are the only known cases of nonsexual household transmission.

**CASE REPORTS**

**Case 1**

A 44-year-old white woman with AIDS had no risk factors for HIV infection except that 2 years earlier she had cared for a 33-year-old man whose death had most likely been due to HIV infection. This woman had prolonged and frequent skin contact with his body secretions. During this time, she also had several small cuts on her hands and chronic eczema, and she had not used the recommended precautions, such as wearing gloves.

**Case 2**

An asymptomatic 32-year-old mother with antibody to HIV had no known risk factors for HIV infection except that she cared for her infant, who at 3 months of age received a transfusion of blood from a donor later found to be seropositive. The infant had congenital intestinal abnormalities and had required numerous surgical procedures and blood transfusions; he was found to be HIV seropositive at 16 months of age and had not been tested previously. The mother was closely involved in his care during hospitalization and at home; this required frequent contact with the child’s blood and body fluids. She did not take recommended precautions, such as wearing gloves, and often did not wash her hands immediately after exposure. She was HIV seronegative at testing when the child was 13 and 16 months of age; she was found to be HIV seropositive when he was 20 months of age.
Case 3

An 11-year-old, apparently healthy, boy was the sibling of a 2-year-old HIV-infected child with AIDS-related complex. When the family was screened, this 11-year-old boy was found to be HIV seropositive. However, factors including false-positive test results, sexual abuse, and IV drug abuse have not been definitely excluded in this case.

RECOMMENDATIONS

Information regarding the epidemiology, clinical manifestations, and management of HIV-infected children is evolving. The AAP will update and modify this statement as new information becomes available. The following guidelines are recommendations for day-care and foster care personnel, parents, and health care providers and supplement the Centers for Disease Control statement of Aug 30, 1985.21 Involvement in child day care, unlike school attendance, is not a legal requirement; day-care providers may develop their own policies in conformity with federal, state, and local regulations regarding day care. Recommendations for management of the HIV-infected child are based on these considerations.

1. The decision as to whether a child known to have HIV infection may attend day care or may be placed in foster care should be made on an individual, case-by-case basis. This decision is best made by an expert panel of individuals, including the child’s physician, that has the qualifications to evaluate (a) whether an infected child poses a potential risk to others and (b) whether the child will receive optimum care in the setting under consideration.

The following factors may be considered by the expert panel as reasons to exclude an infected child from day care: lack of control of body secretions (such as urine), presence of hand- and object-mouthing behaviors, biting, or an oozing skin lesion. Most normal children younger than 3 years of age and some older children exhibit these behaviors. Because some of these infected children are developmentally delayed, criteria for exclusion should be developmentally rather than chronologically determined. Children who do not exhibit these behaviors and who do not have oozing lesions are considered to be no more likely to transmit HIV than are HIV-infected school-aged children in the school setting. Because the behavior of preschool-aged children often changes, frequent observation of the affected child’s behavior should be made.

2. The decision to exclude a child already enrolled in day care or foster care who is subsequently found to be infected with HIV should be based on whether the child is in control of body secretions (such as urine), exhibits hand- or object-mouthing behaviors, bites, or has oozing skin lesions. Decisions regarding notification and management of staff, parent(s), and child contacts in the day-care or foster-care setting should be made on an individual basis by an expert panel of qualified individuals, as described in recommendation 1. If parents of the attendees are to be notified, they should be aware that transmission of HIV to other children under the conditions set forth is extremely unlikely and that the case-by-case decision is not based on documented transmission in day-care settings but on a hypothetical risk of transmission.

3. As the risk of HIV transmission in the day-care setting is only hypothetical at present, widespread screening of these children for the presence of HIV antibody is not warranted or recommended. In populations such as this with a low prevalence of HIV antibody, it is likely that screening will reveal a greater number of false-positive results than it will identify infected individuals. Those with false-positive results will experience a great deal of unnecessary anxiety as well as the expenses of medical evaluation.

4. Diagnostic testing should be initiated by the physician for children who have both clinical and epidemiologic features suggestive of HIV infection. Diagnostic testing for HIV infection is not the responsibility of the day-care provider. For clinical features see “Background.” Epidemiologic features: (a) children who received multiple blood or blood product transfusions between 1978 and 1985, such as: ill neonates, children who had cardiac surgery or who were severely traumatized or burned, children with hemophilia, and children with congenital hemoglobinopathies or other chronic anemias; (b) children or adolescents who were sexually abused or male homosexuals or bisexuals; (c) children and adolescents who are IV drug abusers; (d) infants born to mothers known to be HIV infected or who are at increased risk of HIV infection, such as IV drug abusers, prostitutes, Haitians or Central Africans, and women who have had sexual relations with men who are IV drug abusers, Haitians or Central Africans, bisexuals, or hemophiliacs or are HIV seropositive without clinical manifestations.

The use of special consent procedures for diagnosis of HIV infection is strongly discouraged. Physicians should interpret the results of diagnostic tests and ensure that counseling and other social and medical services are provided to HIV-infected children and their families because their psychologic, physical, medical, and financial needs are great.

5. Some children may be unknowingly infected with HIV or other infectious agents, such as hepatitis B virus; these agents may be present in blood or body fluids. Thus, responsible individuals in all
day-care and foster care settings, regardless of whether children with HIV infection are known to be in attendance, should adopt routine procedures for handling blood and body fluids. All child care personnel and educators should be informed about these procedures. For example, soiled surfaces should be promptly cleaned with disinfectants, such as household bleach (a 1:10 to 1:100 dilution of bleach to water prepared daily). Disposable towels or tissues should be used whenever possible and properly discarded, and mops should be rinsed in the disinfectant. Cleaning personnel should avoid the risk of having their mucous membranes or any open skin lesions exposed to blood or body fluids, for example, by using disposable gloves.

6. Children who are infected with HIV may be immunodeficient. Immunosuppressed children are at increased risk for severe complications from infections with varicella, cytomegalovirus, *Mycobacterium tuberculosis*, herpes simplex virus, and measles virus. Children may have a greater risk of encountering these infectious agents in child day care than at home. Thus, the risk to the immunosuppressed child of attending day care in an unrestricted setting is best assessed by a physician who is aware of the child’s immune status. HIV-infected, unimmunized children exposed to measles or varicella should receive passive immunoprophylaxis (immune globulin or varicella-zoster immune globulin, respectively) following significant exposure. Monthly prophylaxis of HIV-infected children with immune globulin is being evaluated in some centers.

7. There are limited data on the use of live virus vaccines (oral polio, measles, mumps, rubella, and BCG vaccines) in children who are known to be infected with HIV, with no reported complications as yet. Nevertheless, children who are symptomatic with HIV infection should not be given live virus vaccines. These children should receive diphtheria-tetanus-pertussis, inactivated influenza, *Haemophilus influenzae* type b, pneumococcal, and inactivated polio vaccines in accord with the Advisory Committee on Immunization Practices (ACIP) and AAP recommendations.

Some experts believe that asymptomatic HIV-seropositive children should not be given live virus vaccines. However, there have been no substantiated reports of adverse outcomes associated with administration of live virus vaccines in these children as yet. Therefore, widespread screening to detect asymptomatic HIV-infected children prior to routine immunization is not recommended. Children without clinical or epidemiologic manifestations of HIV infection should be immunized in accordance with the ACIP and AAP recommendations for routine childhood immunization.

There have been no reported cases of polio vaccine-associated paralysis in families in which a member had AIDS. Nevertheless, household contacts of HIV-infected symptomatic and asymptomatic children may be immunosuppressed due to HIV. These children and their household contacts should not be given oral polio vaccine; oral polio vaccine virus spreads rapidly to contacts. Inactivated polio vaccine should be used.

8. Persons involved in the care and education of a preschool-aged, HIV-infected child should be informed of the child’s HIV infection status and should respect the child’s and the family’s right to privacy. Records discussing HIV status should be kept only if there is strict confidentiality. The number of personnel aware of the child’s condition should be restricted to include only those needed to ensure proper care of the child and to detect situations in which the potential for transmission may change.

9. Asymptomatic adults infected with HIV may care for children in day-care settings provided that they do not have weeping skin lesions or other conditions that would allow contact with their body fluids. Immunosuppressed adults with AIDS, as defined by the Centers for Disease Control, may be more likely to acquire infectious agents and should consult with their own physicians regarding the safety of their continuing work. On the basis of available data (see “Background”), there is no reason to believe that HIV-infected adults will transmit HIV in the course of their normal day-care duties.

Committee on Infectious Diseases, 1985–1986
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APPENDIX: Provisional Case Definition for Acquired Immunodeficiency Syndrome (AIDS) Surveillance of Children

For the limited purposes of epidemiologic surveillance, the Centers for Disease Control defines a case of pediatric acquired immunodeficiency syndrome (AIDS) as a child who has had (1) a reliably diagnosed disease at least moderately indicative of underlying cellular immunodeficiency, and (2) no known cause of underlying cellular immunodeficiency or any other reduced resistance reported to be associated with that disease.

Diseases accepted as sufficiently indicative of underlying cellular immunodeficiency include the following: intestinal cryptosporidiosis causing diarrhea for more than 1 month, Pneumocystis carinii pneumonia, strongyloidiasis (pulmonary, CNS, or disseminated), toxoplasmosis (internal organs other than liver, spleen, or lymph nodes), candidiasis (causing esophagitis), cryptococcosis (CNS or disseminated beyond lungs or lymph nodes), disseminated atypical Mycobacterium infection (other than M. tuberculosis or M. leprae), cytomegalovirus infection (in internal organs other than liver, spleen, or lymph nodes), herpes simplex virus infection (pulmonary, intestinal, disseminated, or chronic mucocutaneous ulcers persisting longer than 1 month), progressive multifocal leukoencephalopathy, primary lymphoma of the brain, or Kaposi sarcoma.

In the absence of these opportunistic diseases required by the current case definition, any of the following diseases will be considered indicative of AIDS if the patient has a positive serologic or virologic test for HIV: (1) disseminated histoplasmosis (not confined to lungs or lymph nodes), (2) isosporiasis, causing chronic diarrhea (for more than 1 month), (3) bronchial or pulmonary candidiasis, (4) non-Hodgkin's lymphoma of high-grade pathologic type (diffuse, undifferentiated) and of B-cell or unknown immunologic phenotype, (5) histologically confirmed diagnosis of chronic lymphoid interstitial pneumonitis in a child less than 13 years of age.

Patients who have a lymphoreticular malignancy diagnosed more than 3 months after the diagnosis of an opportunistic disease used as a marker for AIDS will be included as AIDS cases.

To increase the specificity of the case definition, patients will be excluded as AIDS cases if they have a negative result on testing for serum antibody to HIV, have no other type of HIV test with a positive result, and do not have a low number of T-helper lymphocytes or a low ratio of T-helper to T-suppressor lymphocytes. In the absence of test results, patients satisfying all other criteria in the definition will continue to be included.

Specific conditions that must be excluded in a child are (1) congenital infections (e.g., toxoplasmosis or herpes simplex virus infection in the first month after birth or cytomegalovirus infection in the first 6 months after birth); (2) primary immunodeficiency diseases, severe combined immunodeficiency, DiGeorge syndrome, Wiskott-Aldrich syndrome, ataxia-telangiectasia, graft versus host disease, neutropenia, neutrophil function abnormality, a- or y-globulinemia, or hypo- or hyperglobulinemia with raised IgM; (3) secondary immunodeficiency associated with immunosuppressive therapy, lymphoreticular malignancy, or starvation.

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sociated virus from a child to a mother providing health care. MMWR 1986;35:76–79

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