Statement of the Issue

School-aged children who are infected with human immunodeficiency virus (HIV) reside in Minnesota. Therefore, a statewide policy on school placement of HIV-infected children and adolescents is needed. To avoid unwarranted fear and confusion by students, parents, teachers and school administrators, the following guidelines have been developed. These recommendations are based on current scientific data regarding the transmission of HIV and apply to all infected school-age children and adolescents in kindergarten through grade twelve. Separate guidelines have been developed for the placement of HIV-infected children in preschool and childcare settings.

Background

In the United States, 90% of pediatric HIV infection has been acquired by maternal-to-infant transmission. Currently, almost all cases of HIV infection in children younger than 13 years have been acquired perinatally. It is also possible for children to acquire HIV infection postnatally through the ingestion of breast milk.\(^1\) The 1994 Centers for Disease Control and Prevention (CDC) recommendation that HIV-infected pregnant women receive antiretroviral medication to prevent perinatal transmission and the 1995 recommendation that all pregnant women be screened for HIV infection has made perinatal transmission of the virus in the United States a rare occurrence.\(^2,3\) However, not all mothers are screened for HIV infection, drug prophylaxis to prevent perinatal transmission occasionally fails, and a few children with HIV infection immigrate to Minnesota.

HIV has been recovered from blood and other body fluids, including cerebrospinal fluid, human milk, semen, vaginal and cervical secretions, amniotic fluid, saliva, tears, and synovial, pleural, peritoneal, and pericardial fluids. Other body fluids and secretions that are visibly contaminated with blood may contain HIV and pose a risk of transmission. All body fluids containing HIV pose a theoretical risk, but some (e.g., tears, urine, and stool) have not been implicated in transmission of the virus. A sufficient quantity of virus and a portal of entry that permits infection of host cells are required for transmission.
The three recognized settings in which HIV transmission occurs are as follows:

- from a mother with HIV infection to her infant during pregnancy, delivery, or breastfeeding;
- direct inoculation of infected blood or blood-containing tissues, including transfusion, transplantation of organs or tissues, and use of contaminated needles or penetrating injuries with needles or sharp objects contaminated with blood; and
- between sex partners by contact with infected semen, vaginal or cervical secretions, or blood with mucosal surfaces.\(^1\)

Transmission of HIV has not been shown to occur in schools or childcare settings\(^4,5\) and several studies have failed to find casual transmission of HIV in other settings.\(^6,7,8\) Transmission of HIV from infected children or infected adults to uninfected persons during routine daily activities, such as household care, is rare and is likely to be related to unrecognized and unprotected exposure to blood or infectious body fluids.\(^9,10,11\)

**MDH Position**

- Students infected with HIV can be allowed to attend school, before and after-school programs, and to participate in sports in an unrestricted manner, with rare exceptions, because the risk of transmission of HIV in these settings appears to be negligible. No cases of HIV transmission occurring in a school setting have been reported.

- The presence of HIV-infected students in school does not constitute a significant threat to other students or staff. In addition, for most HIV-infected students, the benefits of unrestricted school attendance outweigh the risks they may have of acquiring potentially serious infections in that setting.

**Confidentiality**

Knowledge of a student’s HIV status is not required for school entry. If a school is notified of a student with HIV infection, the number of persons aware of the infection should be limited to those who need such knowledge to care for the child.

**Evaluating Potential Risk**

Some HIV-infected students may pose more of a potential risk to others. Students who have medical conditions, such as oozing skin lesions that cannot be covered or bleeding disorders that may result in spontaneous bleeding (such as severe thrombocytopenia) or children with behavioral issues such as frequent biting behavior may pose an increased risk of exposing others to blood or high-risk body fluids. Such children may require a more restricted environment. Although biting is a possible mode of transmission, the risk of such transmission is believed to be extremely low.
For infected students with such medical or behavioral conditions, individual judgments need to be made regarding placement of those students in an unrestricted school setting. The Commissioner of Health may convene an Advisory Committee to evaluate any such student on an ad-hoc basis. The committee will consist of several members and will include the State Epidemiologist (and other MDH representatives as needed), representatives from the Minnesota Department of Children, Families, and Learning, a pediatrician with expertise in infectious diseases (including care of HIV-infected patients), and the child’s primary care physician.

If the committee determines that a specific student may pose an increased risk or exposure to others, additional discussions will be held. These discussions may include the superintendent of the school district, the primary teacher of the student, and the designated school nurse for the school in which the student is to be enrolled. The State Epidemiologist will chair the committee and will be responsible for convening the committee as necessary. The committee’s recommendations to the Commissioner on each student’s placement will be based on the likelihood that others may be exposed to blood or high-risk body fluids from that student. The committee will weigh the risks and benefits to both the HIV-infected student and to others. The committee will re-evaluate such students periodically as deemed necessary by the State Epidemiologist.

**General Infection Control Principles**

Some students may be unknowingly infected with HIV or other bloodborne pathogens such as hepatitis B (HBV) or hepatitis C (HCV) viruses. Alternatively, the student’s parents/guardians may choose (as is their right) not to inform the school of such infection. These pathogens may be present in blood or other high-risk body fluids. Thus, all schools, regardless of whether students with HIV infection or other bloodborne pathogens are known to be in attendance, must develop and adopt routine procedures for the safe handling of blood, blood containing secretions and high-risk body fluids.

Healthcare workers use “Standard precautions” in the care of all patients. The use of Standard precautions indicates that healthcare workers are operating under the assumption that all patient blood, secretions and excretions may be infectious, whether known to be or not. The general principles of Standard Precautions apply in the school setting as well. These precautions, which include the use of barriers such as gloves to prevent skin or mucous membrane exposure to blood should be observed. Gloves should be used when there is any possibility of exposure to blood or high-risk body fluids. Hands (and other parts of the body) should be washed immediately after contact with blood even when gloves have been worn.

Federal and Minnesota Occupational Safety and Health Administration (OSHA) standards require education about bloodborne pathogens and how to avoid exposure to blood or body fluids for those employees who may be exposed. Gloves should be readily available in the event that an injury with bleeding occurs which requires intervention or any time there is a potential for exposure, such as cleaning a blood spill.
In addition, schools are required to have a protocol in place to ensure that employees and students who sustain significant occupational exposures to blood or body fluids have access to prompt evaluation and treatment of such exposures as well as counseling and follow-up.\textsuperscript{15}

Surfaces soiled with blood or body fluids should be promptly cleaned and then disinfected (with at least 30 seconds of contact) with disinfectants, such as a household bleach (sodium hypochlorite) solution that is freshly mixed daily and diluted 1/4 cup bleach to one gallon water. Because sodium hypochlorite can be inactivated by blood and other substances, it is recommended that visibly soiled surfaces be cleaned prior to using bleach. Disposable towels or tissues should be used whenever possible and disposed of properly, and mops should be rinsed in the disinfectant.

HIV-infected students may have compromised immune systems. Immunocompromised persons are at increased risk of developing severe complications from infections such as pneumococcal infections, chickenpox, cytomegalovirus, tuberculosis, herpes simplex, and measles. Students may have a greater risk of encountering these infectious agents in school than in the home. Thus, assessment of the risk of unrestricted school attendance for the immunocompromised student is best made by the student’s physician who is aware of his/her immune status. Schools should have a protocol for informing families when a significant communicable disease (e.g., chickenpox, etc.) has been identified in a student. The families of students who are at risk for complications from such infections may then consult with their child’s physician about any necessary actions to take after an exposure.
References


### Other Related American Academy of Pediatrics Policy Statements


*Although written for hospitals, this guideline may be modified for use in other settings.

**Standard Precautions**

Use Standard Precautions, or the equivalent, for the care of all patients.

A. Handwashing

(1) Wash hands after touching blood, body fluids secretions, excretions, and contaminated items, whether or not gloves are worn. Wash hands immediately after gloves are removed, between patient contacts, and when otherwise indicated to avoid transfer of microorganisms to other patients or environments. It may be necessary to wash hands between tasks and procedures on the same patient to prevent cross-contamination of different body sites.

(2) Use a plain (nonantimicrobial) soap for routine handwashing.

(3) Use an antimicrobial agent or a waterless antiseptic agent for specific circumstances (e.g., control of outbreaks or hyperendemic infections), as defined by the infection control program. (See Contact Precautions for additional recommendations on using antimicrobial and antiseptic agents.)

B. Gloves

Wear gloves (clean, nonsterile gloves are adequate) when touching blood, body fluids, secretions, excretions, and contaminated items. Put on clean gloves just before touching mucous membranes and nonintact skin. Change gloves between tasks and procedures on the same patient after contact with material that may contain a high concentration of microorganisms. Remove gloves promptly after use, before touching noncontaminated items and environmental surfaces, and before going to another patient, and wash hands immediately to avoid transfer of microorganisms to other patients or environments.

C. Mask, Eye Protection, Face Shield

Wear a mask and eye protection or a face shield to protect mucous membranes of the eyes, nose and mouth during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

D. Gown

Wear a gown (a clean, nonsterile gown is adequate) to protect skin and to prevent soiling of clothing during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Select a gown that is appropriate for the activity and amount of fluid likely to be encountered. Remove a soiled gown as promptly as possible, and wash hands to avoid transfer of microorganisms to other patients or environments.
E. Patient-Care Equipment

Handle used patient-care equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and environments. Ensure that reusable equipment if not used for the care of another patient until it has been cleaned and reprocessed appropriately. Ensure that single-use items are discarded properly.

F. Environmental Control

Ensure that the hospital has adequate procedures for the routine care, cleaning, and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces, and ensure that these procedures are being followed.

G. Linen

Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures and contamination of clothing and that avoids transfer of microorganisms to other patients and environments.

H. Occupational Health and Bloodborne Pathogens

(1) Take care to prevent injuries when using needles, scalpels, and other sharp instruments or devices; when handling sharp instruments after procedures; when cleaning used instruments; and when disposing of used needles. Never recap used needles, or otherwise manipulate them using both hands, or use any other technique that involves directing the point of a needle toward any part of the body; rather, use either a one-handed “scoop” technique or a mechanical device designed for holding the needle sheath. Do not remove used needles from disposable syringes by hand, and do not bend, break, or otherwise manipulate used needles by hand. Place used disposable syringes and needles, scalpel blades, and other sharp items in appropriate puncture-resistant containers, which are located as close as practical to the area in which the items were used, and place reusable syringes and needles in a puncture-resistant container for transport to the reprocessing area.

(2) Use mouthpieces, resuscitation bags, or other ventilation devices as an alternative to mouth-to-mouth resuscitation methods in areas where the need for resuscitation is predictable.