

## HIV Infection

### What is HIV infection?

- HIV infection is a chronic infectious disease. It is included in this book because, unlike many infectious diseases, HIV infection is a lifelong condition for many children and youths.
- HIV infection is a blood-borne viral infection that attacks the body's immune system. Infection with HIV involves the cells responsible for controlling the body's immune system. Children usually acquire HIV infection from their mothers when they are born, but with widespread testing and aggressive treatment of infected mothers during their pregnancies, this type of transmission has become much less common.
- HIV infection is also rarely acquired by contaminated needles or sharp instruments or through contact of mucous membranes or injured skin with infected substances such as blood and secretions.
- The most common means by which adolescents develop HIV infection is through sexual contact (with the highest risk being for boys who have sex with boys) and use of intravenous drugs.

### How common is it?

- In 2015, the number of new HIV infection diagnoses in the United States was 39,513.
- There were 31,991 diagnoses among male adults and adolescents (13 years and older), 7,402 among female adults and adolescents, and 120 among children younger than 13 years. Youths aged 13 through 24 years accounted for 22% of all new HIV infection diagnoses in the United States.

### What are some common characteristics of children who have HIV infection or of HIV infection as children present with it?

- Most children with HIV infection may appear very healthy and be able to participate in all activities. Some children with AIDS (the most severe form of HIV infection) are frequently sick and may require numerous hospitalizations.
- Children with active HIV infection may experience
  - Diarrhea
  - Swollen lymph nodes
  - Pneumonia and other lung diseases
  - Thrush (a yeast infection on the surfaces of the mouth)
  - Trouble gaining weight well if he or she is a baby and the infection is not controlled by medication

- Cognitive impairment or difficulty learning
- Developmental delay
- Unusual infections (typically seen only in those with severe immune suppression)

### Who might be on the treatment team?

- Infectious diseases specialists are frequently involved in the child's health care in addition to the primary care provider in the medical home.
- Team communication. Parents/guardians do not have to share information about the HIV status of their child with school or child care providers, but it is easier for the team to care for children when communication is good.
- If parents share the HIV status of their child, the information should not be shared with staff without written permission from the parents/guardians. Confidentiality should be respected, and the plan for sharing information should be very clear to all.

### What adaptations may be needed?

#### Medications

- It is very important that children with HIV infection take their medications regularly. The medications may not taste good but can often be flavored. Ask whether the medication can be mixed with pudding or applesauce. Simplified once-a-day regimens are available for older children and adolescents to decrease pill burden and improve adherence.
- All staff who are administering medications should have medication administration training (see Chapter 6).
- Exposure to chickenpox and measles can be particularly dangerous for children with HIV infection. Make sure that all the staff and children enrolled in the program are up-to-date on their vaccinations to minimize the risk of these diseases. All parents/guardians should be notified about an exposure to measles or chickenpox. But early, personal notification of parents/guardians of children with HIV infection (as for any other immunodeficiency disease), if the identities of these children are known, is recommended.
- All children and staff should have annual influenza vaccines.

## HIV Infection *(continued)*

### Physical Environment and Other Considerations

- Children with HIV infection can participate in all activities that their health permits. It is important to establish good lines of communication before enrollment to discuss all the relevant health-related issues.
- For all children, regardless of HIV infection status, standard precautions should be followed when blood or blood-containing fluids are handled. For blood and blood-containing substances, these precautions are the same precautions described by the Occupational Safety and Health Administration as *universal precautions*.
  - Wear disposable gloves or, if using utility gloves, be sure the utility gloves are sanitized after use.
  - Absorb as much of the spill as possible with disposable materials; put the contaminated materials in a plastic bag with a secure tie.
  - Clean contaminated surfaces with detergent and water.
  - Rinse the clean surface with water.
  - Sanitize the clean surface by wetting the entire surface with a spray application of disinfectant. Do not confuse sanitizing solution with the stronger disinfecting solution. See “Appendix J: Selecting an Appropriate Sanitizer or Disinfectant” in *Caring for Our Children: National Health and Safety Performance Standards* at <http://cfoc.nrckids.org/files/appendix/AppendixJ.pdf>.
  - Dispose of all soiled items in plastic bags with secure ties.

### What should be considered an emergency?

- There are no special emergencies faced by children with HIV infection that vary from other children.
- Notify parents/guardians immediately for exposure to chickenpox or measles.
- Biting of another child or being bitten by another child should be considered, although transmission from biting is likely to occur only if biters who have HIV infection have bleeding sores in their mouths or if a child bites and draws blood from a child who has HIV infection.

### What types of training or policies are advised?

- Standard precautions
- Biting

### What are some resources?

- American Academy of Pediatrics: <https://shop.aap.org>, 1-866-843-2271
  - *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs*, 3rd Edition (book), <http://cfoc.nrckids.org/CFOC—Standard 7.6.3.1, Attendance of Children With HIV, through Standard 7.6.3.4, Ability of Caregivers/Teachers With HIV Infection to Care for Children>
  - *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*, 4th Edition (book)
- Centers for Disease Control and Prevention: [www.cdc.gov](http://www.cdc.gov), 1-800-CDC-INFO (1-800-232-4636)
  - *HIV Surveillance Report: Diagnoses of HIV Infection in the United States and Dependent Areas, 2015* (booklet), [www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2015-vol-27.pdf](http://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2015-vol-27.pdf)
  - “Statistics Overview” (Web page), [www.cdc.gov/hiv/statistics/overview/index.html](http://www.cdc.gov/hiv/statistics/overview/index.html)
- Tiffany Chenneville: *A Clinical Guide to Pediatric HIV: Bridging the Gaps Between Research and Practice* (book)