

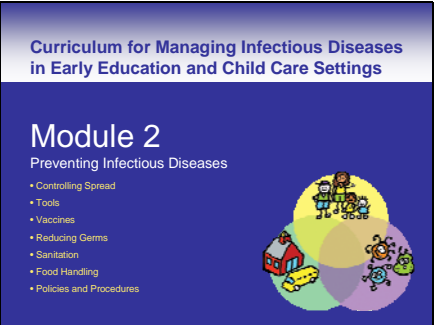

# Curriculum for Managing Infectious Diseases in Early Education and Child Care Settings

## MODULE 2

### Preventing Infectious Diseases

- Controlling Spread
- Tools
- Vaccines
- Reducing Germs
- Sanitation
- Food Handling
- Policies and Procedures



#1	<p><b>Objectives</b></p> <p><b>A. Knowledge</b> Each participant will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify the 3 factors involved in controlling the spread of infection.</li> <li>2. Explain the role of nutrition, healthy lifestyle, and immunization in preventing infectious diseases.</li> <li>3. Identify 4 ways to reduce the number of germs in child care settings.</li> <li>4. Explain at least 1 activity that families, caregivers/teachers, and health care professionals can do to prevent infectious diseases.</li> </ol> <p><b>B. Attitude</b> Each participant will be able to:</p> <ol style="list-style-type: none"> <li>1. Feel knowledgeable about good diaper changing techniques.</li> <li>2. Plan to promote healthy lifestyles in children and staff by practicing good nutrition, and getting adequate exercise and rest.</li> <li>3. Commit to updating and implementing policies and procedures to decrease the spread of infectious diseases, like effective hand washing and sanitizing.</li> <li>4. Commit to keeping vaccine status current, plan to encourage other staff to do likewise, and explore how to improve efforts to have parents keep their children's immunizations updated.</li> </ol> <p><b>C. Behavior</b> Each participant will:</p> <ol style="list-style-type: none"> <li>1. Perform a self-assessment of vaccine status.</li> <li>2. Demonstrate the proper technique for hand washing.</li> <li>3. Participate in look-up exercise using <i>Caring for Our Children</i> standards.</li> </ol> <p>(&lt;1 minute)</p>	
#2	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li>• Infection illness occurs when vulnerable <b>people</b> succumb to disease-causing organisms (bad <b>germs</b>) in the <b>places</b> where there are too many bad germs, which then overcome barriers to infection in vulnerable people. "Bad germs" can infect people without causing illness. Illness due to infection occurs when "bad germs" cause symptoms like a sore throat or feeling terrible.</li> <li>• Infection control: <ul style="list-style-type: none"> <li>– Makes people more resistant by measures that foster health and well-being, including using vaccines for immunization.</li> <li>– Reduces the number of disease-causing organisms (bad germs).</li> <li>– Modifies the environment (places) people occupy to separate people from the bad germs that are likely to cause illness.</li> </ul> </li> <li>• Illness can be reduced and managed, but not eliminated completely.</li> <li>• Management of illness is achieved through preventive health policies and practices.</li> <li>• Participants can use the information in this curriculum to educate and encourage child care staff, children, families, and employers to plan and reinforce desired preventive practices.</li> <li>• Written program policies should describe expectations for staff and families.<sup>1</sup></li> <li>• Child care staff practices must be regularly monitored to ensure performance.</li> </ul> <p><b>Reference</b></p> <ol style="list-style-type: none"> <li>1. <i>Caring for Our Children (CFOC)</i> 2nd ed standard 8.004. <ul style="list-style-type: none"> <li>– American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. <i>Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs</i>. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2002. Also available at <a href="http://nrckids.org">http://nrckids.org</a></li> <li>– <i>CFOC</i> is a joint publication of the American Academy of Pediatrics, the American Public Health Association, and the National Resource Center for Health and Safety in Child Care and Early Education.</li> <li>– <i>CFOC</i> was developed by bringing together leaders in the field of child care to review the literature and develop standards that are based on research, knowledge, and experience. Each standard is supported with references and a rationale. Many groups of people in the fields of child care, health, and public health contribute to the review of the standards.</li> <li>– The second edition is quoted in this curriculum, but the third edition is in progress and should be published in</li> </ul> </li> </ol>	

- 2011. Substitute new wording when the third edition is available.
- An online version of *CFOC* can be viewed at the National Resource Center for Health and Safety in Child Care and Early Education Web site (<http://nrckids.org/CFOC/index.html>) or print copies can be obtained through the AAP, American Public Health Association, National Association for the Education of Young Children, or from Redleaf Press.

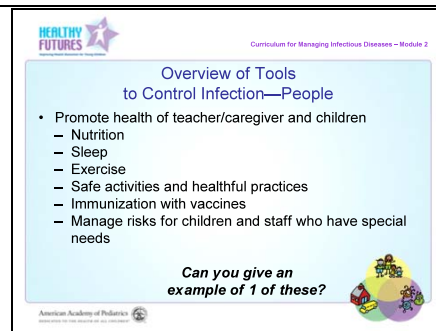
(1–2 minutes)

#3

- The next 3 slides give an overview of tools to control infection. Detailed discussion will be deferred to later in this module. Encourage participants to refer to this list to evaluate infection control in their programs—to plan a healthy program and to manage symptoms when more infectious illness seems to be occurring. The Enrollment/Attendance/Symptom Record in Module 2 of the Participant's Manual can be helpful to identify a trend for an individual or the beginning of an outbreak in a group of children.

**Lecture and Limited Guided Discussion**

- Health promotion practices make people (teacher/caregiver and children) stronger, with better body defenses.
- **Ask** participants to draw from their experience to give an example of 1 of the topics on the slide. Allow 2 or 3 examples to be mentioned before moving to the next.
- The following are background notes for the instructor about examples that the participant might share:
  - While attendance of infants in group care settings slightly increases the risk of upper respiratory infection and wheezing illness for infants, breastfeeding protects against these increased risks. Therefore, everyone involved with families with infants should encourage and support continued breastfeeding of infants to any extent throughout infancy if mothers and their babies are willing. While some have recommended avoiding group care for young infants, the benefits of group care for each family must be weighed and efforts made to offset risks to the extent possible.<sup>1</sup> In addition, early child care attendance **REDUCES** asthma risk in late preschool/kindergarten age group.<sup>2,3,4,5</sup>
  - When people drink enough water, avoid sugar-containing beverages, and practice oral hygiene, their teeth are healthier and are less likely to develop caries (cavities). Caries are the result of an infection by bad germs (a specific type of bacteria) in the mouth, usually transmitted from a parent or other caregiver to the child by contact with the adult's saliva.
  - Good nutrition, enough rest, and skin care are essential for healthy skin. Healthy skin prevents germs from entering the body, while cracked skin provides openings to start infections. That is why using lotion after hand washing to keep skin from cracking is an infection-prevention measure.
  - Hand washing removes bad germs from the skin that would be transferred into the mouth, nose, eyes, or other body openings by touching surfaces that other people then handle and then transfer into their body openings. Frequent hand washing is, with immunization, a key tool to control the spread of infection. Hand washing is mentioned repeatedly in this curriculum.
  - Skill and practice is required to follow the healthful practices recommended for sanitary diaper changing while interacting with the child to use the 1:1 time as a relationship-building opportunity. Refer to Diaper Changing in Module 2 of the Participant's Manual.
  - Limit exposure to insects, mice, rats, and other vermin. Practice Integrated Pest Management to reduce the risk of exposure with the minimally toxic methods.
  - Stay indoors at dawn and dusk because these are times of day when disease-carrying insects are most active. Use screens on windows. Eliminate standing water, fruit trees, and open trash that attract biting and stinging insects from child play areas. When children get insect bites, the swelling of body tissues or scratching may lead to infection. This is a common cause of impetigo, or superficial, crusty infections of the skin.
  - When in an area where biting insects are unavoidable, get advice from a health care professional (a Child Care Health Consultant or public health professional) about the advisability of using insect repellants. If recommended by a health care professional, and with parent consent, use DEET-containing products. DEET (N,N-diethyl-3-methylbenzamide) should be applied to skin or clothing. DEET is the most effective insect repellent; DEET is safe when used properly, even in very young children. The AAP recommends using low concentrations of DEET, not more than 30%, for children over 2 months of age.<sup>6</sup> Concentrations as low as 10% are just as effective as 30%, but they don't last as long (typically 2 hours). For more information, refer to Insect Repellent: Safety Considerations in Module 2 of the Participant's Manual.

**Manual Materials**

- Enrollment/Attendance/Symptom Record
- Diaper Changing
- Insect Repellent: Safety Considerations

**References**

1. Garcia-Marcos L, Mallol J, Solé D, Brand PLP, the EISL Study Group. International study of wheezing in infants: risk factors in affluent and non-affluent countries during the first year of life. *Pediatr Allergy Immunol.* 2010;21(5):878–888
2. Ball TM, Castro-Rodriguez JA, Griffith KA, Holberg CJ, Martinez FD, Wright AL. Siblings, day-care attendance, and the risk of asthma and wheezing during childhood. *N Engl J Med.* 2000;343(8):538–543
3. Midodzi WK, Rowe BH, Majaesic CM, Saunders LD, Senthilselvan A. Early life factors associated with incidence of physician-diagnosed asthma in preschool children: results from the Canadian Early Childhood Development cohort study. *J Asthma.* 2010;47(1):7–13
4. Nicolaou NC, Simpson A, Lowe LA, Murray CS, Woodcock A, Custovic A. Day-care attendance, position in sibship, and early childhood wheezing: a population-based birth cohort study. *J Allergy Clin Immunol.* 2008;122(3):500–506.e5
5. Celedón JC, Litonjua AA, Ryan L, Weiss ST, Gold DR. Day care attendance, respiratory tract illnesses, wheezing, asthma, and total serum IgE level in early childhood. *Arch Pediatr Adolesc Med.* 2002;156(3):241–245
6. American Academy of Pediatrics. Pickering LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2009 Report of the Committee on Infectious Diseases.* 28th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009

**Resources (Diapering)**

1. *CFOC* 2nd ed standard 3.014
2. National Association for the Education of Young Children. *Keeping Healthy: Families, Teachers, and Children.* 2007. Available at [www.naeyc.org/store/node/66](http://www.naeyc.org/store/node/66)

**Resource (Pest Management)**

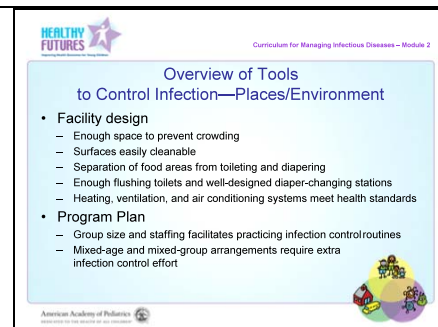
1. California Childcare Health Program: [www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org) (search pest management)
2. Eco-Healthy Childcare: [www.oeconline.org/resources/publications/factsheetarchive/Pesticides.pdf](http://www.oeconline.org/resources/publications/factsheetarchive/Pesticides.pdf)

(2 minutes)

#4

**Lecture and Limited Guided Discussion**

- Using environmental tools can reduce the number of bad germs where children are in care
- **Ask** participants to draw from their experience to give an example of one of the topics on the slide. Allow examples to be discussed within the limited time assigned to this slide before moving to the next slide. The following are background notes for the instructor about examples that the participants might share:
  - In general, the designated area for children's activities shall contain a minimum of 35 square feet of usable floor space per child (or compensating for typical furnishings and equipment being present, 50 square feet measured on the inside, wall-to-wall dimensions).<sup>1</sup>
  - Non-porous smooth surfaces should be used in high risk areas such as food preparation, toileting, and diapering areas. While soft materials are desirable on cuddle toys, for sound absorption, and texture experiences, these must all be treated as potential germ-holding materials. Cuddle toys should belong to an individual child and be regularly laundered at home. Other materials should be regularly cleaned and sanitized according to the Cleaning and Sanitizing Chart in Module 2 of the Participant's Manual.
  - Special attention should be paid to separation of food and beverage sinks, equipment, containers, and activities from anything to do with handling of body fluids (nose wiping, diapering, toileting). Diapering surfaces should not be in places that tempt parents and staff to use them for any other purpose (eg, to unpack lunch or formula bottles, lay out other materials).
  - Flushing toilets with seat adapters (if needed), not potty chairs, should be used in child care
  - Well-designed diaper changing areas facilitate best practice.<sup>2</sup> The floor should never be used for diapering because of poor staff ergonomics and risk of environmental contamination.
  - Heating, ventilation, and air conditioning should meet *CFOC*<sup>3</sup> standards with the technical details assured by a certified heating contractor.
  - Group size and staffing ratios sufficient to follow recommended infection control practices are available in *CFOC*.<sup>4</sup>
  - Mixing groups together provides a larger pool of germs to be shared with everyone. Because of infant and toddler touching behaviors and their need for diapering, they are more likely to share germs with whoever is in their group. Research shows that consistent, small groupings of same-age children are less likely to spread infection. If programs choose to mix children from different groups during some parts of the day, or mix ages in a group, they will need to practice infection control more vigilantly to prevent illness from infection.<sup>5</sup>

**Manual Materials**

- Cleaning and Sanitizing Chart

**References**

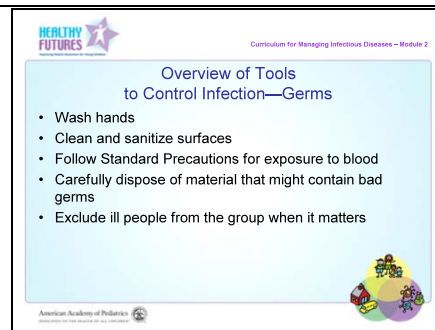
1. CFOC 2nd ed standard 5.112
2. Kotch JB, Isbell P, Weber DJ, et al. Hand-Washing and Diapering Equipment Reduces Disease Among Children in Out-of-Home Child Care Centers. *Pediatrics*. 2007;120:e29-e36
3. CFOC 2nd ed standard 5.032
4. CFOC 2nd ed standard 1.001–1.002
5. Bell DM, Gleiber DW, Mercer AA, Phifer R, Guinter RH, Cohen AJ, Epstein EU, Narayanan M. Illness associated with child day care: a study of incidence and cost. *Am J Public Health*. Apr 1989;79:479-484

(4 minutes)

#5

**Lecture and Limited Guided Discussion**

- Routinely following practices that reduce the number of bad germs in the environment makes it less likely that these germs will be able to make vulnerable people ill. People without symptoms of illness can have bad germs that will make others sick. This may either be because they are just starting to come down with an illness or because their bodies carry the bad germs without getting sick. Infection control practices must be routinely practiced while providing all the other aspects of the program.
- **Ask** participants to draw from their experience to give an example of 1 of the topics on the slide. Allow 3 or 4 examples to be mentioned before moving to the next slide. The following are background notes for the instructor about examples that the participants might share:
  - Hand washing is the most important way to reduce the number of disease-causing germs from entering the body. Hand washing will be discussed in more detail later in this module.
  - Reduce the numbers of bad germs on surfaces with routine cleaning on a recommended housekeeping schedule with special attention to visible soil and high risk areas.
  - See *Managing Infectious Diseases in Child Care and Schools*<sup>1</sup> for the details of Standard Precaution when handling blood. In child care, these procedures require gloves, special approaches to clean up, and disposal of blood-contaminated materials. The procedures are less stringent than those used in health care settings and meet the requirements for Universal Precautions. Universal Precautions is the term used by the Occupational Safety and Health Administration (OSHA).
  - Disposal of materials that might have bad germs in it requires avoiding any extra touching of these materials, as well as any touching of these materials, to other surfaces. That is why plastic lined, hands-free lidded receptacles are recommended to receive soiled diapers and wipes and individual bagging of soiled diapers is not a good idea.
  - Excluding people for specific types of infections will be discussed in Module 3. A limited exposure to a small amount of bad germs may be handled by the body and produce immunity. This explains why every exposure to bad germs does not cause illness. Some illnesses are most infectious when the infected person has no symptoms. That is why exclusion of symptomatic children does little to control the spread of infection in those situations.
  - Continuing exposure to a small number of bad germs maintains immunity that may come from having the illness in the past. That is why people in group care settings may be ill more frequently in their first year of group experience and then seem to have much less illness as long as they remain in the group setting.

**Reference**

1. Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009:15

(4 minutes)



#6

**Lecture and Guided Discussion**

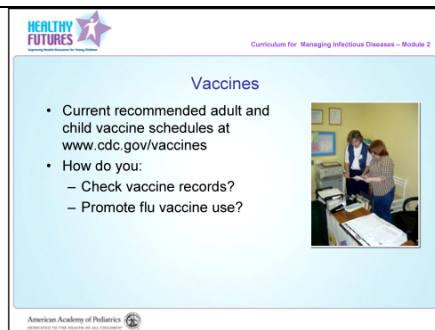
*Caution: The curriculum allows 5 minutes for each of the next 2 slides. Ask the participants to use the “parking lot,” or consult their personal physicians or Child Care Health Consultants if this discussion becomes too extended for this and the next slide.*

- Routine vaccine schedules: *Prior to presenting, download the current child and adult schedules from the CDC Web site (www.cdc.gov). Copy and distribute to the participants.* Emphasize that participants should go to the CDC Web site for annual updates in January to have the current recommended schedules, since these change with new vaccines and science that need to be included. All children and adults in child care settings should receive the vaccines currently and jointly recommended by the CDC, the AAP, and the Academy of Family Practice for their age and circumstances.
  - Follow these national schedules to protect children in your care even though state regulations may not specify all the vaccines as requirements. State regulations may lag behind current recommendations and may be limited by factors such as the funding available to offer low or no cost vaccines. State regulations may require less, but will not require more than national recommendations. Contact state/local public health professionals for details about locally enforced vaccine requirements.
  - Nationally recommended child vaccine recommendations are updated annually in January. States’ regulatory vaccine requirements for children in child care vary, but public and private health professional expert organizations agree on 1 nationally recommended schedule.
  - Child care policies should require that children and adults be up to date with vaccines, and child care staff check for up-to-date status at enrollment and hiring, as well as track vaccines that children will need during the year.
- **Ask** participants how they check vaccine records and coordinate with families and health care professionals.
- Influenza vaccine:
  - All children and adults in child care need the annual flu vaccine in the fall. Infection control measures that reduce the spread of influenza to children, staff, and families who use the child care program also reduce the subsequent spread to the entire community.
  - “Flu viruses change from year to year, which means 2 things. First, you can get the flu more than once during your lifetime. The immunity (natural protection that develops against a disease after a person has had that disease) that is built up from having the flu caused by 1 virus strain doesn’t always provide protection when a new strain is circulating. Second, a vaccine made against flu viruses circulating last year may not protect against the newer viruses. That is why the influenza vaccine is updated to include current viruses every year. Another reason to get flu vaccine every year is that after you get vaccinated, your immunity declines over time and may be too low to provide protection after a year.”<sup>1</sup>
  - **Ask** participants what they do to promote annual influenza vaccine use by children and staff in their programs.

**Reference**

1. CDC, [www.cdc.gov/flu/about/qa/flu vaccine.htm](http://www.cdc.gov/flu/about/qa/flu vaccine.htm)

(5 minutes)



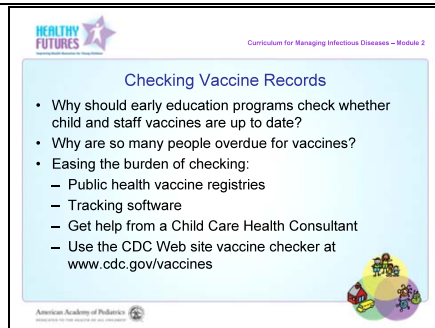
#7

**Participant Exercise**

- **Ask** participants to use the recommended adult vaccine schedule to perform a self-assessment of vaccine status. Comment on their knowledge of what vaccines they have received and any they find they have missed.

**Limited Guided Discussion**

- **Ask** questions in first 2 bullets of slide, making sure the discussion covers the following points:
  - Programs must check vaccine records to be sure that all the adults and children regularly spending time in the facility are protected from the increased risk of exposure in the group setting and to protect all the members of the group from being exposed to disease brought to the group by someone who is not protected by vaccine. The program check provides a safety net to identify and send those with gaps in their immunizations back to their health care professionals for needed vaccines.
  - Overcoming barriers to full immunization requires collaboration among all those involved: families, health care professionals, and child care program staff.
  - Barriers include missed opportunities to give vaccine when the child is ill at the time of a health care professional visit; busy parent schedules and frequent health visits required for young children; concerns about insurance coverage of cost; and concerns about vaccine safety.
  - Tracking systems used by health care professionals are improving, but are not sufficient to keep vaccines up to date. Some communities have immunization registries for children where teachers/caregivers can check to see if



- children are up to date.
- Most insurance covers vaccines for children. If coverage is not available, teachers/caregivers can refer families to health clinics for free or low cost vaccines. Many types of insurance cover vaccines for adults. When insurance does not pay, the cost for the vaccines is small compared with the lost time from work or the cost of discretionary purchases.
  - Vaccine refusal: An increasing number of people have been misled by antivaccine campaigns and are refusing vaccines that their children should have to protect them from bad germs. While all vaccines have some risk of bad effects, overall the risk of going without the routinely recommended vaccines is much higher than the risk of a bad reaction from the vaccine. "Vaccine refusal" poses a risk to infants and others who legitimately are underimmunized because of age or medical conditions that limit their ability to receive full vaccine protection. Disease spreads more easily in groups as the number of underimmunized and unimmunized individuals increases. Outbreaks of vaccine-preventable diseases and severe complications that could have been prevented have occurred. Some children and adults who have not received vaccines may have valid medical or religious reasons for this refusal, but they are at risk and increase the risk of others who are in group care with them, requiring special planning with a Child Care Health Consultant or other health care professional for how to handle these situations. Child care programs must consider their liability for accepting a child into the group whose family refuses vaccine for their child. This child poses a risk to others, as well as to her- or himself, for which a child care program, and not just the parent, has been held responsible. Child care programs should consult an attorney in their state to establish a policy for handling voluntary (non-medical) vaccine refusal.
- Easing the burden of checking:
    - Checking vaccine records by matching the schedules to the records is a complex task, even for health care professionals.
    - Child care programs can make arrangements to check child vaccine status with public health immunization registries where they exist. They may or may not hold complete information depending on whether the different places the child received vaccines or parents provided the data to the registry.
    - Vaccine records may list trade names or abbreviations for vaccines. The CDC Web site provides information about the abbreviations and meaning of the names of vaccines on vaccine records. The CDC has individual vaccine checking software on their Web site into which the dates when a particular child or an adult received specific recommended vaccines. The software identifies gaps in receipt of recommended vaccines.
    - Internet-based software is available to enable child care providers to check and track vaccine records for all the enrolled children. Some things to consider when looking at software are the ability to run reports for the individual child and the entire group; time involved in running reports and data entry; and the ability to apply complex rules for age and intervals between doses or variations, such as a child who received vaccines late or missed doses.

**Resource**

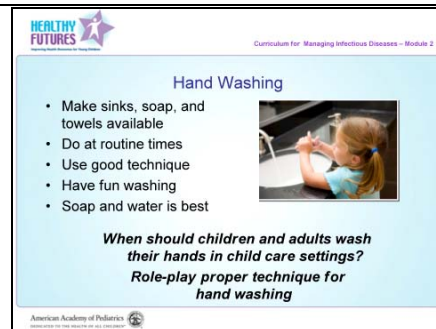
1. [www.aap.org/immunization](http://www.aap.org/immunization)

(5 minutes)

#8

**Refer** participants to Hand Hygiene in Module 2 of the Participant's Manual.**Guided Discussion**

- **Ask** "When should children and adults wash their hands in child care settings?"
- Guide discussion referring to Hand Hygiene and Why Is Hand Hygiene Important? in Module 2 of the Participant's Manual.
- Clarify why these times are important:
  - When arriving for the day or moving from 1 group to another to keep from spreading bad germs among those in child care.
  - Before and after:
    - Eating, handling food, or feeding a child, to avoid putting into the body bad germs picked up on the hands from touching surfaces in the environment and from touching the mouth during eating.
    - Administering medicine for the same reasons as apply to food handling.
    - Playing with water or moist materials, such as play dough, that is used by more than 1 person. Water is an excellent carrier for germs to spread from 1 person to another. Before or while playing in water, children may touch their mouths, eyes, or noses.
  - After:
    - The hands of children of all ages, including infants, should be washed after each diapering or toileting activity since their hands are likely to pick up bad germs at these times that can subsequently spread by touching other surfaces.
    - Diapering and toileting when hands are likely to touch body fluids, even if gloves are worn. Gloves reduce the contact with germs, but all gloves allow some germs through.
    - Handling body fluids (mucus, blood, vomit).



- Wiping noses, mouths, or touching sores.
- Handling uncooked food, especially meat and poultry, because these are more likely than other foods to have bad germs on them.
- Handling pets and other animals (including tropical fish) or cleaning their cages or litter boxes, because of the bad germs these animals may carry without being sick themselves.
- Playing in sandboxes which hold bad germs from insect and animal contact as well as from the hands of the children who play in the sand.
- Cleaning surfaces.
- Handling garbage.
- When leaving for the day, to avoid bringing bad germs home to families from the group.
- Note that child care staff evaluation should include observed performance of hand washing at appropriate times and use of the recommended technique.
- **Ask** “What is the proper technique for hand washing? Can someone role play for us?”

### Role play

- Either pretend or have props (eg, basin, liquid soap dispenser, paper towels) to perform hand washing per technique described in Hand Hygiene in Module 2 of the Participant's Manual. During the role play, sing to the tune of *Row, Row, Row your Boat* to show how to have fun and lather for **at least 10 seconds**: *Wash, wash, wash your hands. Play our handy game. Rub and scrub, and scrub and rub; germs go down the drain. Yea!*

### Lecture

- When soap and running water are available, always use hand washing. Review the points under Why is Hand Hygiene Important? in Module 2 of the Participant's Manual. When soap and running water are not available, hand sanitizer is acceptable. If the program must use hand sanitizer:
  - Follow the manufacturer's instructions.
  - Keep alcohol-based hand sanitizers inaccessible to children when not in use.
  - Closely supervise children if they are using alcohol-based hand sanitizers to make sure that they are using it appropriately and safely.
- **Study quote and discuss:** “For nearly 25 years studies have demonstrated that child caregivers can be taught the proper way to diaper and wash hands, and when so taught, diarrhea in the child care center goes down. The study that my team published in 1994 was the first to randomize centers into intervention and control groups. The intervention groups received intensive training in hand washing and sanitation, resulting in significantly less severe diarrhea (5 or more stools a day), especially among younger children and in newer centers. Proper diaper changing and hand washing was associated with less diarrhea, especially among younger children and children in newer centers, but physical barriers to hand washing increased the risk of diarrhea. One thing that may have been associated with newer centers and therefore with lower illness rates was the observation that newer centers were more likely to have written infectious disease control policies.”<sup>1</sup>
- A study from the *Pediatric Infectious Diseases Journal* shows positive results when hand washing routines are taught and monitored.<sup>2</sup>
- A study from Pediatrics shows significantly fewer child and staff illnesses: fewer antibiotic prescriptions; fewer parental absences from work; 50 percent reduction in child diarrheal illness in children over 24 months of age. So staff evaluation should include observed performance of hand washing at appropriate times and using the recommended technique.<sup>3</sup>

### Manual Materials

- Hand Hygiene
- Why Is Hand Hygiene Important?

### References

1. Kotch JB, Weigle KA, Weber DJ, Clifford RM, Harms TO, Loda FA, et al. Evaluation of an hygienic intervention in child day-care centers. *Pediatrics*. 1994;94 (suppl 2):991–4
2. Uhari M, Mottonen M. An open randomized controlled trial of infection prevention in child day-care centers. *Pediatr Infect Dis J*. 1999;18:672–677
3. Roberts, L, Jorm, L, Patel, M, Smith, W, Douglas, RM, McGilchrist, C. Effect of infection control measures on the frequency of diarrheal episodes in child care: a randomized, controlled trial. *Pediatrics*. 2000;105:743–746

### Resources

1. *CFOC* 2nd ed standard 3.021
2. National Association for the Education of Young Children. *Keeping Healthy: Families, Teachers, and Children*. 2007. Available at [www.naeyc.org/store/node/66](http://www.naeyc.org/store/node/66)

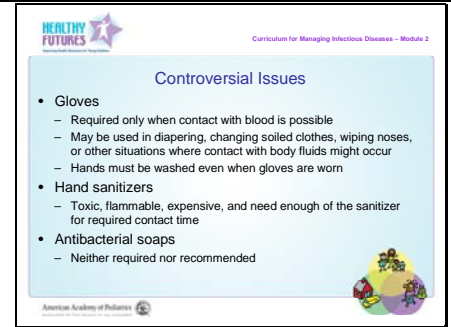
(5 minutes)



#9

**Lecture and Guided Discussion**

- Review points on slide that may have already been covered in guided discussion. Invite questions and feedback from participants.
- Gloves
  - “Although gloves are not necessary for diaper changing, they may reduce contamination of the caregiver’s hands and reduce the presence of infectious disease agents under the fingernails and from the hand surfaces. Even if gloves are used, caregivers must wash their hands after each child’s diaper changing to prevent the spread of disease-causing agents. Gloves can provide a protective barrier, but they offer little protection beyond that achieved by good hand washing. To achieve maximum benefit from use of the gloves, the caregiver must remove the gloves properly after cleaning the child’s genitalia and buttocks and removing the soiled diaper. Otherwise, the contaminated gloves will spread infectious disease agents to the clean surfaces as the child is dressed with a clean diaper and clothing.”<sup>1</sup>
  - If gloves are worn for food preparation, hand washing is still a necessity. Gloves can become contaminated as the handler puts on the gloves. “Frequent and proper hand washing before and after using clean plastic gloves reduces food contamination.”<sup>2</sup>
- Hand sanitizers
  - “The use of alcohol-based hand-rub products does not substitute for hand washing in the group care setting. Hand washing is required to remove visible soil. Alcohol-based hand rubs should be limited to instances in which no sink is available.”<sup>3</sup>
- Antibacterial soaps
  - “These may be used, but are neither required nor recommended.”<sup>4</sup>

**References**

1. CFOC 2nd ed standard 3.014
2. CFOC 2nd ed standard 4.051
3. Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009:26
4. Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009:25

(2 minutes)

#10

**Review** Cleaning and Sanitizing Chart in Module 2 of the Participant's Manual.

- Emphasize the need to have a surface visibly clean to be able to sanitize it. Many sanitizing solutions do not clean effectively. When visible soil is present, surfaces should be cleaned with detergent, and then rinsed with water before applying a sanitizing chemical.

**Participant Exercise**

- After participants have looked at the Cleaning and Sanitizing Chart, have them mark any items that need to be improved in their work setting. On flip charts hung around the room (which list the major categories from the chart), have participants put colored dots or use markers to make a check next to the items they think need to be improved in their programs.

**Guided Discussion**

- Note and discuss items with the most dots or checks as time permits.

**Manual Materials**

- Cleaning and Sanitizing Chart

(9 minutes)

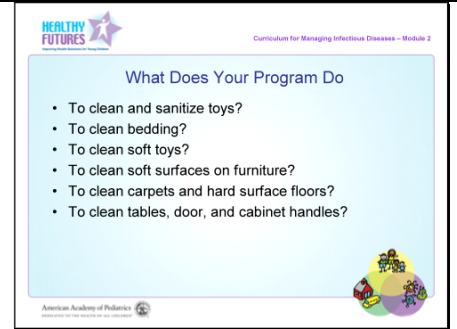


#11

**Guided Discussion**

- **Ask** participants to volunteer or round-robin among the group, ask for a brief response to the questions on the slide. Encourage brief sharing of different approaches, such as:
  - Clean and sanitize toys
    - Use a “soiled” bin to hold toys until they can be washed and sanitized.
    - Use a dishwasher to wash and sanitize toys—perhaps using a nylon bag to contain the toys in the dishwasher and then hanging up the bag with the toys in it so they can fully dry without having to handle each 1.
  - Bedding
    - Have a washing machine and dryer to launder bedding at the facility.
    - Send the child’s bedding home with parents to launder and return to the program.
    - Have extra bedding at the center for those who do not remember to return the bedding they took home.
  - Soft toys and any soft surfaces such as upholstered furniture
    - Accept only soft toys that can be used by only 1 child before they are laundered in a washing machine.
    - Either launder soft toys at the facility or send personal toys home to be laundered.
    - Cover soft surfaces with removable, easily washed surfaces.
  - Carpets and hard-surfaced floors
    - Have a commercial carpet cleaner use hospital-type carpet cleaning. Schedule cleaning when there will be at least 24 hours after the cleaning for the carpet to dry while nobody is in the facility.
    - Purchase a heavy-duty steam carpet cleaner to clean carpets. Schedule cleaning when there will be enough time for the carpets to dry while nobody is in the facility.
    - Hard-surfaced floors, countertops, tabletops, doors, and cabinet handles should be cleaned and sanitized daily as well as anytime they are soiled.

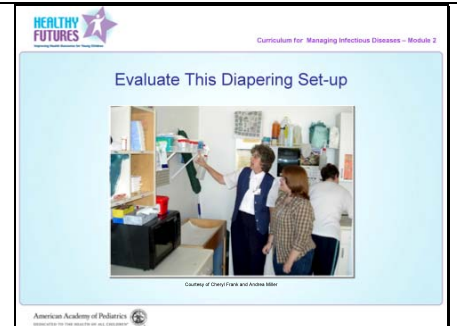
(3 minutes)



#12

**Guided Discussion**

- Encourage participants to collaborate and piggy-back on each other’s responses, using Diaper Changing in Module 2 of the Participant’s Manual.
- **Ask** “What are the strengths of this diaper changing area?”
  - Open storage of supplies that might be needed.
  - Nothing is kept on the diapering surface.
  - Probably what is in the spray bottle that is out of child reach is a spray dilution of bleach and water, 1 tablespoon of bleach to 1 quart of water. This 1:64 solution gives the minimum effective dilution if left for 2 minutes of contact with a visibly clean surface. Evaporation of bleach reduces the concentration, so the solution should be made fresh daily.
  - The diaper table surface has sides which tend to keep the child from rolling off, and no safety straps, which trap germs and do not make a child safe on the table. The caregiver must have a hand on the child at all times.
- **Ask** “What needs to be improved?”
  - Food preparation area with microwave oven is too close to diaper changing area, tempting people to put food on the diapering surface or to put soiled diapers on the food preparation surface.
  - No sink within an arms reach of the diaper changing surface, which is necessary for diaper changing. Children should never be left unattended on a table during the diapering.
  - Unclear whether the diaper changing surface is or will be covered by disposable paper to reduce the transfer of germs to the diapering surfaces.
  - The sides of the diapering surface look like they might be made of wood which would be harder to clean and sanitize properly with each diaper change. A surface that is non-porous, durable, and easy to clean and sanitize is best.
  - No hands-free lidded, plastic-lined trash receptacle to receive the soiled diapers and wipes is visible in the photo.
  - The caregiver/teacher with the Child Care Health Consultant is facing away from the room as is the other caregiver/teacher in the photo. Who is supervising the children? When 1 staff member is diaper changing, the effective staff:child ratio decreases substantially, leaving the other caregivers/teachers with more children than is usually appropriate. Turning the table around so the caregiver/teacher who is doing diapering can glance at the group while diapering and talking with the child being diapered helps.
- Reference and review Diaper Changing in Module 2 of the Participant’s Manual. Emphasize that clothing and shoes that might become soiled during the change should be removed and placed off the diaper surface. Before putting a clean diaper or pull-up on a child, be sure that all surfaces are free of visible soil. This may require folding up the diaper changing paper to enclose the soiled surface and provide the clean back side of the paper, or changing the paper. The



soiled gloves should be removed at this point also. Both the caregiver's/teacher's and the child's hands should be wiped at this point—even though hand washing would be better, it would be too hard to wash hands mid-procedure while the child's bottom is uncovered.

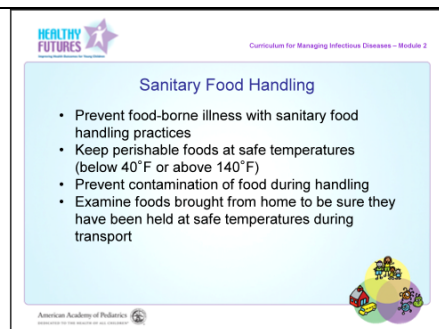
(5 minutes)

#13

### Lecture

- From preparation to cleanup, sanitary food handling practices are critical to prevent food-borne illness. Wash raw foods, and cook foods thoroughly that are not safe to eat raw. Live chickens, turkeys, and raw poultry and eggs commonly carry bacteria that can cause illness. This is why poultry and eggs must be fully cooked, and any surface that touches raw poultry must be sanitized especially carefully. Soft-cooked or runny eggs are not safe to eat.
- Make sure perishable foods are held at safe temperatures, either below 40°F or above 140°F. The temperature between 40°F or above 140°F is a danger zone in which bacteria can multiply more easily than at the colder or hotter temperatures. Use a food thermometer to check both hot and cold food temperatures. Use a refrigerator thermometer to monitor the temperature of refrigerators to detect problems before food is spoiled.
- Prevent contamination of food during handling, making sure equipment and utensils are cleaned and sanitized to reduce disease-causing germs.
- Encourage safe family-style food service. Offer foods that are in a form that children can easily serve themselves without touching food for other people. Self-serving experiences need to be closely supervised.
- Examine foods brought from home and check the temperature of perishable foods when they arrive to be sure they have been and continue to be held at safe temperature zones.
- Infant formula should be ready-to-feed, factory-sealed servings, or be prepared at the facility from factory-sealed containers of powder or concentrates diluted with water.
- Wash infant feeding bottles and nipples in the dishwasher to sanitize them, or hand wash them like dishes using the wash, rinse, and sanitize steps recommended by local health authorities.

(2 minute)



#14

### Guided Discussion

- Ask** “What does clean mean?”
- Encourage participant responses** and then review Sanitation, Disinfection, and Maintenance in Module 2 of the Participant's Manual. Also refer to the Cleaning and Sanitizing Chart in Module 2 of the Participant's Manual.
- Quote** “Routine housekeeping procedures can help reduce the spread of germs in child care and school environments. Routine cleaning: using detergents or abrasive cleaners and rinsing with water to remove visible soil.”<sup>1</sup>
- Surfaces must be clean before they can be sanitized, but a visibly clean surface does not need to be cleaned before sanitizing it. A spray solution of 1:64 dilution of household bleach (1 tablespoon to 1 quart of water) made fresh daily and given 2 minutes of contact time with the surface to be sanitized is commonly used in child care. Bleach is inexpensive and non-toxic in this dilution. Some public health professionals follow guidelines for hospitals and other settings where more concentrated bleach solutions are used to wipe surfaces because the wipe is repeatedly dipped in the solution. For marketing reasons, bleach manufacturers have not sought spray solution labeling from the Environmental Protection Agency regulators. There are many commercial products to use to sanitize surfaces. Most cost more and many are toxic with instructions to keep them away from children. Follow the manufacturer's label when using products other than the bleach spray solution to sanitize surfaces.

### Manual Materials

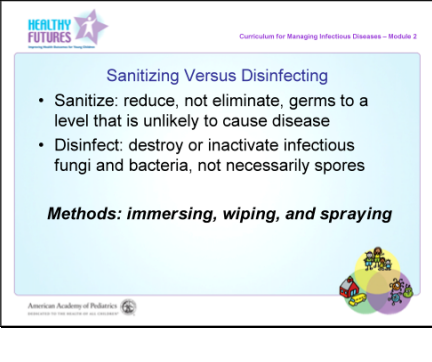
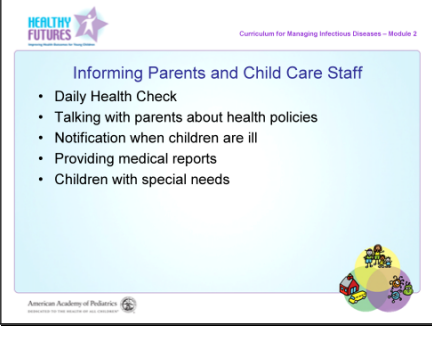
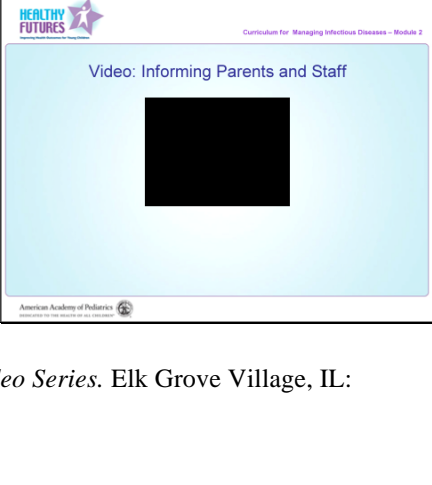
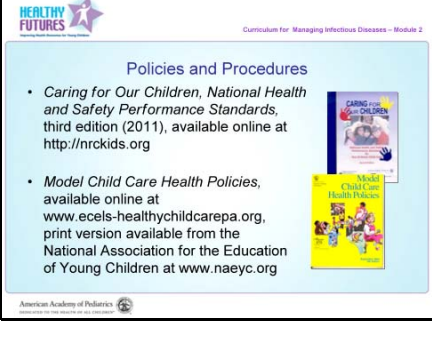
- Sanitation, Disinfection, and Maintenance

### References

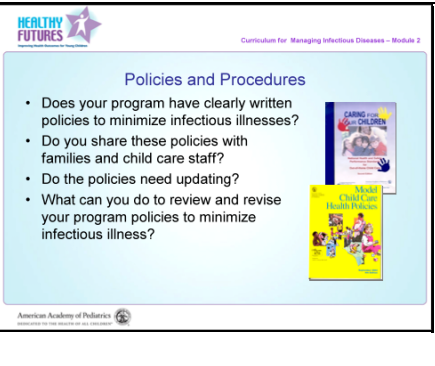
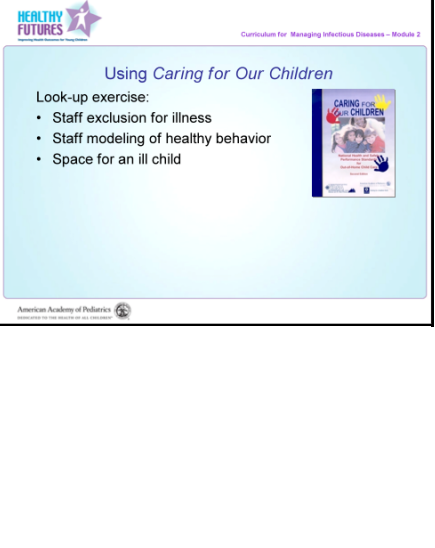
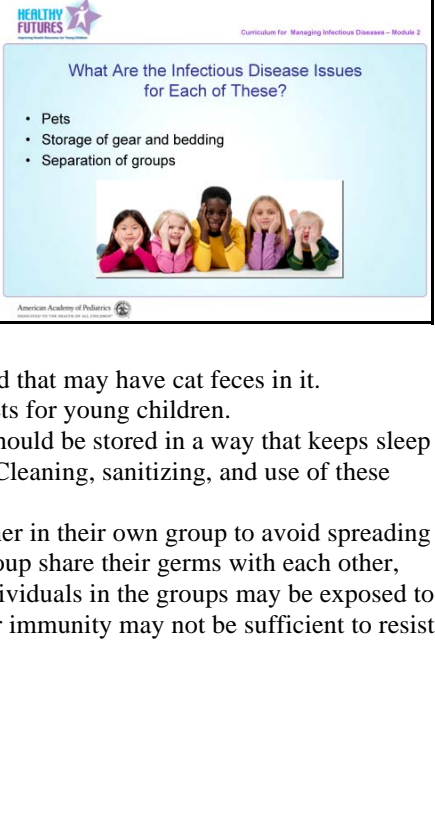
- Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009:20

(<1 minute)



<p>#15</p>	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li>Review content of slide, and Sanitation, Disinfection, and Maintenance and the Cleaning and Sanitizing Chart in Module 2 of the Participant's Manual.</li> <li>If a product is registered with the US Environmental Protection Agency (EPA) as a sanitizer or as a disinfectant and is used according to manufacturer's instructions, it can be used in child care settings.</li> </ul> <p><b>Manual Materials</b></p> <ul style="list-style-type: none"> <li>Sanitation, Disinfection, and Maintenance</li> <li>Cleaning and Sanitizing Chart</li> </ul> <p>(&lt;1 minute)</p>	
<p>#16</p>	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li><b>Explain</b> that the video in the next slide will show how some key child care staff-parent interactions enable child care programs to be more effective in preventing infections.</li> <li>The video shows best practice based on national standards in <i>CFOC</i>. State regulations may differ. Check the state regulations that apply to see if they are more or less stringent than those in <i>CFOC</i>.</li> </ul> <p>(&lt;1 minute)</p>	
<p>#17</p>	<p><b>Video</b></p> <ul style="list-style-type: none"> <li>Double-click on the black square to view video.</li> <li>This video segment is 4 minutes long.</li> <li>The video segment is taken from Part 6: <i>Caring for Our Children Video Series</i>.<sup>1</sup></li> <li>If time is not available to show video, discuss the topics in the video. (Instructor should view video prior to training and then lead discussion with participants.)</li> </ul> <p><b>Reference</b></p> <ol style="list-style-type: none"> <li>American Academy of Pediatrics and the American Public Health Association. <i>Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs Video Series</i>. Elk Grove Village, IL: American Academy of Pediatrics; 1995</li> </ol> <p>(4 minutes)</p>	
<p>#18</p>	<p><b>Guided Discussion</b></p> <ul style="list-style-type: none"> <li>Do your programs have clearly written policies that the program reviews with families and child care staff to foster effective collaboration to prevent infectious illness?</li> <li>Which areas are covered in written policies and procedures, and which could be improved?</li> <li>How can you use the publications shown on this slide to review your written policies and make needed revisions?</li> <li>Allow participants to offer responses to these questions.</li> </ul> <p>(3 minutes)</p>	



#19	<p><b>Guided Discussion</b></p> <ul style="list-style-type: none"> <li>Suggest participants will need a process to review and update their program policies.</li> <li>Suggest involving those affected, those with authority to implement policies, and those with health care professional expertise (ie, a Child Care Health Consultant) in reviewing facility policies.</li> <li>Suggest using the publications shown on the slide by dividing up the topics to be covered among those involved in the review process so everyone becomes familiar with these resources.</li> </ul> <p>(2 minutes)</p>	
#20	<p><b>Look-up Exercise</b></p> <ul style="list-style-type: none"> <li><b>Ask</b> 1 or 2 participants to review 1 or 2 of the following exercises in the <i>CFOC</i> excerpts in Module 2 of the Participant's Manual: <ul style="list-style-type: none"> <li>Staff Exclusion for Illness (<i>CFOC</i> 2nd ed standard 3.069)</li> <li>Staff Modeling of Healthy Behavior (<i>CFOC</i> 2nd ed standard 2.063)</li> <li>Space for Ill Child (<i>CFOC</i> 2nd ed standard 5.149)</li> </ul> </li> <li><b>Ask</b> the participant to read the standard and the rationale, as well as the indication of whether the standard applies to centers, or large or small family child care homes.</li> <li>The third edition of <i>CFOC</i> is expected in 2011. Substitute new wording when third edition is available.</li> </ul> <p><b>Manual Materials</b></p> <ul style="list-style-type: none"> <li>Staff Exclusion for Illness (<i>CFOC</i> 2nd ed standard 3.069)</li> <li>Staff Modeling of Healthy Behavior (<i>CFOC</i> 2nd ed standard 2.063)</li> <li>Space for Ill Child (<i>CFOC</i> 2nd ed standard 5.149)</li> </ul> <p>(3 minutes)</p>	
#21	<p><b>Lecture</b></p> <ul style="list-style-type: none"> <li>Having animals in child care is educational. However, some animals carry disease-causing germs even if they are not sick themselves<sup>1</sup>. <b>Ask</b> "Do you know some examples?" (See list below to augment the responses of the participants.) <ul style="list-style-type: none"> <li>Healthy reptiles and amphibians (eg, snakes, turtles, frogs, and salamanders) carry salmonella, a bacterium that causes diarrhea and serious, even life-threatening, illness. Live chickens and turkeys, and raw poultry and eggs, commonly carry this organism also.</li> <li>Cat claws carry a particular germ, a bacterium <i>Bartonella henselae</i>, that causes a serious disease called cat-scratch fever; cat's feces carry germ, a parasite <i>Toxoplasma</i>, that can cause serious problems for babies of pregnant women who handle cat litter or uncovered outdoor sand that may have cat feces in it.</li> <li>See <a href="http://www.cdc.gov">www.cdc.gov</a> for more detailed discussion about pet risks and safe pets for young children.</li> </ul> </li> <li>Bedding and clothing that touches infected skin can transmit disease. Bedding should be stored in a way that keeps sleep surfaces used by 1 child from touching the sleep surface used by another child. Cleaning, sanitizing, and use of these articles by only 1 person are key preventive measures.</li> <li>Separation of groups is called "cohorting"—which means keeping people together in their own group to avoid spreading disease-causing germs from 1 group to another. Cohorting is a way to have a group share their germs with each other, developing immunity for those germs that are shared. When groups mix, the individuals in the groups may be exposed to some different disease-causing germs than they have already mastered, and their immunity may not be sufficient to resist such exposures.</li> </ul> <p><b>Reference</b></p> <ol style="list-style-type: none"> <li><i>CFOC</i> 2nd ed standard 3.042–3.044</li> </ol> <p>(2 minutes)</p>	




## Module 2: Instructor's Manual

#22

## Lecture

Review list of tools to control infection that were discussed in this module.

(&lt;1 minute)




HEALTHY  
FUTURES  
Helping Your Success Today


Curriculum for Managing Infectious Diseases – Module 2

## Review: Focus of Tools to Control Infection

- People
- Places/Environment
- Germs



American Academy of Pediatrics  
ADVANCING CHILD HEALTH



#23

[illegible]

## Module 2: Preventing Infectious Diseases

### Objectives

#### A. Knowledge

Each participant will be able to:

1. Identify the 3 factors involved in controlling the spread of infection.
2. Explain the role of nutrition, healthy lifestyle, and immunization in preventing infectious diseases.
3. Identify 4 ways to reduce the number of germs in child care settings.
4. Explain at least 1 activity that families, caregivers/teachers, and health care professionals can do to prevent infectious diseases.

#### B. Attitude

Each participant will be able to:

1. Feel knowledgeable about good diaper changing techniques.
2. Plan to promote healthy lifestyles in children and staff by practicing good nutrition, and getting adequate exercise and rest.
3. Commit to updating and implementing policies and procedures to decrease the spread of infectious diseases, like effective hand washing and sanitizing.
4. Commit to keeping vaccine status current, plan to encourage other staff to do likewise, and explore how to improve efforts to have parents keep their children's immunizations updated.

#### C. Behavior

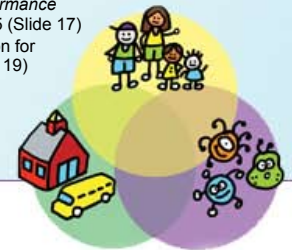
Each participant will:

1. Perform a self-assessment of vaccine status.
2. Demonstrate the proper technique for hand washing.
3. Participate in look-up exercise using *Caring for Our Children* standards.

## Module 2: Preventing Infectious Diseases

### References

- American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2002. Also available at <http://nrckids.org> (Slides 1, 2, 4, 9, 18, 19, 20, 21)
- Garcia-Marcos L, Mallol J, Solé D, Brand PLP, the EISL Study Group. International study of wheezing in infants: risk factors in affluent and non-affluent countries during the first year of life. *Pediatr Allergy Immunol*. 2010;21(5):878–888 (Slide 3)
- Ball TM, Castro-Rodriguez JA, Griffith KA, Holberg CJ, Martinez FD, Wright AL. Siblings, day-care attendance, and the risk of asthma and wheezing during childhood. *N Engl J Med*. 2000;343(8):538–543 (Slide 3)
- Midodzi WK, Rowe BH, Majaesic CM, Saunders LD, Senthilselvan A. Early life factors associated with incidence of physician-diagnosed asthma in preschool children: results from the Canadian Early Childhood Development cohort study. *J Asthma*. 2010;47(1):7–13 (Slide 3)
- Nicolaou NC, Simpson A, Lowe LA, Murray CS, Woodcock A, Custovic A. Day-care attendance, position in sibship, and early childhood wheezing: a population-based birth cohort study. *J Allergy Clin Immunol*. 2008;122(3):500–506.e5 (Slide 3)
- Celedón JC, Litonjua AA, Ryan L, Weiss ST, Gold DR. Day care attendance, respiratory tract illnesses, wheezing, asthma, and total serum IgE level in early childhood. *Arch Pediatr Adolesc Med*. 2002;156(3):241–245 (Slide 3)
- Kotch JB, Isbell P, Weber DJ, et al. Hand-Washing and Diapering Equipment Reduces Disease Among Children in Out-of-Home Child Care Centers. *Pediatrics*. 2007;120:e29–e36 (Slide 4)
- Bell DM, Gleiber DW, Mercer AA, Phifer R, Guinter RH, Cohen AJ, Epstein EU, Narayanan M. Illness associated with child day care: a study of incidence and cost. *Am J Public Health*. Apr 1989;79:479–484 (Slide 4)
- Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009:26 (Slides 5, 9, 14)
- American Academy of Pediatrics. Pickering LK, Baker CJ, Kimberlin DW, Long SS, eds. *Red Book: 2009 Report of the Committee on Infectious Diseases*. 28th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009 (Slide 3)
- CDC. [www.cdc.gov/flu/about/qa/flu vaccine.htm](http://www.cdc.gov/flu/about/qa/flu vaccine.htm) (Slide 6)
- Kotch JB, Weigle KA, Weber DJ, Clifford RM, Harms TO, Loda FA, et al. Evaluation of an hygienic intervention in child day-care centers. *Pediatrics*. 1994;94(suppl 2):991–4 (Slide 8)
- Uhari M, Mottonen M. An open randomized controlled trial of infection prevention in child day-care centers. *Pediatr Infect Dis J*. 1999;18:672–677 (Slide 8)
- Roberts L, Jorm L, Patel M, Smith W, Douglas RM, McGilchrist C. Effect of infection control measures on the frequency of diarrheal episodes in child care: a randomized, controlled trial. *Pediatrics*. 2000;105:743–746 (Slide 8)
- American Academy of Pediatrics and the American Public Health Association. *Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs Video Series*. Elk Grove Village, IL: American Academy of Pediatrics; 1995 (Slide 17)
- Pennsylvania Chapter, American Academy of Pediatrics. *Model Child Care Health Policies*. 3rd ed. Washington, DC: National Association for the Education of Young Children; 1997. Also available at [www.ecels-healthychildcarepa.org/content/MHP4thEd%20Total.pdf](http://www.ecels-healthychildcarepa.org/content/MHP4thEd%20Total.pdf) (Slides 18, 19)



## Module 2: Preventing Infectious Diseases

### Resources

1. *CFOC* 2nd ed standard 3.014
2. National Association for the Education of Young Children. *Keeping Healthy: Families, Teachers and Children*. 2007. Available at [www.naeyc.org/store/node/66](http://www.naeyc.org/store/node/66)
3. California Childcare Health Program: [www.ucsfchildcarehealth.org](http://www.ucsfchildcarehealth.org) (search pest management)
4. Eco-Healthy Childcare:  
[www.oeonline.org/resources/publications/factsheetarchive/Pesticides.pdf](http://www.oeonline.org/resources/publications/factsheetarchive/Pesticides.pdf)
5. [www.aap.org/immunization](http://www.aap.org/immunization)
6. *CFOC* 2nd ed standard 3.021

## Enrollment/Attendance/Symptom Record

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## Diaper Changing

### Components of a Diapering Area

Diaper-changing areas should

- Not be located in food preparation areas.
- Not be used for temporary placement of food or utensils.
- Be conveniently located, washable, with all surfaces, including walls and floors, made of a nonporous material without cracks or crevices that are difficult to clean and sanitize.
- Have tightly covered, hands-free receptacles within arm's reach to prevent environmental contamination.
- Take into account whether caregivers must provide simultaneous supervision of the other children in the group. If so, the diaper-changing table should be positioned to allow caregivers/teachers to maintain constant sight and sound supervision of children.
- Be designed to prevent contamination of surfaces during, and as a result of, the diaper-changing process.
- Provide at least one diaper-changing table per infant or toddler group to
  - ~ Allow sufficient time for changing diapers.
  - ~ Allow for cleaning and sanitizing between uses.
- Be used only by those children in one group because
  - ~ Disease spreads more easily when caregivers/teachers from different groups use the same diaper-changing surface and sinks for diapering. This means that diaper-changing tables should not be placed between or shared between classrooms because doing so promotes cross-contamination.
- Be organized to maximize the opportunity for one-on-one time between the child and the teacher/caregiver. Skilled teachers plan diaper-changing areas to give the child visual stimulation, but use objects that do not add to the burden of cleaning and sanitation after the diaper change. For example, mirrors on the wall or ceiling, mobiles, and laminated pictures on the walls or ceiling are interesting for children to look at, and they offer an opportunity for the caregiver and child to interact while diapering is done. While this interaction distracts the child during the diapering activity, more importantly, it fosters language and caring relationships. If the child is given something to hold while being diapered, that object must be considered contaminated and taken from the child to be cleaned and sanitized when the soiled diaper is removed from the child's bottom.

### Changing Table Requirements

Changing tables should be

- Made of moisture-proof, nonabsorbent, smooth surfaces that do not trap soil and are easily sanitized
- Sturdy
- At a convenient height (between 28" and 32" high) for use by caregivers/teachers
- Be equipped with railings or barriers that extend at least 6" above the change surface
- Be free of restraining straps or any other objects that pose an additional challenge to cleaning and sanitizing after each diaper change

### Sinks in Diaper-Changing Areas

- Sinks in diaper-changing areas should be within arm's reach of the caregivers/teachers so hand washing can be done before any other surfaces are touched and contaminated.
- At least one sink should be available for every 2 changing tables.
- Sinks and diaper-changing tables should be assigned to a specific group of children.
- Sinks should not be used for bathing or removing smeared fecal material.
- Drinking utensils and food should not be washed in these sinks.

### Diaper-Changing Steps

The procedure for diaper changing is designed to reduce surface contamination that, later, will come in contact with uncontaminated surfaces such as hands, furnishings, and floors. Posting this multistep procedure may help caregivers/teachers routinely follow the correct steps to changing a child's diaper.

Staff who will be involved with food handling should avoid being involved with diaper changing if at all possible until after food handling duties are completed. All staff should follow these diapering procedures.

#### Step 1: Get organized.

Before bringing child to diaper area, gather the needed supplies.

- Nonabsorbent paper liner, large enough to cover changing surface from the child's shoulders to beyond the child's feet (so that the table surface is protected and

➤ *continued*



## Diaper Changing, continued

the paper liner can be folded back under the child after removing the soiled diaper and cleaning the child's bottom, if the surface under the child's bottom becomes soiled during cleanup)

- Fresh diaper
- Clean clothes (if needed)
- Wipes for cleaning child's bottom and wiping the caregiver's/teacher's and child's hands between taking off the soiled diaper and putting on the clean diaper
- Plastic bag for soiled clothes
- Disposable gloves (If used, put on before touching soiled clothing or diapers and remove before touching clean diapers and surfaces.)
- Thick application of any diaper cream (when appropriate) removed from the container to a piece of disposable material (eg, a small piece of the table liner paper)

### **Step 2: Carry the child to changing table, avoiding contact with soiled clothing.**

- Always keep a hand on the child.
- If the child's feet cannot be kept out of the diaper or from contact with soiled skin during the changing process, remove the child's shoes and socks so the child does not contaminate them with stool or urine.
- Put any soiled clothes in a plastic bag and securely tie the bag to send the soiled clothes home.

### **Step 3: Clean the child's diaper area.**

- Place the child on the diaper-changing surface and unfasten the diaper, but leave the soiled diaper under the child.
- If safety pins are used, close each pin immediately once it is removed and keep pins out of the child's reach (never hold pins in your mouth).
- Lift the child's legs as needed to use disposable wipes to clean the skin on the child's genitalia and buttocks.
- Remove stool and urine from front to back, and use a fresh wipe each time.
- Put the soiled wipes in the soiled diaper or directly into a plastic-lined, covered, foot-operated receptacle.

### **Step 4: Remove the soiled diaper without contaminating any surface not already in contact with stool or urine.**

- Fold the soiled surface inward.
- Put soiled disposable diapers in a plastic-lined, covered, hands-free receptacle. If reusable cloth diapers are used, put the soiled cloth diaper (without emptying or rinsing) in a plastic bag or into a plastic-lined, covered, foot-operated receptacle to give to parents or the laundry service.
- If gloves were used, remove them and put them into a plastic-lined, covered, hands-free receptacle.
- Whether or not gloves were used, use a disposable wipe to clean the surfaces of the caregiver's/teacher's hands, and another wipe to clean the child's hands, and put the wipes into the plastic-lined, hands-free, covered can.
- Check for spills under the child. If there are any, use the paper that extends under the child's feet to fold the disposable paper over so that a fresh, unsoiled paper surface is now under the child's buttocks.

### **Step 5: Put on a clean diaper and dress the child.**

- Slide a fresh diaper under the child.
- Use tissue to apply any necessary diaper creams, discarding the tissue in a plastic-lined, covered, foot-operated receptacle.
- Observe, note, and plan to report any skin problems such as redness, skin cracks, or bleeding.
- Fasten the diaper (if pins are used, place your hand between the child and diaper when inserting the pin) and put on the child's clothing and shoes, being careful to stand the child only on a clean surface so that the child's shoes do not carry contamination from the diaper-changing table around the room.

This is the end of the soiled portion of the diaper change. Gloves should be off and all soiled articles should be in the hands-free can.

►continued



## Diaper Changing, continued

### ***Step 6: Wash the child's hands and return the child to a supervised area.***

- Use soap and water (no less than 60°F [15.6°C] and no more than 120°F [48.9°C]) to wash the child's hands.
- If a child is too heavy to hold or cannot stand at the sink, use the following method to wash hands:
  - ~ Wipe the child's hands with a damp paper towel moistened with a drop of liquid soap.
  - ~ Wipe the child's hands with a paper towel wet with clean water.
  - ~ Dry the child's hands with a paper towel.

### ***Step 7: Clean and sanitize the diaper-changing surface.***

- Dispose of the paper liner used on the diaper-changing surface in a plastic-lined, covered, hands-free receptacle.
- Clean any visible soil from the changing surface with detergent and water; rinse with water.
- Spray a sanitizing bleach solution onto the entire changing surface (see "Sanitation, Disinfection, and Maintenance" on page 20).
- Leave the bleach sanitizer on the surface for at least 2 minutes. (The surface can be wiped dry or left to air-dry.)

### ***Step 8: Wash your hands and record the diaper change in the child's daily log.***

- Wash hands using soap and water, using a paper towel to turn off water faucet.
- In the daily log, record what was in the diaper and any problems (eg, diarrhea, unusual color or odor, blood in the stool, any skin irritation).

The procedure for diaper changing is designed to

- Reduce surface contact that leads to contamination of uncontaminated surfaces.
- Ensure the child's safety by assembling supplies before bringing child to the changing area.
- Reduce possible contamination and spreading of disease by taking supplies directly from their containers and leaving containers in their assigned areas.

Remember,

- Food preparation should not be permitted in the diapering area.
- Gloves are not necessary, but may reduce contamination of hands and infectious agents under the fingernails.
- After diapering, clean visible soil from surfaces followed by application of a sanitizing solution. If a spray solution of bleach (1 tablespoon bleach to 1 quart of water) is used, apply the spray until the surface is wet enough to glisten, and then leave the solution on for 2 minutes before wiping or allow the surface to air dry (see "Sanitation, Disinfection, and Maintenance" on page 20). If there is no visible soil, there is no need to clean with detergent first. The 2-minute waiting time for the bleach solution to work can be used conveniently to wash the caregiver's hands, record the diaper change, and gather supplies for the next child's diaper change. By the time these tasks are completed, if another child must use the diaper-changing table, and 2 minutes have elapsed with the table still wet from the bleach solution, the table can be wiped dry with a paper towel.



## Insect Repellent: Safety Considerations

- Do not allow young children to apply insect repellent to themselves; have an adult do it for them.
- Apply it to your own hands and then rub your hands on the child.
- Avoid children's eyes and mouth and use it sparingly around their ears. Do not apply over cuts, wounds, or irritated or sunburned skin.
- Do not apply repellent to children's hands; children may tend to put their hands in their mouths.
- Use just enough to cover exposed skin.
- Do not apply repellent to skin under clothing.
- Do not use sprays in enclosed areas or near food.
- Reapply if washed off by sweating or by getting wet.
- Wash the treated skin with soap and water when the children return inside.
- If repellent is applied to clothing, wash treated clothing before wearing again.
- Keep repellents out of reach of children.
- If a child develops a rash or other reaction from any insect repellent, discontinue use, wash the repellent off with soap and water and contact the poison control center (800-222-1222) or a physician, followed by the child's parent.

### References:

Centers for Disease Control and Prevention. What You Need to Know About Mosquito Repellent. 2007. Available at: [www.cdc.gov/ncidod/dvbid/westnile/mosquitorepellent.htm](http://www.cdc.gov/ncidod/dvbid/westnile/mosquitorepellent.htm)

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Cleaning and Sanitizing Chart			
Area	Clean	Sanitize	Frequency
<b>Classroom/Child Care/Food Areas</b>			
Countertops/tabletops, floors, doorknobs, and cabinet handles	X	X	Daily and when soiled
Food preparation/service surfaces	X	X	Before/after contact with food activity; between preparation of raw and cooked foods
Carpets and large area rugs	X		Vacuum daily when children are not present. Clean with a carpet-cleaning method approved by the local health authority. Clean carpets only when children will not be present until carpet is dry. Clean carpets at least monthly in infant areas, at least every 3 months in other areas, and when soiled.
Small rugs	X		Shake outdoors or vacuum daily. Launder weekly.
Utensils, surfaces/toys that go in the mouth or have been in contact with saliva or other body fluids	X	X	After each child's use, or use disposable, one-time utensils or toys.
Toys that are not contaminated with body fluids. Dress-up clothes. Sheets/pillowcases, individual cloth towels (if used), combs/hairbrushes, washcloths, and machine-washable cloth toys. (None of these items should be shared among children without washing first because of the potential for spread of germs by close contact of these items with the skin and hair of the body.)	X		Weekly and when visibly soiled. Many of these articles may be washed in a dishwasher or clothes washer. Small toys, such as plastic blocks, can be put in a net bag for washing.
Blankets, sleeping bags, cubbies	X		Monthly and when soiled
Cribs and crib mattresses	X		Weekly, before use by different child, and whenever soiled or wet
Phone receivers	X	X	Weekly
<b>Toilet and Diapering Areas</b>			
Hand-washing sinks, faucets, surrounding counters, soap dispensers, doorknobs	X	X	Daily and when soiled
Toilet seats, toilet handles, doorknobs or cubicle handles, floors	X	X	Daily or immediately if visibly soiled
Toilet bowls	X	X	Daily
Changing tables, potty chairs (Use of potty chairs in child care is discouraged because of high risk of contamination.)	X	X	After each child's use
<b>General Facility</b>			
Mops and cleaning rags	X	X	Before and after a day of use, wash mops/rags in detergent and water, rinse in water, immerse in sanitizing solution, and wring as dry as possible. After cleaning and sanitizing, hang mops and rags to dry.
Waste and diaper containers	X		Daily
Any surface contaminated with body fluids (eg, saliva, mucus, vomit, urine, stool, blood)	X	X	Immediately, using standard precautions as specified in <i>Caring for Our Children</i> , Standard 3.026
Updated from National Association for the Education of Young Children. <i>Keeping Healthy</i> . 1999, as found in American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care. <i>Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs</i> . 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2002:106. Available at: <a href="http://nrc.uchsc.edu/CFOC/index.html">http://nrc.uchsc.edu/CFOC/index.html</a> . Accessed March 19, 2008.			

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## Hand Hygiene

### When to Wash Hands

To prevent the spread of infection, signs should be posted at each sink indicating when and how staff, volunteers, and children should wash their hands.

Hand washing should occur

- When arriving for the day or when moving from one group of children to another
- Before and after
  - ~ Eating, handling food, or feeding a child; especially important for children who eat with their hands to decrease the amount of saliva (which may contain organisms) on their hands
  - ~ Administering a medication
  - ~ Playing with water that is used by more than one person
- After
  - ~ Diapering and toileting
  - ~ Handling body fluids (eg, mucus, blood, vomit)
  - ~ Wiping noses, mouths, and sores
  - ~ Handling uncooked food (especially raw meat and poultry)
  - ~ Handling pets and other animals (including tropical fish) or cleaning their cages or litter boxes
  - ~ Playing in sandboxes (to prevent the ingestion of parasites that could be present in contaminated sand and soil)
  - ~ Cleaning
  - ~ Handling garbage
- When leaving for the day

### How to Wash Hands

Children and staff should wash hands using the following method:

- Make sure a clean, disposable paper (or single-use) towel is available.
- Turn on water (no less than 60°F [15.6°C] and no more than 120°F [48.9°C]).
- Moisten hands with water and apply liquid soap to hands.
- Rub hands together vigorously until soapy lather appears, and continue for at least 10 seconds; rub areas between fingers, around nail beds, under fingernails and jewelry, and on back of hands.
- Rinse hands under running water until free of soap and dirt. Leave water running while drying hands.

- Dry hands with a clean, disposable paper towel or single-use cloth towel.
- If taps do not turn off automatically, turn taps off with a disposable paper towel or single-use cloth towel.
  - ~ Shared towels can transmit infectious diseases.
- To dispose of towels
  - ~ Throw disposable towel in lined trash container.
  - ~ Place single-use cloth towel in laundry hamper.
  - ~ Hang individually labeled cloth towels to dry.
- If desired, use hand lotion from a liquid lotion dispenser to prevent chapping.

Use a source of clean, running water. Running water will initially rinse off some soil, provide moisture for a good lather, and rinse the skin thoroughly to leave the skin clean.

Children and staff should use liquid soap because

- Although adequately drained bar soap has not been shown to transmit bacteria, bar soaps sitting in water have been shown to be heavily contaminated with *Pseudomonas* and other bacteria.
- Many children do not have the dexterity to handle a bar of soap, and many adults do not take the time to rinse the soil off before putting down the bar of soap.

Additional information

- Premoistened cleansing towelettes
  - ~ Do not effectively clean hands and may spread pathogens from one hand to another.
  - ~ May be used when running water is not available (eg, during an outing).
  - ~ May be used while in the middle of diapering. After removing the soiled diaper and before putting on a clean diaper, the caregiver's/teacher's hands (and often the child's hands, too) may come in contact with feces or urine by touching the soiled skin in the diaper area. Stepping away from the diaper table to wash hands at a sink at this point is not practical. Using a wipe to reduce the level of soil on the caregiver's/teacher's and child's hands at this point is a reasonable compromise.
- Antibacterial soaps may be used, but are neither required nor recommended.

➤continued



## Hand Hygiene, continued

### Assisting Children With Hand Washing

Encouraging and teaching children good hand-washing practices must be done in a safe manner. Washing infants' hands helps reduce the spread of infection. Washing under running water is best. Staff should wash their own hands after assisting children with hand washing.

Caregivers/teachers should provide assistance

- At a sink for infants who can be safely cradled in one arm
- For children who can stand, but not wash their hands by themselves

For the child who is unable to stand and too heavy to hold at the sink to wash hands under running water, the following method should be used:

- Wipe the child's hands with a damp paper towel moistened with a drop of liquid soap, and discard towel.
- Wipe the child's hands with a clean, wet paper towel until hands are free of soap, and discard towel.
- Dry the child's hands with a clean paper towel.

### Using Alcohol-based Hand Rubs

The use of alcohol-based hand-rub products (eg, liquid, gel, or foam hand sanitizers) does not substitute for hand washing in the group care setting. Hand washing is required to remove visible soil. Alcohol-based hand rubs should be limited to instances in which no sink is available. These products require an alcohol content of 60% or greater to be effective at killing germs. They are highly toxic if ingested by children, and they are flammable.

Caregivers/teachers should do the following:

- Limit the use of alcohol-based hand rubs to areas of the facility that are inaccessible to children (eg, in a kitchen that is off-limits to children or the maintenance equipment area).
- Discourage alcohol-based hand rubs for hand hygiene in child-use areas. If they are used in these areas because of lack of sinks, ensure that no child can have independent use of the container or dispenser.
- Be sure that hand hygiene using alcohol-based hand rubs conforms to the manufacturer's instructions. The procedure for using alcohol-based rubs should include the following:
  - ~ Apply the required volume of the product to the palm of one hand and rub together; cover all surfaces of the hands and fingers until the hands are dry. The required volume should keep the hand surfaces wet for at least 15 seconds or longer if indicated by the manufacturer.
  - ~ Check the dispenser systems for hand-hygiene rubs on a regular schedule to be sure they deliver the required volume of the product and do not become clogged or malfunction in some other way.
  - ~ Store supplies of alcohol-based hand rubs in cabinets or areas approved for flammable materials.
  - ~ Monitor hand hygiene with unannounced and regular direct observation. When hand rubs are used, check how much of the product is being used to be sure the appropriate amount gets used as a way to verify that the staff who are authorized to use this method of hand hygiene are continuing to use the material properly.



### Bedding, Personal Clothing, and Cribs

Sleep equipment should be used only by one child and cleaned and sanitized before use by another child. Equipment used by one child should be stored separately from that used by others.

- Cribs and crib mattresses should have a nonporous, easy-to-wipe surface.
- Bedding (eg, sheets, pillows, blankets, sleeping bags) should be washable.
- Lice infestation, scabies, and ringworm are among the most common contagious diseases in child care and school settings. Although no evidence exists to show that lice are transmitted except by head-to-head contact, some skin diseases have been shown to spread if bedding materials, jackets with hoods, and hats used by various children are stored so that they touch each other.

### Potty Chairs and Toilets

- Potty chair use is not recommended and should be discouraged. Toilets adapted for use by children are preferable.
- If potty chairs are used, they should be
  - ~ Made with a surface that is easily cleaned and sanitized
  - ~ Used only in a bathroom area
  - ~ Used over a surface that will not be damaged by moisture
  - ~ Out of reach of toilets or other potty chairs
  - ~ Emptied into a toilet, then cleaned in a sink that is used only for cleaning and sanitizing potty chairs
- Toilets should be kept visibly clean and separate from the children's activity area.

### Staff Training

Provide training for staff who are responsible for cleaning, including the following:

- How to handle, mix, and store cleaning solutions. (See "Sanitation, Disinfection, and Maintenance" on page 20.)
- Proper use of protective barriers (eg, gloves).
- Proper handling and disposal of contaminated materials, such as soiled diapers or bandages that are contaminated with blood or body fluids.
- Information required by the US Occupational Safety and Health Administration about the use of any chemical agents. Even if custodial services are provided under a contract with an outside service organization, be sure that an assigned staff member supervises routine cleaning of the facility according to the facility's schedule. Be sure that the staff have read the Material Safety Data Sheet for any products they use.

### Hand Hygiene

Because many infected people carry communicable diseases without having symptoms and are contagious before they experience symptoms, caregivers/teachers need to protect themselves and the children they serve by carrying out hygienic procedures on a routine basis.

#### Why Is Hand Hygiene Important?

Hand hygiene is the most effective means of reducing germs and infections in group care settings. Studies have shown that unwashed or improperly washed hands are primary carriers of infections. Lack of hand washing and poor hand-washing techniques have contributed to many outbreaks of diarrhea among children and staff in group care settings. Conversely, adherence to good hand-washing techniques has consistently demonstrated a reduction in disease transmission in child care and school settings. While working with children, caregivers/teachers should not wear elaborate jewelry or long or artificial nails, because these interfere with effective hand washing. Using hand lotion after hand washing to prevent chapping and cracking of skin also is important.

Although alcohol-based hand rubs have come into common use in hospitals and other health care settings, hand washing is still the preferred method of hand hygiene in educational settings. Alcohol-based hand rubs should only be used when there is no visible soil, and when soap and water washing is not practical. Proper use of alcohol-based hand rubs requires that the product contain at least 60% alcohol and that the amount of product applied to the skin be sufficient to keep the hands wet with the solution for the length of time specified on the manufacturer's label, generally 15 seconds. This is not less time than it takes to wash hands with soap and water. While the alcohol-based hand rubs are convenient carry-along products, they are expensive, toxic, and flammable. If they are used, precautions to handle these risks are required. Instructions for the use of these products are included in "Hand Hygiene" on page 25.

Hand washing is best; use hand rubs only when there is no visible soil, and soap and water washing is not practical.

### Diaper Changing

See "Diaper Changing" on page 27 for sanitary procedures.



(eg, an entryway) that might tempt someone to use the diapering surface as a temporary place to put down articles unrelated to diapering.

- ~ Locate stored diaper-changing supplies off but near the diaper-changing surface, so the supplies for a single diaper change can be gathered and brought to the table without contaminating the bulk supplies during the diaper change. However, the bulk supplies should be stored so that there are no barriers, such as cabinet doors that would have to be handled to get to the supplies if an extra diaper is unexpectedly needed during the diaper change.
- ~ Post the diaper-changing procedures in graphics that are large enough and clear enough to remind staff and families who use the diaper-changing area to follow the steps of the procedure correctly.
- ~ All surfaces must be nonporous, without cracks or crevices, so that they can be effectively cleaned and sanitized between uses. That means that straps and restraints should not be a part of the table design since they cannot be cleaned and sanitized effectively after each change.
- ~ Be sure the plastic-lined, lidded, hands-free container for disposable diapering items is big enough and in good working order so that nobody uses hands to open it or push trash into it.

Routine environmental sanitation. (See the “Cleaning and Sanitizing Chart” on page 21 to establish and monitor the frequency and method of maintenance for all surfaces and “General Guidelines for Surfaces and Equipment” on page 22.)

### Health Consultant

All programs in which children routinely spend time should have a health consultant to

Assist in the development and implementation of written policies for prevention and control of communicable diseases.

Perform site visits and observe program operations to spot and help correct hazards and risky practices and provide health education to children, child care providers, and families. Facilities with infants should seek services from a health consultant at least monthly, all centers at least quarterly, and all family child care homes at least annually. See Chapter 8, “Role of the Health Consultant in Child Care and Schools,” on page 161 for more information.

### Written Policies

All child care facilities and schools should have written policies dealing with infectious disease control as part of the program’s health policies that describe the following:

- Environmental hygiene (cleaning and sanitizing)
- Inclusion and exclusion for children and staff illnesses
- Families’ responsibility to share information about illnesses and needs for special care of their children
- The need to notify local health authorities of certain communicable diseases involving children or staff
- Accurate record keeping and tracking for immunizations and other routine preventive health care services
- The need to identify the child’s source of routine, comprehensive health care, known as the medical home

### Sanitation, Disinfection, and Maintenance

#### Routine Cleaning, Sanitizing, and Disinfecting of Contaminated Surfaces

Routine housekeeping procedures can help reduce the spread of germs in child care and school environments. Following are definitions of these terms and techniques for their use:

- **Routine cleaning:** using detergents or abrasive cleaners and rinsing with water to remove surface soil.
- **Sanitizing:** removing filth or soil and small amounts of certain germs. For a surface to be considered sanitary, the surface must be cleaned first, and then an additional sanitizer solution must be applied to reduce the number of germs to such a level that disease transmission by that surface is unlikely. This procedure is less rigorous than disinfecting and is applicable to a wide variety of routine housekeeping procedures.
  - ~ Many different types of sanitizing solutions are available.
  - ~ Follow the instructions on the manufacturer’s label for correct use.
  - ~ Products that are registered with the US Environmental Protection Agency (EPA) as *detergent-disinfectant* or *hospital-grade* germicides may be used for sanitizing. Although there are products that are specifically listed as effective against different types of infectious agents, except in an outbreak situation, any of these products is suitable for use in child care and schools. In an outbreak, the instructions of the local health department should be followed.
  - ~ Avoid products that are labeled as toxic for children.
  - ~ Be cautious about using industrial products advertised as “having germicidal action” or “killing germs.” They may not have the same effectiveness as bleach and water or EPA-approved hospital-grade germicides.





### US Environmental Protection Agency Definitions

**Sanitization**—Reduce, but not necessarily eliminate, microorganisms from the inanimate environment to levels considered safe as determined by public health codes or regulations.

**Disinfection**—Used on hard, inanimate surfaces and objects to destroy or irreversibly inactivate infectious fungi and bacteria, but not necessarily their spores.

**Sterilize**—Used to destroy or eliminate all forms of microbial life including fungi, viruses, and all forms of bacteria and their spores.

Source: [http://www.epa.gov/oppad001/ad\\_info.htm](http://www.epa.gov/oppad001/ad_info.htm). Accessed July 21, 2008.

- ~ Consult with your local health department or regulatory licensing authority for any product other than household bleach.
- ❖ Surface sanitizing method.
  - Household bleach is inexpensive, relatively safe, and easy to use, and can be mixed as follows:
    - For all tasks that do not involve blood, mix  $\frac{1}{4}$  cup of household bleach to 1 gallon of tap water (or 1 tablespoon of household bleach to 1 quart of water) for a 1:64 dilution. Because chlorine evaporates from bleach and is weakened by sunlight and heat, this minimal dilution may become too diluted to be effective if not made fresh daily from the stock bottle of household bleach. Freshly purchased stock supplies should be used within a few months so they, too, do not become too weak to be effective when diluted.
    - To sanitize with the freshly made 1:64 dilution of bleach, spray the diluted solution on the surface until glossy. Leave the bleach solution on the surface for at least 2 minutes before wiping it off with a clean paper towel, or allow it to air-dry.
    - If blood is involved, change the strength of the bleach and water solution to 1:10 and conduct the same cleaning and sanitizing procedure, carefully bagging all articles in contact with potentially contaminated surfaces.
  - Dipping methods for sanitizing dishes and toys that have been washed and rinsed also are useful.
    - Follow the manufacturer's instructions on the containers for products other than bleach.
    - Household bleach
      - Mix 1.5 teaspoons of household bleach per gallon of water (100 parts per million chlorine) that is not less than 75°F (23.9°C).
      - Immerse the object to be sanitized for at least 2 minutes.
      - Allow the object to air-dry.
    - Hot water immersion

- Completely immerse in hot water at 170°F (76.7°C) for not less than 30 seconds.
- Air-dry.

- **Disinfecting:** eliminating virtually all germs from surfaces through the use of chemicals registered with the US EPA as *disinfectants* or physical agents (eg, heat).

### Prevention of Disease Transmission

Baseline routine frequency of cleaning and sanitation can be found in the “Cleaning and Sanitizing Chart” on page 21. Frequency of cleaning and sanitation should be increased when

- There are outbreaks of illness.
- There is known contamination.
- There is visible soil, blood, or other body fluids.
- There are recommendations by the health department to control certain infectious diseases.

Fecal bacteria in the environment have been shown to increase during outbreaks of diarrheal illnesses. Health officials may recommend a more frequent cleaning schedule in certain areas, depending on the nature of the problem.

### General Guidelines for Surfaces and Equipment

- Carpets, porous fabrics, other surfaces that trap soil, and potentially contaminated materials, such as potted plants, should not be used in toilet rooms, diaper-changing areas, and food preparation areas.
- Walls, ceilings, floors, furnishings, equipment, and other surfaces should be maintained in good repair and kept clean.
- Because children will touch any reachable surface (including floors), all surfaces may be contaminated and can spread infectious disease agents. Generally, sanitizing agents are not very effective at removing visible soil, and do not work well to sanitize if visible soil is present. Therefore, all surfaces must be properly cleaned and then sanitized.
- Respiratory tract secretions (nasal discharge, drool, eye secretions) may contaminate surfaces. They may contain viruses that remain infectious for varying periods of time, making it possible to acquire an infection by touching these surfaces. Children usually have respiratory tract secretions on their hands and may have viruses in their respiratory tract before and after they seem sick. That is why any surface that might have been in contact with a child's hands must be cleaned and sanitized so often.
- All surfaces, furnishings, and equipment that are not in good repair or have been contaminated by body fluids should not be used until repaired, cleaned, and, if needed, sanitized effectively. Have a way to take out of service any

Aronson SS, Shope TR. *Managing Infectious Diseases in Child Care and Schools: A Quick Reference Guide*, 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009. Available at [www.aap.org/bookstore](http://www.aap.org/bookstore)

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surfaces or furnishings that cannot be cleaned or repaired right away. For example, you can use a plastic bin labeled, “dirty—to be washed”, for soiled toys, and yellow plastic tape or yarn to rope off areas that must be temporarily put out of use.

- Adhere to appropriate hand and personal hygiene for children and staff. (See “Hand Hygiene” on page 25.)
- Clean all toys—make it a priority to use toys that can be washed in a dishwasher or washing machine.
- Clean/sanitize tables and countertops, including those used for play, food handling, and eating.
- Clean/disinfect spills of blood or body fluids.
- Sanitize floors and handles of doors and cabinets—all surfaces that children touch.
- Use caution when shampooing rugs used by children who are crawling. Cleaning with potentially hazardous chemicals should be scheduled to minimize exposure to children.
- To prevent animal and insect access, cover sandboxes when they are not in use.
- Ensure that pets are appropriately enclosed and their enclosures are kept clean of waste.
- Ensure that staff wash hands before and after contact with any animal, and after handling animal waste, cages, or bedding (including fish tanks).
- Provide separate and sanitary sleep equipment for each child.
- One way to measure compliance with the standard for cleanliness is to wipe a surface with a clean mop or rag and then insert the mop or rag in cold rinse water. If the surface is clean, no residue will appear in the rinse water.

### Cleaning Equipment

- Only utility gloves/equipment designated for cleaning and sanitizing toilets should be used. After each use, wash utility gloves with soapy water and then let them air-dry.
  - ~ Disposable gloves commonly are made of latex or vinyl. If individuals sensitive to latex are present in the facility, only vinyl disposable gloves should be used.
- Disposable towels are preferred for cleaning, and should be placed in a plastic-lined container until removed to outside garbage.
- After each day of use, place cloth rags in a closed, foot-operated receptacle until laundered.
- Reusable rags should be cleaned and sanitized before and after each day of use.
- Sponges are not recommended because they retain organic material that promotes bacterial growth.
- Mops should be assumed to be contaminated because they are used to remove contamination from floors and other soiled surfaces. Be sure they are cleaned and sanitized before and after a day of use.

~ Bleach solution that is used for sanitizing the child care and school environment (see “Routine Cleaning, Sanitizing, and Disinfecting of Contaminated Surfaces” on page 20) can be used for sanitizing mops and rags. Detachable mop heads and reusable rags may be cleaned in a washing machine without other types of articles in the same load, and dried in a mechanical dryer or hung to dry.

### Waste Receptacles

Waste receptacles in toilet rooms should be kept clean, lined with plastic bags, in good repair, and emptied daily. Those that receive materials that are contaminated with body fluids should be of the hands-free type, such as a foot-operated receptacle. All other waste receptacles should be kept clean and emptied daily. This practice prevents the spread of disease.

### Toys

- All toys can spread disease. Toys become contaminated when children touch them or put them into their mouths. If other children play with or mouth the toy, those children can get the germs on their hands and mucous membranes.
- Toys that cannot be washed and, if needed, sanitized should not be used.
- Mouthed toys or toys contaminated by body secretions or excretions should be removed from the play area until they are washed with water and detergent, rinsed, sanitized, and air-dried.
- Machine-washable cloth toys should be used only by one child until these toys are laundered.
- Indoor toys should not be shared between groups of infants or toddlers unless they are washed/sanitized before being moved from one group to another.
- Small, hard-surfaced toys can be cleaned in a dish pan labeled “soiled toys,” containing soapy water to remove soil, or a dry container can be used to bring the soiled toys to a toy cleaning area later in the day. A dishwasher that can sanitize dishes can be used to clean and sanitize hard-surfaced toys.
- Have more than one set of toys on hand so that one set can be used while the other is cleaned.

### Mouthed Objects

Thermometers, teething toys, and similar objects should be cleaned, and reusable parts should be sanitized between uses. Pacifiers should be cleaned, and not shared. Pacifiers should never be placed in a caregiver’s mouth.



### **Bedding, Personal Clothing, and Cribs**

Sleep equipment should be used only by one child and cleaned and sanitized before use by another child. Equipment used by one child should be stored separately from that used by others.

- Cribs and crib mattresses should have a nonporous, easy-to-wipe surface.
- Bedding (eg, sheets, pillows, blankets, sleeping bags) should be washable.
- Lice infestation, scabies, and ringworm are among the most common contagious diseases in child care and school settings. Although no evidence exists to show that lice are transmitted except by head-to-head contact, some skin diseases have been shown to spread if bedding materials, jackets with hoods, and hats used by various children are stored so that they touch each other.

### **Potty Chairs and Toilets**

- Potty chair use is not recommended and should be discouraged. Toilets adapted for use by children are preferable.
- If potty chairs are used, they should be
  - ~ Made with a surface that is easily cleaned and sanitized
  - ~ Used only in a bathroom area
  - ~ Used over a surface that will not be damaged by moisture
  - ~ Out of reach of toilets or other potty chairs
  - ~ Emptied into a toilet, then cleaned in a sink that is used only for cleaning and sanitizing potty chairs
- Toilets should be kept visibly clean and separate from the children's activity area.

### **Staff Training**

Provide training for staff who are responsible for cleaning, including the following:

- How to handle, mix, and store cleaning solutions. (See "Sanitation, Disinfection, and Maintenance" on page 20.)
- Proper use of protective barriers (eg, gloves).
- Proper handling and disposal of contaminated materials, such as soiled diapers or bandages that are contaminated with blood or body fluids.
- Information required by the US Occupational Safety and Health Administration about the use of any chemical agents. Even if custodial services are provided under a contract with an outside service organization, be sure that an assigned staff member supervises routine cleaning of the facility according to the facility's schedule. Be sure that the staff have read the Material Safety Data Sheet for any products they use.

### **Hand Hygiene**

Because many infected people carry communicable diseases without having symptoms and are contagious before they experience symptoms, caregivers/teachers need to protect themselves and the children they serve by carrying out hygienic procedures on a routine basis.

### **Why Is Hand Hygiene Important?**

Hand hygiene is the most effective means of reducing germs and infections in group care settings. Studies have shown that unwashed or improperly washed hands are primary carriers of infections. Lack of hand washing and poor hand-washing techniques have contributed to many outbreaks of diarrhea among children and staff in group care settings. Conversely, adherence to good hand-washing techniques has consistently demonstrated a reduction in disease transmission in child care and school settings. While working with children, caregivers/teachers should not wear elaborate jewelry or long or artificial nails, because these interfere with effective hand washing. Using hand lotion after hand washing to prevent chapping and cracking of skin also is important.

Although alcohol-based hand rubs have come into common use in hospitals and other health care settings, hand washing is still the preferred method of hand hygiene in educational settings. Alcohol-based hand rubs should only be used when there is no visible soil, and when soap and water washing is not practical. Proper use of alcohol-based hand rubs requires that the product contain at least 60% alcohol and that the amount of product applied to the skin be sufficient to keep the hands wet with the solution for the length of time specified on the manufacturer's label, generally 15 seconds. This is not less time than it takes to wash hands with soap and water. While the alcohol-based hand rubs are convenient carry-along products, they are expensive, toxic, and flammable. If they are used, precautions to handle these risks are required. Instructions for the use of these products are included in "Hand Hygiene" on page 25.

Hand washing is best; use hand rubs only when there is no visible soil, and soap and water washing is not practical.

### **Diaper Changing**

See "Diaper Changing" on page 27 for sanitary procedures.



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authority to contribute to transmission of the illness at the facility. These conditions that do not require exclusion include:

- a) Presence of bacteria or viruses in urine or feces in the absence of illness symptoms, like diarrhea. Exceptions include children infected with highly contagious organisms capable of causing serious illness such as *E. coli* 0157:H7, *Shigella*, or *Salmonella typhi*. Children with *E. coli* 0157:H7 or *Shigella* shall be excluded from child care until two stool cultures are negative and they are cleared to return by local health department officials. Children with *Salmonella typhi* shall be excluded from child care until three stool cultures are negative and they are cleared to return by local health department officials;
- b) Nonpurulent conjunctivitis, defined as pink conjunctiva with a clear, watery eye discharge and without fever, eye pain, or eyelid redness;
- c) Rash without fever and without behavior changes;
- d) CMV infection, as described in STANDARD 6.021 and STANDARD 6.022;
- e) Hepatitis B virus carrier state, provided that children who carry HBV chronically have no behavioral or medical risk factors, such as unusually aggressive behavior (biting, frequent scratching), generalized dermatitis, or bleeding problems;
- f) HIV infection, provided that the health, neurologic development, behavior, and immune status of an HIV-infected child are appropriate as determined on a case-by-case basis by qualified health professionals, including the child's health care provider, who are able to evaluate whether the child will receive optimal care in the specific facility being considered and whether that child poses a potential threat to others;
- g) Parvovirus B19 infection in a person with a normal immune system.

**RATIONALE:** Excluding children with many mild infectious diseases is likely to have only a minor impact on the incidence of infection among other children in the group and the staff (32). Thus, when formulating exclusion policies, it is reasonable to focus on the needs and behavior of the ill child and the ability of staff in the out-of-home child care setting to meet those needs without compromising the care of other children in the group (32).

**COMMENTS:** The lay term pink eye is used interchangeably to describe purulent and nonpurulent conjunctivitis. The infectious characteristics of purulent and nonpurulent conjunctivitis, however, are quite different. For more information on the difference between purulent and nonpurulent conjunctivitis, see STANDARD 3.068, on conjunctivitis.

For additional information on child inclusion, exclusion, and dismissal, see STANDARD 6.003 on exclusion during antibiotic treatment of *Haemophilus influenzae* type b (Hib); STANDARD 6.008, on exclusion during antibiotic treatment of meningococcal infection; STANDARD 6.011, on exclusion during antibiotic treatment of pertussis; STANDARD 6.034 on excluding children with an immune system that does not function properly to prevent infection.

**TYPE OF FACILITY:** Center; Large Family Child Care Home; Small Family Child Care Home

### STANDARD 3.069 STAFF EXCLUSION FOR ILLNESS

Please note that if a staff member has no contact with the children, or with anything with which the children come into contact, this standard does not apply to that staff member.

A facility shall not deny admission to or send home a staff member or substitute with illness unless one or more of the following conditions exists (65). The staff member shall be excluded as follows:

- a) Chickenpox, until all lesions have dried and crusted, which usually occurs by 6 days;
- b) Shingles, only if the lesions cannot be covered by clothing or a dressing until the lesions have crusted;
- c) Rash with fever or joint pain, until diagnosed not to be measles or rubella;
- d) Measles, until 4 days after onset of the rash (if the staff member or substitute is immunocompetent);
- e) Rubella, until 6 days after onset of rash;
- f) Diarrheal illness, three or more episodes of diarrhea during the previous 24 hours or





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- blood in stools, until diarrhea resolves; if *E.coli* 0157:H7 or *Shigella* is isolated, until diarrhea resolves and two stool cultures are negative;
- g) Vomiting illness, two or more episodes of vomiting during the previous 24 hours, until vomiting resolves or is determined to result from noncommunicable conditions such as pregnancy or a digestive disorder;
  - h) Hepatitis A virus, until 1 week after onset or as directed by the health department when immunoglobulin has been given to appropriate children and staff in the facility;
  - i) Pertussis, until after 5 days of appropriate antibiotic therapy (which is to be given for a total of 14 days) and until disease preventive measures, including preventive antibiotics and vaccines for children and staff who have been in contact with children infected with pertussis, have been implemented;
  - j) Skin infection (such as impetigo), until 24 hours after treatment has been initiated;
  - k) Tuberculosis, until noninfectious and cleared by a health department official;
  - l) Strep throat or other streptococcal infection, until 24 hours after initial antibiotic treatment and end of fever;
  - m) Head lice, from the end of the day of discovery until after the first treatment;
  - n) Scabies, until after treatment has been completed;
  - o) Purulent conjunctivitis, defined as pink or red conjunctiva with white or yellow eye discharge, often with matted eyelids after sleep, and including eye pain or redness of the eyelids or skin surrounding the eye, until 24 hours after treatment has been initiated;
  - p) *Haemophilus influenzae* type b (Hib), prophylaxis, until antibiotic treatment has been initiated;
  - q) Meningococcal infection, until all staff members, for whom antibiotic prophylaxis has been recommended, have been treated. See STANDARD 6.006 through STANDARD 6.008;
  - r) Respiratory illness, if the illness limits the staff member's ability to provide an acceptable level of child care and compromises the health and safety of the children.

Child care providers who have herpes cold sores shall not be excluded from the child care facility, but shall:

- 1) Cover and not touch their lesions;

- 2) Carefully observe handwashing policies;
- 3) Refrain from kissing or nuzzling infants or children, especially children with dermatitis.

**RATIONALE:** Adults are as capable of spreading infectious disease as children are. See also the Rationale for Child Inclusion/Exclusion/Dismissal, STANDARD 3.065.

**COMMENTS:** Other management procedures should be followed as stated in Child Inclusion/Exclusion/Dismissal, STANDARD 3.065. For additional information on infectious disease, see STANDARD 6.001 through STANDARD 6.039.

**TYPE OF FACILITY:** Center; Large Family Child Care Home; Small Family Child Care Home

## CARING FOR ILL CHILDREN

### STANDARD 3.070 SPACE REQUIREMENTS FOR CARE OF ILL CHILDREN

Environmental space utilized for the care of children who are ill with infectious diseases and cannot receive care in their usual child care group shall meet all requirements for well children and include the following additional requirements:

- a) If the program for ill children is in the same facility as the well-child program, well children shall not use or share furniture, fixtures, equipment, or supplies designated for use with ill children unless it has been cleaned and sanitized before use by well children;
- b) Indoor space that the facility uses for ill children, including hallways, bathrooms, and kitchens, shall be separate from indoor space used with well children; this reduces the likelihood of mixing supplies, toys, and equipment. The facility may use a single kitchen for ill and well children if the kitchen is staffed by a cook who has no child care responsibilities other than food preparation and who does not handle soiled dishes and utensils until after food preparation and food service are completed for any meal;





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#### STANDARD 2.061 HEALTH EDUCATION TOPICS

Health education for children and staff shall include physical, oral, mental/emotional, nutritional, and social health and shall be integrated daily in the program of activities, to include such topics as:

- a) Body awareness;
- b) Families (including cultural heritage);
- c) Personal/social skills;
- d) Expression of feelings;
- e) Self-esteem;
- f) Nutrition;
- g) Personal hygiene;
- h) Safety (such as home, vehicular care seats and belts, playground, bicycle, fire, and firearms);
- i) Conflict management and violence prevention;
- j) First aid;
- k) Physical health;
- l) Handwashing;
- m) Awareness of special needs;
- n) Importance of rest and sleep;
- o) Fitness;
- p) Oral health;
- q) Health risks of secondhand smoke;
- r) Taking medications;
- s) Dialing 911 for emergencies.

**RATIONALE:** For young children, health and education are inseparable. Children learn about health and safety by experiencing risk taking and risk control, fostered by adults who are involved with them. Whenever opportunities for learning arise; facilities should integrate education to promote healthy behaviors. Health education should be seen not as a structured curriculum, but as a daily component of the planned program that is part of child development. Certified health education specialists are a good resource for this instruction. The American Association for Health Education (AAHE), the National Commission for Health Education Credentialing, Inc. (NCCHEC), and the State and Territorial Injury Prevention Directors' Association (STIPDA) provide information on this specialty. Contact information for the AAHE, NCCHEC, and STIPDA is located in Appendix BB.

**TYPE OF FACILITY:** Center; Large Family Child Care Home; Small Family Child Care Home

#### STANDARD 2.062 GENDER AND SEXUALITY

The facility shall prepare caregivers to appropriately discuss with the children anatomical facts related to gender identity and sexuality differences.

**RATIONALE:** Open discussions among adults concerning childhood sexuality increase their comfort with the subject. The adults' comfort may reduce children's anxiety about sexuality.

**COMMENTS:** Developing a common approach to matters involving young children, sexuality and gender identity is not always easy because the views of facility administrators, caregivers, parents, and community leaders do not always coincide (53).

**TYPE OF FACILITY:** Center; Large Family Child Care Home; Small Family Child Care Home

#### STANDARD 2.063 STAFF MODELING OF HEALTHY BEHAVIOR

The facility shall require all staff members to model healthy behaviors and attitudes in their contact with children in the facility, including eating nutritious foods, complying with no tobacco use policies, and handwashing protocols.

**RATIONALE:** Modeling is an effective way of confirming that a behavior is one to be imitated.

**COMMENTS:** Modeling healthy behavior and attitudes can be specified in the plan as compliance with no tobacco use policies, handwashing protocols, and so forth.

See Policy on Smoking, Tobacco Use, Prohibited Substances, and Firearms, STANDARD 8.038 and STANDARD 8.039. See also Hygiene, STANDARD 3.012 through STANDARD 3.019, on handwashing protocols.

**TYPE OF FACILITY:** Center; Large Family Child Care Home; Small Family Child Care Home



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of futons and ensure that bedding is not shared, thereby reducing transmission of infectious diseases and keeping children out of traffic areas.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

#### STANDARD 5.148 BUNK BEDS

Children younger than 6 years of age shall not use the upper levels of double-deck beds (or “bunk beds”). Bunk beds must conform to the U.S. Consumer Product Safety Commission (CPSC) Facts Document #071, Bunk Beds and the American Society for Testing and Materials (ASTM) F1427-96 Standard Consumer Safety Specification for Bunk Beds.

RATIONALE: Falls and entrapment between mattress and guardrails, bed structure and wall, or between slats from bunk beds are a well-documented cause of injury in young children.

COMMENTS: Consult the CPSC, the manufacturer's label, or the consumer safety information provided by the American Furniture Manufacturer's Association (AFMA) for advice. Contact information for the CPSC, the ASTM, and the AFMA is located in Appendix BB.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

#### AREAS FOR SPECIAL THERAPIES AND INJURED OR ILL CHILDREN

#### STANDARD 5.149 SPACE FOR ILL CHILD

Each facility shall have a separate room or designated area within a room for the temporary or ongoing care of a child who needs to be separated from the group because of injury or illness. This room or area shall be located so the child may be supervised. Toilet and lavatory

facilities shall be readily accessible. If the child under care is suspected of having a communicable disease, all equipment the child uses shall be cleaned and sanitized after use. This room or area may be used for other purposes when it is not needed for the separation and care of a child or if the uses do not conflict.

RATIONALE: Children who are injured or ill may need to be separated from other children to provide for rest and to minimize the spread of potential infectious disease. Toilet and lavatory facilities must be readily available to permit frequent handwashing and provide rapid access in the event of vomiting or diarrhea to avoid contaminating the environment. Handwashing sinks should be stationed in each room not only to provide the opportunity to maintain cleanliness but also to permit the caregiver to maintain continuous supervision of the other children in care.

COMMENTS: Separate rooms need not be used for mild illness since children may consider isolation as a form of punishment. For additional information on caring for injured or ill children, see STANDARD 3.072 through STANDARD 3.080; and STANDARD 8.011 and STANDARD 8.012. See STANDARD 3.066, for situations that require separation or isolation.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

#### STANDARD 5.150 SPACE FOR THERAPY SERVICES

In addition to accessible classrooms, in facilities where some but fewer than 15 children need occupational or physical therapy and some but fewer than 20 children need individual speech therapy, centers shall provide a quiet, private, accessible area within the child care facility for therapy. No other activities shall take place in this area at the time therapy is being provided.

Family child care homes and facilities integrating children who need therapy services shall receive these services in a space that is separate and private during the time the child is receiving therapy.

