

Excluding Sick Children



A 2010 outbreak of E. coli infected 60% of children and staff at a Colorado child-care center. Health authorities insisted on a strict policy of excluding sick individuals, which reduced the spread of disease.

Public Health Reasons

Children who attend child-care centers are twice as likely to experience gastrointestinal illnesses as those who do not. Therefore, the likelihood of an outbreak occurring increases in a child-care setting. When several individuals become sick, steps must be taken to control the spread of disease, otherwise the situation can quickly turn into an outbreak.

Children are particularly vulnerable to the rapid spread of infectious diseases, including gastrointestinal illnesses, for several reasons. Very young children and infants (younger than 12 months old) have a natural curiosity that leads to handling objects and surfaces frequently and a tendency to put their hands and objects in their mouths. This natural behavior increases their exposure to potential sources of illness. Also, children's immune systems are still developing and because they are smaller than adults, they often have more pronounced reactions to infections. Finally, children are more likely to suffer severe consequences from diseases that cause vomiting or diarrhea because they have smaller body fluid reserves than adults.

Transmission of pathogens can happen in a number of ways. Vomiting episodes produce droplets containing pathogens that may be aerosolized then inhaled and swallowed by others. The droplets produced from vomit as well as diarrhea can settle onto nearby surfaces, which can then infect people who come in contact with the contaminated surface. Also, children who have experienced diarrhea or vomiting may spread pathogens with their contaminated hands or clothing by coming in direct contact with other people. To avoid the spread of pathogens, it is important to exclude sick children from child-care centers.

Although most centers agree on the need to exclude seriously ill children from group programs, policies for the exclusion and return of mildly ill children are controversial and vary considerably. Exclusion policies create conflicts:

- for parents who have a continuing need for childcare even when their child has a mild infectious illness; and
- for child-care centers, who have a responsibility to provide optimal care for all children in the group and limit the transmission of infectious agents; and
- for both parents and child-care providers, who have responsibility for the well-being of the ill child.

Policies that are too lenient may place both ill and healthy children at risk. Whereas, policies that are overly stringent may incur high social, economic, and medical costs. Bell et al. reported that 40% of parental absenteeism from the workplace is attributable to the illness of a child. Moreover, centers that require examination by a physician before an ill child can return increase both parental expenditures and use of healthcare resources.

The American Academy of Pediatrics, the American Public Health Association, and the Federal Bureau of Maternal and Child Health have collaborated to develop health and safety standards for child-care centers, including criteria for the exclusion and return of sick children. They recommend that most children with mild illness should *not* be excluded from the regular child-care program *except* in the presence of one or more of the following conditions:

- the illness prevents the child's comfortable participation in group activities
- the illness necessitates more care than the center can provide
- other children are likely to become ill because of a significant risk of transmission
- the child has signs or symptoms suggesting a more serious illness that requires medical attention

Practices

Procedures For When A Child Is Sick

- When a child vomits, has diarrhea, or complains of nausea, separate the child from well children. It is best to move her to a separate room, but if this is not an option, keep her 30 feet away from the others.
- Have someone who knows the child well care for the child in a place where she will be comfortable. Have this child-care provider continue to monitor the child for new or worsening symptoms.
- Contact the family to pick up the child as soon as possible.
- Talk to the family member who picks up the ill child about any observations of symptoms and what is required for the child to return to childcare.
- Ask the family to relay the observations made by the program staff to the child's healthcare provider and the information from the healthcare provider to the child-care staff. The healthcare provider's information does not need to be in written form unless a medical visit is deemed necessary by the healthcare provider or the program staff requires clarification directly from the healthcare provider. Telephone advice and electronic transmissions of instructions are acceptable without an office visit.
- Contact the local health department if there is a question about a notifiable communicable disease. If there are conflicting opinions from different healthcare providers about the management of a child with a notifiable communicable disease, the health department has the legal authority to make a final determination. (For a list of nationally mandated notifiable diseases visit the Centers for Disease Control and Prevention website at: http://www.cdc.gov/osels/ph_surveillance/nndss/phs/infdis.htm)
- Document details in the child's file noting the date, time, symptoms, actions taken, and care giver's name with signature.
- Disinfect toys and other items the child may have contaminated by mouthing or handling and continue to practice good handwashing techniques (see "Cleaning and Disinfecting High-Touch Surfaces" and "Hand Hygiene for Care Providers" fact sheets).

When To Exclude A Child

Exclude children if they have the following symptoms or have been diagnosed with any of the following illnesses:

Symptoms

- Persistent abdominal pain (continuing for two or more hours) or intermittent abdominal pain accompanied by fever, dehydration or other systemic symptoms
- Fever accompanied by behavior changes or other signs and symptoms that are suggestive of a severe illness

Excluding Sick Children

- For infants less than 4 months of age, a rectal temperature 101.0°F (38.3°C) or greater
- For infants and children older than 4 months of age
 - Rectal temperature 102.0°F (38.8°C) or greater
 - Axillary (under the arm) temperature 100.0°F (37.7°C) or greater
 - Oral temperature 101.0°F (38.3°C) or greater
- Vomiting two or more times during a 24 hour period
- Diarrhea (three or more loose stools in a 24 hour period)
- Jaundice
- Sore throat with a fever

Diagnosed Illnesses

- Norovirus
- Rotavirus
- Hepatitis A virus
- *Shigella* spp.
- Enterohemorrhagic or shiga toxin-producing *Escherichia coli*
- *Salmonella* Typhi and other *Salmonella* spp.
- *Campylobacter* spp.
- *Giardia lamblia*

When a Child Can Return to the Center

Diarrhea

- Children can return to the child-care center after diarrhea has stopped or after a doctor clears the child to return.
- Children having diarrhea with blood or mucus *must* have a medical note to return to the child-care center.

Vomiting

- A child who has vomited two or more times in 24 hours should not return until the vomiting stops unless she is known not to be contagious.

Infections

For the following infections, children can return with the resolution of the listed symptoms *and* a medical note.

- *Campylobacter* – After diarrhea stops
- Norovirus – After diarrhea and vomiting stops
- Rotavirus – After diarrhea stops
- *Shigella* – After diarrhea stops *and* after five days of antibiotics or a negative lab test
- *Salmonella* spp. – After diarrhea stops

- *Salmonella* Typhi
 - Children under 5 years of age: Exclude until diarrhea stops and three stool cultures are negative for *Salmonella* Typhi
- Children 5 years of age and older: Exclude until 24 hours without diarrhea
- *Escherichia coli* – After diarrhea stops
- *E. coli* O157:H7 –After diarrhea stops *and* two lab tests taken 24 hours apart are negative
- *Giardia* – After diarrhea stops or the child has taken antibiotics for at least 24 hours
- Hepatitis A virus – One week after onset of illness or jaundice if symptoms are mild

References

1. American Academy of Pediatrics, American Public Health Association, & National Resource Center for Health and Safety in Child Care and Early Education. 2011. *Caring for our children: National health and safety performance standards; Guidelines for early care and education programs*. 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics; Washington, D.C.; American Public Health Association.
2. American Public Health Association & American Academy of Pediatrics. 1992. *Caring for our children. National Health and Safety Performance Standards: guidelines for out-of-home child care programs*. Washington, D.C.; American Public Health Association 65–114.
3. Aronson, A. S., & Shope, T. R. eds. 2008. *Managing infectious diseases in childcare and schools: a quick reference guide*. 2nd Edition. Elk Grove Village, IL: American Academy of Pediatrics.
4. Bell, D. M., Gleiber, D. W., Mercer, A. A., Phifer, R., Guinter, R. H., Cohen, A. J., Epstein, E. U., and Narayanan, M. 1989. Illness associated with child day care: a study of incidence and cost. *American Journal of Public Health* 79:479–84.
5. Brown, J. A, Hite, D. S., Gillim-Ross, L.A., Maguire, H. F., Bennett, J. K., Patterson, J. J., Comstock, N. A., Watkins, A. K., Ghosh, T. S., & Vogt, R. L. 2011. Outbreak of shiga toxin-producing *Escherichia coli* serotype O26: H11 infection at a child care center. *Pediatric Infectious Disease Journal* 4:384-388.
6. Bureau of Disease Control. 2011. Childcare exclusion list: official list of conditions requiring exclusion from out-of-home childcare settings for 2011-2012, with guidance section. South Carolina Department of Health and Environmental Control. http://www.hammondschool.org/uploaded/pdf/health_forms/2011-2012_Childcare_Exclusion_List.pdf (accessed October 2, 2012).
7. Byun, R., Sheppeard, V., & Bull, R. 2010. Bug breakfast in the bulletin: Gastroenteritis outbreaks in institutions. *NSW Public Health Bulletin* 21 (12): 267-268.
8. Centers for Disease Control and Prevention (CDC). 2012. National Center for Health Statistics. <http://www.cdc.gov/nchs/> (accessed October 30, 2012).
9. Cordell, R. L., MacDonald, J. K., Solomon, S. L., Jackson, L. A., & Boase, J. 1997. Illnesses and absence due to illness among children attending child care facilities in Seattle-Kings County, Washington. *Pediatrics* 100:850–5.
10. Kahan, E., Gross, S., & Cohen, H. A. 2005. Exclusion of ill children from child-care centers in Israel. *Patient Education and Counseling* 56:93-97.
11. Huskins, W. C. 2000. Transmission and control of infections in out-of-home child care. *Journal of Pediatric Infectious Disease* 19 (10): S101-110.
12. Landis, S. E., Earp, J. A. L., & Sharp, M. 1988. Day-care center exclusion of sick children: comparison of opinions of day-care staff, working mothers, and pediatricians. *Pediatrics* 81 (5): 662-667.
13. Louhiala, P. J., Jaakkola, N., Ruotsalainen, R., & Jaakkola, J. J. 1997. Day-care centers and diarrhea: A public health perspectives. *Journal of Pediatrics* 131:476–9.
14. Robinson, J. 2001. Infectious diseases in school and child care facilities. *Pediatrics in Review* 22:39–45.
15. Wald, E. R., Guerra, N., & Byers, C. 1991. Frequency severity of infections in day care: Three-year follow-up. *Journal of Pediatrics* 118:509–14.

Authors and Acknowledgements

AUTHORS: Cortney Miller, MS, Angela Fraser, PhD, Roman Sturgis, MFA (editor), Xi Chen, MS, Anna Saunders. Department of Food, Nutrition, and Packaging Sciences, Clemson University, Clemson, SC 29634

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