

Diseases at School

Infectious diseases account for millions of school days lost each year for kindergarten through 12th-grade public school students in the United States:

- 40% of children aged 5–17 years missed 3 or more school days in the past year because of illness or injury.¹
- Nearly 22 million school days are lost each year due to colds alone.²
- 38 million school days are lost each year due to the influenza virus.²

Schools inherently foster the transmission of infections from person to person because they are a group setting in which people are in close contact and share supplies and equipment. But, schools also can be instrumental in keeping their communities healthy by:

- Encouraging sick students and staff to stay home and seek medical attention for severe illness.
- Facilitating hand hygiene by supplying soap and paper towels and teaching good hand hygiene practices.
- Being vigilant about cleaning and disinfecting classroom materials and surfaces.
- Providing messages in daily announcements about preventing infectious disease.
- Adopting healthy practices such as safe handling of food and use of standard precautions when handling body fluids and excretions.
- Encouraging students and staff to get annual influenza vaccinations.

Important Infectious Diseases

Foodborne Illness



Foodborne illness is caused by consuming contaminated foods or beverages. Many different disease-causing microbes, or pathogens, can contaminate foods, leading to many different foodborne illnesses.³ Educating students, families, and school staff on simple but effective food safety measures can help prevent the approximately 76 million cases of foodborne illness reported in the United States annually, which result in an average of 325,000 hospitalizations and 5,000 deaths.⁴

Food safety remains a concern in schools, as children can come into contact with contaminated foods on school property.

Noroviruses are a major cause of foodborne illness, and outbreaks occur in a range of settings, including schools. CDC's [Updated Norovirus Outbreak Management and Disease Prevention Guidelines](#) provide information on prevention and control.

Influenza

On average, each year 5%–20% of the U.S. population acquires seasonal influenza (flu), more than 200,000 people are hospitalized as a result of flu complications, and about 36,000 people die from flu. Young children are among the populations at greatest risk for serious flu complications.⁵ During the 2004–2005 influenza season, only 34.8% of children aged 2–17 years with high-risk conditions received an influenza vaccination.⁶

Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza. Sometimes a person can become infected by touching something — such as a surface or object — with flu viruses on it and then touching their mouth or nose. The best ways to prevent seasonal flu is to get a seasonal flu vaccination each year and follow proper respiratory and hand hygiene etiquette.

- [Seasonal Flu Information for Schools & Childcare Providers](#)
- [School Planning](#) (Flu.gov)

MRSA (Methicillin-Resistant *Staphylococcus aureus*)



[MRSA](#) is methicillin-resistant *Staphylococcus aureus*, a type of staph bacteria that is resistant to certain antibiotics and may cause skin and other infections. Invasive (i.e., serious) MRSA infections occur in approximately 94,000 people each year and are associated with approximately 19,000 deaths, most frequently among persons in hospitals and health care facilities who have weakened immune systems.^{7,8} MRSA can also infect otherwise healthy people in the community at large. Community-associated MRSA cases are usually manifested as skin infections, such as pimples and boils.⁸

- [Information and Advice about MRSA for School Officials](#)

Preventing Transmission of Infectious Diseases

Hand Hygiene

Keeping hands clean is one of the best ways to keep from getting sick and spreading illnesses. Practicing good hand hygiene gets rid of bacteria and viruses from contact with other people or surfaces.¹⁰



Schools play a key role in supporting hand hygiene. This involves teaching good hand-hygiene practices, providing hand-hygiene information to students and families, and providing the hand soap and paper towels necessary to reduce the spread of infectious diseases in the school environment.

- [Clean Hands Save Lives](#)
- [Handwashing and Nail Hygiene](#)

Respiratory Etiquette

Respiratory infections can spread from person to person in respiratory droplets of coughs and sneezes. Droplets from a cough or sneeze of an infected person can be propelled through the air and land on the mouth or nose of people nearby.

To prevent the spread of respiratory illnesses, the nose and mouth should be covered with a tissue when coughing or sneezing and the tissue should be thrown in the trash immediately after use. Schools can teach respiratory etiquette to students and staff — including coughing or sneezing into the arm if no tissue is available — and can ensure that tissues are available.

- [Cover Your Cough](#)

Data and Statistics

School Health Policies and Programs Study (SHPPS)

[SHPPS](#) is a national survey periodically conducted to assess school health policies and programs at the state, district, school, and classroom levels, including those related to infectious diseases.

According to SHPPS 2006 data on infectious disease policies and practices

- 76.0% of states either provided funding for or offered staff development for school nurses on infectious disease prevention (e.g., hand hygiene or food safety).
- 68.0% of states and 65.3% of districts provided funding for or offered staff development on infectious disease prevention (e.g., hand hygiene or food safety).
- 69.4% of states provided model policies for schools on preventing infectious disease.
- 74.8% of schools reviewed student health records to identify possible outbreaks, an increase from 61.9% in 2000.
- 34.7% of states established a policy requiring the availability of supplies for applying standard or universal precautions as needed at outdoor play and sporting areas and indoor gyms.
- 77.0% of schools kept supplies available in all classrooms to apply standard precautions.

Related SHPPS Fact Sheets

- [Crisis Preparedness and Response](#)  [pdf 213K]
- [Food Safety](#)  [pdf 189K]
- [Health Services](#)  [pdf 199K]

References

1. CDC. [Summary Health Statistics for U.S. Children: National Health Interview Survey, 2007.](#)  [pdf 2.0M]
2. CDC. [Vital Health and Statistics. Current Estimates from the National Health Interview Survey, 1996.](#)  [pdf 3.2M]
3. CDC. [Foodborne Illness Q&A.](#) Atlanta, GA: CDC; 2011
4. Mead PS, Slutsker L, Dietz V, McCaig LF, Bresee JS, Shapiro C., et al. Food related illness and death in the United States. *Emerging Infectious Diseases* 1999;5(5):607–625.
5. CDC. [Seasonal Flu: Key Facts about Seasonal Influenza \(Flu\).](#)
6. CDC. [Estimated Influenza Vaccination coverage Among Adults and Children—United States, September 1, 2004–January 31, 2005.](#) *MMWR* 2005;54(12):304–307.
7. Klevens RM, Morrison MA, Nadle J, Petit S, Gershman K, Ray S., et al. Invasive methicillin-resistant *Staphylococcus aureus* infections in the United States. *JAMA* 2007;298(15):1763–1771.
8. CDC. [Methicillin Resistant *Staphylococcus aureus* Infections.](#)
9. CDC. [An Ounce of Prevention Keeps the Germs Away: Seven Keys to a Safer, Healthier Home.](#)  [pdf 3.0M]