Managing Communicable Diseases in Schools

Prepared by
Michigan Department of Education
and
Michigan Department of Health and Human Services, Bureau of Infectious Disease Prevention

September 2025

Version 9.0

Disease Basics

Schools can play a major role in helping to reduce or prevent the incidence of illness among children and adults in our communities. Encouraging good hand hygiene, following cleaning recommendations, and adhering to the most up-to-date requirements and recommendations contribute to a safe and healthy learning environment for children. When schools report illness to their local health department (LHD), public health specialists can assist schools with disease prevention and control guidance. This document provides schools with general information on what steps they can take to prevent and control communicable disease.

Disease Spread and Prevention

Understanding how infections spread can help prevent illness. The words *contagious*, *communicable* and *infectious* all describe conditions in which a person is infected with a germ that may be passed to another person. The *incubation period* is the time between when a person is exposed to a germ and when it causes symptoms. During the *contagious period*, an infected person may transmit these germs to others.

Common routes of transmission include:

- Fecal-oral: Contact with human stool; usually ingestion after contact with contaminated food or objects.
- Respiratory: Inhaled respiratory particles or droplets from the nose, throat and mouth.
- Direct skin-to-skin contact: Contact with infected skin.
- Indirect contact: Contact with contaminated objects or surfaces.
- Bloodborne: Contact with blood or body fluids.

Respiratory Etiquette

Teach children (and adults) to cough or sneeze into tissues or their sleeve and not onto surfaces, their hands or other people. If children and adults sneeze into their hands, hands should be washed immediately.

Handwashing Procedures

Washing your hands is one of the easiest and best ways to prevent the spread of diseases. Hands should be washed frequently including after using the toilet, contact with bodily fluids (such as nose wiping, changing diapers or handling soiled clothing), touching animals (including classroom pets), before eating and handling food and any time hands are soiled. It is also important that handwashing occurs frequently throughout the day. Establish a process for immediate handwashing or the use of hand sanitizers upon school building entry. Water basins and pre-moistened cleansing wipes are not approved substitutes for soap and running water. Alcohol-based hand sanitizers containing at least 60% alcohol may be used when soap and water are not available, and hands are not visibly soiled. However, sanitizers do not eliminate all types of germs so they should be used to supplement soap and water handwashing.

General handwashing procedures include the following steps:

- Wet hands under warm running water and apply liquid soap. Antibacterial soap is not recommended.
- Vigorously rub hands together for at least 20 seconds to lather all surfaces of the hands. Pay special attention to cleaning between fingers, the tops of hands and under nails.
- Thoroughly rinse hands under warm running water.
- Dry hands using a single-use disposable towel or an air dryer.
- Turn off the faucet with the disposable towel, your wrists or the backs of your hands.

General alcohol-based hand sanitizer procedures include the following steps:

- Use directed amount of sanitizer on the label. Discourage wiping off excess.
- Cover all surfaces of hands, including between fingers and backs of hands.
- Rub hands and fingers together until dry, usually around 20 seconds.

- If sanitizer is being routinely used, encourage the use of lotion to maintain skin hydration and integrity.

For more, see the CDC's website: About Hand Hygiene in Schools and Early Care and Education Settings.

Steps for Cleaner Air

Improving air quality can reduce the number of germs in the air by increasing airflow and/or cleaning the air. Cleaner air can reduce the likelihood of spreading disease, particularly respiratory viruses. For more, see the CDC's Ventilation in Buildings.

Strategies that can be implemented to have cleaner air include:

- Ensuring existing HVAC systems are providing the minimum outdoor air ventilation requirement in accordance with ventilation design codes.
- Considering ventilation design and/or enhancements when remodeling or constructing new buildings.
- Opening windows, if safe, to increase ventilation. Using fans to increase the effectiveness of open windows.
- Using portable air cleaners in spaces with low ventilation.
- Holding some activities outside, such as lunch, certain classes or recess/social periods.
- Keeping bus windows open when it does not create a safety or health hazard.

Bloodborne Exposures

Bloodborne pathogens, such as Hepatitis B virus (HBV), Hepatitis C virus (HCV) and human immunodeficiency virus (HIV), can be found in infected human blood and other body fluids. Bloodborne pathogens can be transmitted when there is direct contact with blood or other potentially infected material. This can include someone else's blood or bodily fluids entering open cuts or blood splashing into mucous membranes (eyes, nose or mouth). All human blood should be treated as if it is infectious. If any bloodborne exposure occurs, contact your LHD to discuss the need for public health or medical follow-up. Carriers of bloodborne pathogens should not be excluded from school. For more information, see the Michigan Department of Education's Bloodborne Pathogens and School Employees website.

When to Exclude from School*

Many illnesses do not require exclusion. However, children may be excluded if the illness prevents the child from participating comfortably in school activities or if there is risk of spreading harmful disease to others. These criteria also apply to when staff should be excluded. Criteria include:

1. **Severely ill**: A child who is lethargic or less responsive, has difficulty breathing, or has rapidly spreading rash.
2. **Fever**: A child with a temperature of 101°F or greater AND behavior changes, or other signs or symptoms (e.g., sore throat, rash, vomiting or diarrhea). The child should not return until there is no fever for 24 hours, without the use of fever-reducing medications. Staff can use their best judgement if the child does not have a fever of 101°F or greater but still appears significantly ill with symptoms such as glassy eyes and lethargy.
3. **Diarrhea**: A child who has two or more loose or watery stools. The child should have no loose stools for 24 hours prior to returning to school. Exception: A health care provider has determined the diarrhea is not due to an infectious condition. Diarrhea may be caused by antibiotics or new foods a child has eaten. Discuss with a parent/guardian to find out if this is the likely cause. For students with diarrhea caused by *Campylobacter*, *E. coli*, *Salmonella* or *Shigella*, please refer to the chart below for exclusions and required clearance criteria.
4. **Vomiting**: A child who has vomited two or more times. The child should have no vomiting episodes for 24 hours prior to returning. Exception: A health care provider has determined the vomiting is not due to an infectious condition.
5. **Abdominal pain**: A child with abdominal pain that continues for more than two hours, or intermittent pain associated with any other signs and symptoms such as fever.

6. **Rash**: A child with a rash AND a fever or a change in behavior. Exclude until the rash subsides or until a health care provider has determined the rash is not infectious. For students with a diagnosed rash, please refer to the chart below for exclusions and required clearance criteria.
   Note: Rapidly spreading bruising or small blood spots under the skin need immediate medical attention.
7. **Skin sores**: A child with weeping sores on an exposed area that cannot be covered with waterproof dressing.
8. **Respiratory symptoms**: A child with worsening or not improving symptoms, and not explained by another cause (e.g., allergies).
9. **Certain communicable diseases**: Children and staff diagnosed with specific communicable diseases may have to be excluded for a certain period of time. **See the chart below for disease-specific exclusion periods.**

*These are general recommendations. Please consult your LHD for additional guidance. Exclusion criteria should be based on written policies that are shared with families during enrollment and when exclusion is necessary. Written exclusion policies promote consistency and reduce confusion. If a child is excluded from school, participation in extracurricular activities should also be excluded when a student has a communicable illness. Anyone with a diarrheal illness (e.g., Norovirus, Salmonellosis, Shigellosis, Shiga-Toxin producing *E. coli*, Giardiasis or Cryptosporidiosis) should not use swimming pools for two weeks after diarrhea has ceased.

Responding to Illness in a School

To better respond to illness in a school, it is important to develop a written plan for staff on how to address illnesses and reduce spread. Prompt action by staff may prevent a serious outbreak of communicable disease. Consider contacting your LHD for guidance on creating a plan. Plans should include identifying resources, such as computers, phone, internet, supplies and restrooms with handwashing facilities that are required in the school health designated space. Within this plan, the following topics should be covered:

Absenteeism Among Staff

- Develop plans to monitor absenteeism and cover classes in the event of increased staff absences.
- Coordinate with the Intermediate School District (ISD) and reach out to substitutes to determine their anticipated availability if regular staff members need to stay home if they or their family members are sick.

Exclusion Criteria

- Require sick students and staff who meet exclusion criteria to stay home.
- Ill students and staff who meet exclusion criteria should be sent home immediately; isolate students if caregivers are not present to immediately take them home.
- Share resources with the school community to help families understand when to keep children home.
- The American Academy of Pediatrics When to Keep Your Child Home guidance can be helpful.

Illness While at School

- Establish or update policies and procedures to ensure students and staff who become sick at school or arrive at school sick, and meet exclusion criteria, are sent home as soon as possible.
- Educators who are familiar with the behavior and appearance of the children can assess each child's health status when the child arrives and periodically throughout the day.
- Recommend that individuals at higher risk for severe illness consult their medical provider to assess their risk and to determine if they should stay home if there is a communicable disease outbreak in the community.
- Unless there is disease-specific guidance that states otherwise, schools are not expected to screen students or staff to identify communicable disease. If a community (or more specifically, a school) has cases of a communicable disease, the LHD will help identify those individuals and will follow up on next steps.

- Michigan Communicable Disease Rules state "Primary schools, secondary schools, preschools, camps, or child daycares **must** report to their local health department the suspected occurrence of any communicable disease [in the reportable disease list], along with any unusual occurrence, outbreak, or epidemic of any disease, infection, or condition, amongst those in attendance.
- Notification to the local health department should include symptoms, number of ill students and staff, affected facilities and closings due to illness".

School Building Isolation

- Keep sick students and staff who meet exclusion criteria separate from others until they can leave.
- Evaluation of the current designated space for school health services and identify space for isolation.
    - Plan to have identified areas where these individuals can be isolated from well students and staff until they can leave the school.
    - Consideration of ventilation such as windows and an outside door to reduce the spread of disease both in general, and for isolated individuals exiting the building.
- If a sick child has been isolated in your facility, clean and disinfect surfaces in your isolation room or area after the sick child has gone home.
    - Close off areas used by the person who is sick.
    - Open outside windows to increase air circulation in the areas.
    - Wait 24 hours or as long as possible before disinfecting to allow respiratory droplets to settle.
    - Clean and disinfect all areas used by the ill person, such as offices, bathrooms and common areas.
- Create a "*When to isolate and send students and staff home*" flow chart (see page 15 for staff and school administrators to follow if the school nurse is not present or is not in the school full time.
- CDC provides guidance on an isolation plan if someone arrives or becomes ill at school. Isolation "separates sick people with a contagious disease from people who are not sick" (CDC, 2017).

Urgent Medical Attention

- Some children may have urgent situations that do not necessarily require emergency medical services (EMS) (911) for ambulance transport but still need medical attention without delay.
- Staff should develop contingency plans for emergencies or disaster situations when it may not be possible to follow standard emergency procedures.
- Situations that require medical attention within an hour include:
    - Any infant or child older than two months who appears severely ill with a temperature above 101 °F (38.3 °C) taken by any method (Note: Rectal temperatures in early childhood education should be taken only by persons with specific health training in performing this procedure and with permission by parents/guardians. Never "correct" for an axillary temperature by adding 0.5° or 1°).
    - Temperature above 100.4 °F (38.0 °C) by any method in an infant younger than two months (eight weeks).
    - A quickly spreading purple or red rash.
    - A rapidly spreading rash that raises concern for a severe allergic reaction.
    - A large volume of blood in stools.
    - A cut or injury where the bleeding cannot be stopped.
    - Any medical condition specifically outlined in a child's care plan that requires immediate action and/or notification of the child's parent/legal guardian.

- The educator may first call the parent/legal guardian. If the parent/ legal guardian is immediately available to take the child to a source of urgent pediatric health care within an hour, they should be instructed to do so; otherwise, EMS (911) should be called to bring the child to a pediatric health professional.
    - When EMS is transporting the child, if possible, a staff member who knows the child should accompany the child until the parent/legal guardian can be present to provide information and reassure the child. Program policies should be clear about how such situations will be handled given local resources.

Personal Protective Equipment

- If not already wearing a face mask, a surgical or cloth mask should be provided to anyone with respiratory symptoms and fever if available, tolerated by the person and developmentally appropriate.
- School staff who are assigned responsibility for caring for sick children or who will be exposed to infectious materials should understand appropriate use and selection of personal protective equipment (PPE).
- PPE may include items such as gloves, safety glasses, masks or respirators and gowns.
- Train unlicensed personnel on the administration of this flow chart, proper temperature taking procedure, and the use of Personal Protective Equipment (PPE), including eye protection, gowns, gloves, and facemasks.
- Guidance intended for health care settings, such as the CDC's Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings, is appropriate for school health staff, for example, school nurses or school-based health center personnel.

Collaboration with the LHD

- Develop and use tracking forms or other data collection tools to track students and staff with symptoms and report to your LHD for follow-up.
- Work closely with the LHD for re-entry procedures when schools have been closed for more than two weeks.
- Refer families of high-risk students to health care providers to determine when re-entry is recommended.

Additional Strategies to Minimize Infectious Disease Transmission

- The CDC's Preventing Spread of Infections in K-12 Schools guide states that when there is a higher level of illness in the school community, schools can add other strategies to their regular activities in addition to increasing everyday actions like hand washing and ventilation.
- Which strategies are added can be based on considerations such as local factors (for example, elevated absenteeism in the area, community preferences) and which pathogen is circulating.
- Additional prevention strategies include:
    - Masking and respiratory protection.
    - Increasing distance and cohorting.
    - Illness monitoring.
    - Testing.
    - Managing exposure.

Cleaning, Sanitizing and Disinfecting

It is important to maintain a sanitary setting to prevent the spread of illnesses. Many items and surfaces in schools must be cleaned and sanitized frequently. To clean and sanitize means to wash vigorously with soap and water, rinse with clean water, and apply sanitizing solution using the manufacturer's instructions on the label. Cleaning is the act of physically removing debris (usually using soap and water). Disinfecting or sanitizing is applying a specific product to reduce germs. Ensure that the disinfectant is wet (i.e., not dried out early) for the duration specified in the instructions. For items that cannot be submerged into solution, spray or wipe with a sanitizing solution. Do not towel

dry. Immediately wash, rinse, and sanitize items or surfaces that have been soiled with discharge such as urine or nasal drainage. Follow the Norovirus Cleaning Guidance when cleaning any vomit or stool incidents to prevent spread of norovirus and other gastrointestinal illnesses.

Examples of sanitizing solutions include:

- Commercial sanitizers used only in accordance with the manufacturer's instructions.
- Some commercial disinfectants should be used with PPE such as gloves to reduce skin absorption. This PPE should be available to staff and staff should be trained in how to use these products.
- A fresh solution of water and non-scented chlorine bleach with a bleach concentration of 50–200 parts per million (one teaspoon to one tablespoon of bleach per gallon of water). Directions should be available on the bottle. More information can be found at the Selected EPA-Registered Disinfectants website.

Any cleaning, sanitizing or disinfecting product must always be safely stored out of reach of children. To avoid fumes that may exacerbate asthma, bleach sanitization with appropriate concentrations should occur before or after school. All sanitizers must be used in a manner consistent with their labeling. Do not mix or combine different sanitizers or disinfectants as this can create toxic fumes or substances. If there are questions about the product, guidance is available from the National Antimicrobial Information Network at 1-800-621-8431 or npic@ace.orst.edu or from the National Pesticide Information Center at 1-800-858-7378. Schools should refer to local policy or other regulations for procedures on disinfecting specific areas (e.g., food services areas, bathrooms).

VACCINATION

Vaccination is the best way to prevent many diseases. Monitor the Michigan Care Improvement Registry (MCIR) to assure that children are up to date on their vaccinations for school and childcare. Assure that staff have also received all recommended vaccines. Visit the MDHHS School and Childcare Immunization Information website for the MDHHS Immunization Division's School and Childcare/Pre-school Immunization Rules.

REPORTING

Michigan Law requires schools and childcare centers to report specific diseases according to Act No. 368 of the Public Acts of 1978, which states that physicians, laboratories, primary and secondary schools, child daycares, and camps are required to report the occurrence or suspected occurrence of any disease, condition or infections as identified in the Michigan Department of Health and Human Services (MDHHS) CD rules to your LHD within 24 hours.
The creation of consistent reporting procedures and measures across all schools within one district or across the state will allow the rapid detection of unusual changes or trends in student health.

It is important for schools to report to their LHD for many reasons, including:

- To identify disease trends, outbreaks and epidemics.
- To enable preventative treatment and/or education.
- To target prevention programs, identify care needs and allocate resources efficiently.
- To inform epidemiological practice and research.
- To evaluate the success of long-term control efforts.
- To assist with local, state, national and international disease surveillance efforts.

Individual Case Reporting

Schools must report to their LHD the suspected occurrence of any communicable disease listed in the reportable disease list, along with any unusual occurrence, outbreak or epidemic of any disease, infection or condition, amongst those in attendance. For a complete list of diseases that are required to be reported, and LHD contact numbers, see

the MDHHS CD Info website Reportable Diseases Lists under Communicable Disease Reporting in Michigan. Because of the risk of **rabies**, animal bites must be reported to your LHD and/or animal control within 24 hours.

Family Educational Rights and Privacy Act (FERPA) allows for the disclosure of personally identifiable information in connection with a health or safety emergency to public health authorities without individual or parent authorization if knowledge of the information is necessary to protect the health or safety of the student or other individuals under § 99.31(a)(10) and § 99.36 of the FERPA regulations.

COVID-19 Reporting

All schools **must** report, at a minimum, weekly aggregate counts of COVID-19 to the LHD (R 325.173 part 9).
In addition, schools must document individual-level, identifiable information on these cases. Should an LHD request identifiable information, the school should be able to provide:

- Student information: full name, DOB, grade, class, street address, name of parent/guardian, phone number.
- The date of first absence and who identified the disease (e.g., health care provider, parent/guardian).

Further, if a school administers antigen testing as a CLIA-certified provider or under a CLIA certificate of waiver, a positive result meets the probable case definition and reporting of these individual results to public health is mandatory. Schools must report these individual results to their local health department within 24 hours.

Aggregate Reporting

Weekly aggregate counts of flu-like illness (or influenza-like illness) are to be reported to the LHD. Influenza-like illness refers to an individual with fever and a cough and/or sore throat without a known cause other than influenza. Vomiting and diarrhea alone are NOT indications of influenza or flu-like illness. Some LHDs may also require weekly aggregate counts of gastrointestinal illness, which is defined as an individual with diarrhea and/or vomiting for at least 24 hours. For weekly reporting, COVID-19 illness refers to an individual reporting a positive COVID-19 test. (Note: An individual who tests COVID-19 positive from a school administered test must be reported individually within 24 hours to the LHD). Other diseases such as strep throat, pink eye and head lice may also need to be reported on a weekly basis. Schools should consult their LHD for reporting requirements and how to submit communicable disease reports.

Requesting Information from Parents

To assist with illness reporting, schools can provide suggestions to parents/guardians about what they should report regarding their child's illness. For example, "Michigan law requires that schools report the possible occurrence of communicable disease to the local health department. To assist in this reporting, please include the illness (if known) and who diagnosed it OR a detailed description of symptoms such as vomiting, diarrhea, fever, rash or sore throat when reporting your child's absence." Information about illness reporting can be provided in packets to parents / guardians at the beginning of the school year. This reminder message can be left on the absentee line voice message.

Immediate Reporting of Serious or Unusual Communicable Disease

In addition to reporting aggregate and individual cases, call your LHD **immediately** to report any of the following serious illnesses: **measles, mumps, rubella, pertussis, *Haemophilus influenzae* Type B, meningitis, encephalitis, hepatitis, tuberculosis or any other serious or unusual communicable disease**.

Immediate Reporting of Outbreaks

All outbreaks of suspected or confirmed communicable diseases should be **immediately** reported to your LHD. An outbreak is defined as any increase of an illness. The LHD can assist in determining if an outbreak is occurring in the school and which control measures should be taken to mitigate transmission. Even in the absence of closing a school,

families should be notified about any outbreak. LHDs can assist with family notification letters. This form may be used to assist in reporting to the LHD.

- An influenza-like illness outbreak is when a school building is experiencing influenza-like illnesses in the school community above a level that would be expected for that time of year. Schools are encouraged to work with their LHD to determine local influenza activity.
- A COVID-19 outbreak is when a school building is experiencing higher levels of COVID-19 illnesses among the school community. Schools are encouraged to work with their LHD to determine local COVID-19 activity.
- A gastrointestinal (GI) illness outbreak is when a school building is experiencing GI illnesses in the school community above a level that would be expected for that time of year. The sudden onset of vomiting and/or diarrhea in several individuals may suggest an outbreak is occurring.

School Closures due to Illness

Most gastrointestinal or respiratory illness outbreaks will not lead to school closure. However, there are instances where closure may be recommended for disinfection or other mitigation actions. Consult your LHD for outbreak-specific recommendations. School closures due to illness should be reported **immediately** to your LHD regardless of whether it is an outbreak of one disease, a closure due to a variety of illnesses or a closure due to staff illnesses.
LHD Information: http://www.malph.org/directory or Local Health Department. Maps (michigan.gov)

Disease-Specific Information and Exclusion Guidelines

No fever = no fever without the use of fever-reducing medication

All diseases in **bold** are to be reported to your local health department

Disease	Mode of Spread	Symptoms	Incubation Period	Contagious Period	Contacts	Exclusions (subject to LHD approval)
Adenovirus	Droplet; contact with respiratory secretions, contaminated surfaces or stool	Fever, cough, runny nose, sore throat, bronchitis, pneumonia, conjunctivitis, vomiting, diarrhea	Respiratory: 2-14 days Intestinal: 3-10 days	Most contagious during the first few days of symptoms; can be shed for weeks	Exclude with first signs of illness; encourage good hand hygiene	Exclude until 24hr with no fever and symptoms improving
Campylobacteriosis‡	Ingesting raw milk, undercooked meat, contaminated food / water; animal contact	Diarrhea (may be bloody), abdominal pain, malaise, fever	Average 2-5 days (range 1-10 days)	Throughout illness (usually 1-2 weeks, but up to 7 weeks without treatment)	Exclude with first signs of illness; encourage good hand hygiene	Exclude until diarrhea has ceased for at least 2 days; additional restrictions may apply
Chickenpox** ‡ **(Varicella)** 	Person-to-person by direct contact, droplet or airborne spread of vesicle fluid or respiratory secretions	Fever, mild respiratory symptoms, body rash of itchy, blister-like lesions, usually concentrated on the face, scalp, trunk	Average 14-16 days (range 10-21 days)	As long as 5 days, but usually 1-2 days before onset of rash and until all lesions have crusted	Exclude contacts lacking documentation of immunity until 21 days after last case onset	Until lesions crusted and no new lesions for 24hr (for non-crusting lesions: until lesions are fading and no new lesions appear)
CMV (Cytomegalovirus)	Exposure to infectious tissues, secretions or excretions	None or "mono-like"	1 month	Virus may be shed for 6 months to 2 years	If pregnant, consult OB; contacts should not be excluded	No exclusion necessary
Common Cold	Person-to-person; droplet or airborne respiratory secretions; contaminated surfaces	Runny or stuffy nose, slight fever, watery eyes	Variable, usually 1-3 days	24hrs before onset to up to 5 days after onset	Encourage cough etiquette and good hand hygiene	Exclude until 24hr with no fever **and** symptoms improving
COVID-19‡ 	Airborne or contact with respiratory secretions; person-to-person or by touching contaminated surfaces	Fever, sore throat, shortness of breath, difficulty breathing, cough, runny nose, congestion, fatigue, vomiting, diarrhea	Average 5 days (Range 2-14 days)	2 days prior to symptom onset and potentially after symptom resolution	Monitor health; test if symptoms develop	Exclude until 24hr with no fever **and** symptoms improving
Croup	Airborne or contact with respiratory secretions	Barking cough, difficulty breathing	Variable based on causative organism	Variable based on causative organism	Encourage cough etiquette and good hand hygiene	Exclude until 24h with no fever **and** symptoms improving
Diarrheal Illness (Unspecified)	Fecal-oral: person-to-person, ingesting contaminated food or liquid, animal contact	Loose stools, nausea, vomiting, abdominal cramps, fever possible	Variable based on causative organism	Variable based on causative organism	Exclude with first signs of illness; encourage good hand hygiene	Exclude until diarrhea has ceased for 24h or until medically cleared

Disease	Mode of Spread	Symptoms	Incubation Period	Contagious Period	Contacts	Exclusions (subject to LHD approval)
E. coli ǂ **(Shiga toxin-producing)**	Fecal-oral: person-to-person, from contaminated food or liquid, animal contact	Abdominal cramps, diarrhea (may be bloody), gas, nausea, fever, or vomiting	Variable, usually 2-10 days	For duration of diarrhea until stool culture is negative	Exclude with first signs of illness; encourage good hand hygiene	Medical clearance required; Exclude until diarrhea has ceased for at least 2 days
Fifth Disease (Erythema infectiosum) (Parvovirus B19)	Person-to-person; Contact with respiratory secretions	Fever, flushed, lacy rash ("slapped cheek")	Variable, usually 4-20 days	Most infectious before 1-2 days prior to onset	If pregnant, consult OB; encourage good hand hygiene; do not share eating utensils	No exclusion if rash is diagnosed as Fifth disease by a health care provider
Giardiasis** ǂ	Person-to-person transmission of cysts from infected feces; contaminated water	Diarrhea, abdominal cramps, bloating, fatigue, weight loss, pale, greasy stools; may be asymptomatic	Average 7-10 days (range 3-25+ days)	During active infection	Encourage good hand hygiene	Exclude until diarrhea has ceased for at least 2 days; may be relapsing; additional restrictions may apply
Hand Foot and Mouth Disease** (Coxsackievirus) (Herpangina)	Contact with respiratory secretions or feces from an infected person	Sudden onset of fever, sore throat, cough, tiny blisters in mouth/throat and on extremities	Average 3-5 days (range 2-14 days)	From 2-3 days before onset and several days after onset; shed in feces for weeks	Exclude with first signs of illness; encourage cough etiquette and good hand hygiene	If secretions from blisters can be contained, no exclusion required
Head lice (Pediculosis)	Head-to-head contact with an infected person and/or their personal items such as clothing or bedding Head Lice Manual	Itching, especially nape of neck and behind ears; scalp can be pink and dry; patches may be rough and flake off	1-2 weeks	Until lice and viable eggs are destroyed, which generally requires 1-2 shampoo treatments and nit combing	Avoid head-to-head contact during play; do not share personal items, such as hats, combs; inspect close contacts frequently	Students with live lice may stay in school until end of day; immediate treatment at home is advised
Hepatitis A** ǂ 	Fecal-oral; person-to-person or via contaminated food or water	Loss of appetite, nausea, fever, jaundice, abdominal discomfort, diarrhea, dark urine, fatigue	Average 25-30 days (range 15-50 days)	2 weeks before onset of symptoms to 1 to 2 weeks after onset	Immediately notify LHD regarding evaluation and treatment of close contacts; encourage good hand hygiene	Exclude until 7 days after jaundice onset and medically cleared; exclude from food handling for 14 days
Herpes simplex I, II (cold sores / fever blisters) (genital herpes)	Infected secretions HSV I – saliva HSV II – sexual	Tingling prior to fluid-filled blister(s) that recur in the same area (mouth, nose, genitals)	2-14 days	As long as lesions are present; may be intermittent shedding while asymptomatic	Encourage hand hygiene and age-appropriate STD prevention; do not share personal items; avoid blister secretions	No exclusion necessary
Impetigo (Impetigo contagiosa)	Direct or indirect contact with lesions and their discharge	Lesions/blisters are generally found on the mouth and nostrils and occasionally near eyes	Variable, usually 4-10 days, but can be as short as 1-3 days	While sores are draining	Encourage good hand hygiene	Cover lesions; can delay treat until day's end; no exclusion if treatment started before next day

Disease	Mode of Spread	Symptoms	Incubation Period	Contagious Period	Contacts	Exclusions (subject to LHD approval)
***Influenza** (influenza-like illness)**	Droplet; contact with respiratory secretions or contaminated surfaces	High fever, fatigue, sore throat, cough, aches, runny nose, headache	1-4 days	1 day prior to onset of symptoms to 1 week or more after onset	Exclude with first signs of illness; encourage cough etiquette and good hand hygiene	Exclude until 24hrs with no fever and cough has subsided
Measles ǂ (Rubeola) (Hard/red measles)**	Contact with nasal or throat secretions; airborne via sneezing and coughing	High fever, runny nose, cough, red, watery eyes, followed by rash on face, then body	Average 10-12 days (range 7-21 days) from exposure to fever onset	4 days before to 4 days after rash onset	Exclude contacts lacking documentation of immunity until 21 days after last onset	Cases: Exclude until 4 days after rash onset
Meningitis ǂ (Aseptic/viral)**	Varies with causative agent: droplet or fecal oral route; may result from another illness	Severe headache, stiff neck or back, vomiting, fever, light intolerance, neurologic symptoms	Varies with causative agent	Varies with causative agent, but generally 2-14 days	Encourage cough etiquette and good hand hygiene	Exclude until medically cleared
Meningitis ǂ (Bacterial)** ***(N. meningitis)*** ***(H. influenzae)*** ***(S. pneumoniae)***	Contact with respiratory secretions; spread by sneezing, coughing, and sharing beverages or utensils	Severe headache, fever, stiff neck or back, vomiting, irritability, light sensitivity, rash, neurologic symptoms;	Average 2-4 days (range 1-10 days)	Generally considered no longer contagious after 24hrs of antibiotic treatment	Immediately notify LHD; encourage good hand hygiene; do not share personal items and eating utensils	Medical clearance required; exclude until 24hrs after antimicrobial treatment
Molloscum contagiosum	Transmitted by skin-to-skin contact and through handling contaminated objects	Smooth, firm, flesh-colored papules (bumps) with an indented center	Usually between 2 and 7 weeks	Unknown but likely as long as lesions persist	Do not share personal items	No exclusion necessary
Mpox virus (MPV) ǂ	Close contact (e.g., skin-to-skin); respiratory secretions or surfaces	Rash (several stages, with scabs), fever, chills, swollen lymph nodes, aches, sore throat	21 days	From onset until the rash has completely healed	Monitor for signs or symptoms and exclude with first signs of illness	Exclude until scabs have fallen off, and a fresh layer of skin has formed (~2-4 weeks)
Mononucleosis	Person-to-person via saliva	Fever, sore throat, fatigue, swollen lymph nodes, enlarged spleen	30-50 days	Prolonged, possibly longer than 1 year	Do not share personal items	Exclude until able to tolerate activity. Exclude from contact sports until recovered
MRSA** (Methicillin-resistant *Staphylococcus aureus)*	Transmitted by skin-to-skin contact and contact with surfaces that have contacted infection site drainage	Possibly fever; lesion may resemble a spider bite (swollen, draining, painful); asymptomatic carriage is possible	Varies	As long as lesions are draining; found in the environment; good hand hygiene is the best way to avoid infection	Encourage good hand hygiene; do not share personal items such as towels, washcloths, clothing, and uniforms	No exclusion if covered and drainage contained; No swim exclusion if covered by waterproof bandage
Mumps ǂ**	Transmitted by respiratory droplets or direct contact with saliva	Salivary gland swelling (usually parotid); chills, fever, headache	Average 16-18 days (range 12-25 days)	7 days prior to and 8 days after parotitis onset	Exclude contacts lacking documentation of immunity until 25 days after last onset	Exclude until 5 days after onset of salivary gland swelling

Disease	Mode of Spread	Symptoms	Incubation Period	Contagious Period	Contacts	Exclusions (subject to LHD approval)
Norovirus* **(viral gastroenteritis)**	Food, water, surfaces contaminated with vomit or feces, person-to-person, aerosolized vomit	Nausea, vomiting, diarrhea, abdominal pain for 12-72hrs; possibly low-grade fever, chills, headache	Average 24-48hrs (range: 12-72hrs)	Usually from onset until 2-3 days after recovery; typically, virus is no longer shed after 10 days	Encourage good hand hygiene with soap and water; contact LHD for environmental cleaning recommendations	Exclude until illness has ceased for at least 2 days; exclude from food handling for 3 days after recovery
Pink Eye (conjunctivitis)	Discharge from eyes, respiratory secretions; from contaminated fingers, shared eye make-up applicators	Bacterial: Often yellow discharge in both eyes Viral: Often one eye with watery/clear discharge and redness Allergic: itchy eyes with watery discharge	Variable but often 1-3 days	During active infection (range: a few days to 2-3 weeks)	Encourage good hand hygiene	Exclude only if herpes simplex conjunctivitis and eye is watering; exclusion also may be necessary if 2 or more children have watery, red eyes; contact LHD
Poliomyelitis ǂ (polio) 	Contact with the feces of an infected person (or less often, from respiratory droplets)	Most asymptomatic; 25%: flu-like symptoms e.g., sore throat, fatigue fever, headache; rarely meningitis or paralysis	Nonparalytic: 3-6 days Paralysis: usually 7-21 days	Most risk 7-10 days before / following onset; possible while virus is excreted; Asymptomatic transmission possible.	Exclude contacts lacking documentation of immunity	At least 14 days from onset and until 2 stool samples taken 7 days apart are negative.
Rash Illness (Unspecified)	Variable depending on causative agent	Skin rash with or without fever	Variable depending on causative agent	Variable depending on causative agent	Variable depending on causative agent	Exclude if fever, change in behavior
Respiratory Illness (Unspecified)	Contact with respiratory secretions	Fever, sore throat, cough, runny nose	Variable but often 1-3 days	Variable depending on causative agent	Promote hand hygiene and cough etiquette	Exclude until fever free for 24hrs
Respiratory Syncytial Virus (RSV)	Droplet; contact with respiratory secretions or contaminated surfaces	Fever, sore throat, cough, wheezing, runny nose, sneezing, fever; may appear in stages; may cause bronchiolitis, pneumonia	Average 4-6 days (range: 2-8 days)	Usually 3-8 days, beginning ~ 1 day before onset; infants and immunocompromised people can spread the virus for 3-4 weeks	Promote hand hygiene and cough etiquette	Exclude until fever free for 24hrs. Note: cough often lasts as long as 3 weeks.
Ringworm (Tinea)	Direct contact with an infected animal, person or contaminated surface	Round patch of red, dry skin with red raised ring; temporary baldness	Usually 4-14 days	As long as lesions are present and fungal spores exist on materials	Inspect skin for infection; do not share personal items; seek veterinary care for pets with signs of skin disease	Can delay treatment until day's end; no exclusion if treatment started before next day; exclude from contact sports, swim until treatment start
Rubella ǂ **(German Measles)** 	Direct contact; contact with respiratory secretions; airborne (e.g., sneeze)	Red, raised rash for ~3 days; possibly fever, headache, fatigue, red eyes	Average 16-18 days (range: 14-21 days)	7 days before to 7 days after rash onset	If pregnant, consult OB; exclude contacts lacking documentation of immunity until 21 days after last onset	Exclude until 7 days after onset of rash

Disease	Mode of Spread	Symptoms	Incubation Period	Contagious Period	Contacts	Exclusions (subject to LHD approval)
Salmonellosis ǂ	Fecal-oral: person-to-person, contact with infected animals or via contaminated food	Abdominal pain, diarrhea (possibly bloody), fever, nausea, vomiting, dehydration	Average 12-36hrs (range: 6hrs-7 days)	During active illness and until organism is no longer detected in feces	Exclude with first signs of illness; encourage good hand hygiene	Exclude until diarrhea has ceased for at least 2 days; additional restrictions may apply
Scabies	Close, skin-to-skin contact with infected person or via infested clothing or bedding Scabies Prevention and Control Manual	Extreme itching (may be worse at night); mites burrowing in skin cause rash / bumps	2-6 weeks for first exposure; 1-4 days for re-exposure	Until mites are killed by appropriate treatment; prescription skin and oral medications are generally effective after one treatment	Treat close contacts and infected persons at the same time; avoid skin-to-skin contact; do not share personal items; see exclusions	Treatment may be delayed until end of the day; if treatment started before next day's return, no exclusion necessary
Shigellosis** ǂ	Fecal-oral: frequently person-to-person; also via contaminated food or water	Abdominal pain, diarrhea (possibly bloody), fever, nausea, vomiting, dehydration	Average 1-3 days (range 12-96hrs)	During active illness and until no longer detected; treatment can shorten duration	Exclude with first signs of illness; encourage good hand hygiene	Exclude until diarrhea has ceased for at least 2 days; Medical clearance required
Strep throat / Scarlet Fever	Respiratory droplet or direct contact; via contaminated food	Sore throat, fever; Scarlet Fever: body rash and red tongue	Average 2-5 days (range 1-7 days)	Until 12hrs after treatment; (10-21 days without treatment)	Exclude with signs of illness; encourage good hand hygiene	Exclude until 12hrs after antimicrobial therapy (2+ doses)
Streptococcus pneumoniae ǂ 	Contact with respiratory secretions	Varies: ear infection, pneumonia, meningitis	Varies; as short as 1-3 days	Until 24hrs after antimicrobial therapy	Consult LHD to discuss any need for treatment	Exclude until 24hrs after antibiotics start
Tuberculosis (TB) ǂ	Airborne; spread by coughing, sneezing, speaking, or singing	Fever, fatigue, weight loss, cough (3+ weeks), night sweats, anorexia	2-10 weeks	While actively infectious	Consult LHD to discuss need for evaluation and testing of contacts	Exclude until medically cleared
Typhoid fever (*Salmonella* typhi) ǂ	Fecal-oral: person-to-person, ingestion of contaminated food or water (cases are usually travel-related)	Fever, headache, rose spots, malaise, cough, anorexia, diarrhea, constipation, abd pain, mental status change	Average range: 8-14 days (3-60 days reported)	From first week of illness through convalescence	Consult LHD for evaluation of close contacts	Exclude until symptom free; Medical clearance required; Contact LHD about additional restrictions
Vomiting Illness (Unspecified)	Varies; See Norovirus	Vomiting, cramps, mild fever, diarrhea, nausea	Varies; See Norovirus	Varies; See Norovirus	Encourage good hand hygiene; See Norovirus	Exclude until 24hrs after last episode
Whooping Cough (Pertussis)** ǂ 	Contact with respiratory secretions	Initially mild respiratory symptoms, cough; may have inspiratory whoop, post-tussive vomiting	Average 7-10 days (range 5-21 days)	With onset of cold-like symptoms until 21 days from onset (or until 5 days of treatment)	Consult LHD to discuss the potential need for treatment	Exclude until 21 days after onset or until 5 days after appropriate antibiotic treatment
West Nile Virus	Bite from an infected mosquito	High fever, nausea, headache, stiff neck	3-14 days	Not spread person-to-person	Avoid bites with EPA-approved repellents	No exclusion necessary

*****Report only aggregate number of cases for these diseases

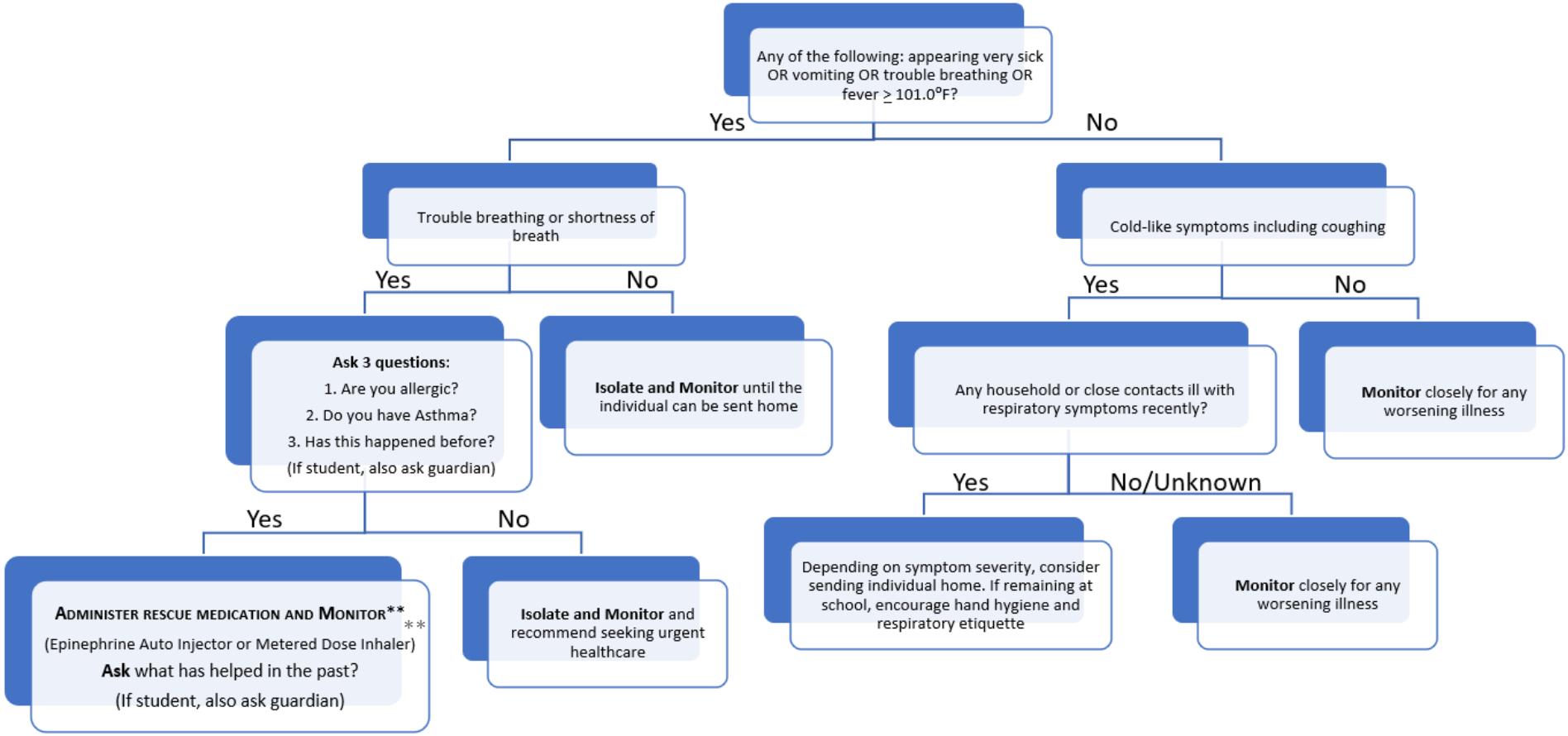
ǂConsult with local health department on case-by-case basis

** Contact your local health department for a "letter to parents"

 Vaccination is highly encouraged to prevent or mitigate disease

When to Send a Person Home due to Illness*

When a student or staff member starts to feel unwell, attempt to take their temperature using a no-touch method.



*This interim guidance may change as additional recommendations from the Centers for Disease Control and Prevention (CDC) are made available.

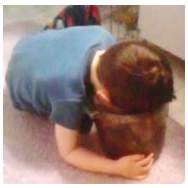
** Urgent health care may be necessary; call 911 if an epinephrine auto injector (EpiPen) was administered.

Conditions That Generally Do Not Require Exclusion to Control Spread of Disease to Others

(During suspected or confirmed outbreaks, defer to Public Health recommendations.)

- Common colds, runny noses (regardless of color or consistency of nasal discharge) and coughs.
- Yellow, white or watery eye discharge without fever, eye pain or eyelid redness.
- Pinkeye (bacterial conjunctivitis), without fever or behavior changes, usually associated with pink or red conjunctiva (i.e., "whites of the eyes") with white or yellow/green eye mucus drainage; often also associated with matted eyelids after sleep.
- Fever (for this purpose, defined as temperature above 101°F [38.3 °C] by any method) without any signs or symptoms of illness in infants and children who are older than four months. Devices to measure body temperatures include thermometers intended for use in the mouth, armpit, ear canal or skin that overlies an artery next to the outside corner of the eye. To read more about how to take a child's temperature and the special issues associated with each method, go to https://www.healthychildren.org/English/health-issues/conditions/fever/Pages/How-to-Take-a-Childs-Temperature.aspx (available in English and Spanish). Note: Do not adjust the reading for the location in which the temperature was taken. Simply record the temperature and the location where it was taken.
- Rash without fever and without behavioral changes. Exception: a child with a new, rapidly spreading rash characterized by bruising or small red or purple "blood" spots under the skin. If so, EMS (911) should be called.
- Hand-foot-and-mouth disease. No exclusion needed unless the child has mouth sores with constant drooling or meets other exclusion criteria (e.g., fever, requiring too much care). In some cases, the LHD may require children with hand-foot-and-mouth disease to stay home to control an outbreak.
- Impetigo. Lesions should be covered, but treatment may be delayed until the end of the day. If treatment starts before returning the next day, no exclusion is needed.
- Lice or nits without lice. Treatment may be delayed until the end of the day. If treatment starts before returning the next day, no exclusion is needed, even if nits are still present after treatment.
- Ringworm. Treatment may be delayed until the end of the day. If treatment starts before returning the next day, no exclusion is needed.
- Scabies. Treatment may be delayed until the end of the day. If treatment starts before returning the next day, no exclusion is needed.
- Thrush (often white spots or patches in the mouth).
- Fifth disease (slapped cheek disease, parvovirus B19) in someone with a typical immune system and without an underlying blood disorder like sickle cell disease.
- Staphylococcal colonization or carrier state in children without an illness that otherwise requires exclusion.
- Molluscum contagiosum. Exclusion or covering of lesions is not required.
- Cytomegalovirus infection.
- Chronic hepatitis B virus infection.
- HIV infection.
- Asymptomatic children who are known to have a disease-causing germ in their stools do not need to be excluded, except when they have an infection with a Shiga toxin–producing *Escherichia coli* (STEC), *Shigella*, *Salmonella* serotype Typhi or *Salmonella* serotype Paratyphi. Then, exclusion may be warranted as follows: for STEC, until results of two stool cultures are negative; for *Shigella*, until at least one stool culture is negative (varies by state); and for *S* Typhi / Paratyphi, until three stool cultures are negative. Check with your LHD, as requirements for returning to school may vary by jurisdiction and evaluation of transmission risk. In some cases, exclusion may be based on time since illness or recovery.

Select Diseases: Additional Information



Norovirus

Noroviruses are a group of viruses that cause gastroenteritis (GAS-tro-en-ter-I-tis). Norovirus is known incorrectly as the "stomach flu". Norovirus is NOT related to the flu (influenza), which is a respiratory illness caused by a different virus. Norovirus illness usually begins 24-48 hours after exposure but can appear as early as 10 hours after exposure. Symptoms usually include nausea, vomiting, diarrhea and stomach cramping, but a low-grade fever, chills, headache, muscle aches and a general sense of tiredness may also be present. The illness is usually brief, with symptoms lasting one to two days. Noroviruses are very contagious and spread easily from person-to-person. The virus is found in the stool and vomit of infected people. People can become infected in several ways, including eating food or drinking liquids that are contaminated by infected food handlers, touching surfaces or objects contaminated with norovirus and then touching their mouth before handwashing, or having direct contact with another person who is infected and then touching their mouth before handwashing. Children and staff exhibiting symptoms of viral gastroenteritis should be excluded from school or other group activities until two days after their symptoms have stopped. Frequent handwashing with warm water and soap for at least 20 seconds is highly encouraged as alcohol-based hand sanitizers are NOT effective against the virus. It is important to note that most household cleaners are ineffective against norovirus; a diluted bleach solution is the most reliable means of disinfection (https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants). Norovirus can survive on surfaces for many days unless disinfected. Please see the References section below for the MDHHS Fact Sheet and Guidelines for Environmental Cleaning and Disinfection of Norovirus.

Influenza

Influenza (or "the flu") is a contagious respiratory illness caused by influenza viruses that infect the nose, throat and lungs. It can cause mild to severe illness, and at times can lead to death. In fact, influenza causes more hospitalizations among young children than any other vaccine-preventable disease. People infected with influenza may experience fever or feeling feverish, chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches and/or fatigue; some children may experience vomiting and diarrhea. Most experts believe that flu viruses spread mainly by droplets produced when people with the flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby. Less often, a person might get infected with the flu by touching a surface contaminated with the influenza virus and then touching their own mouth, eyes or nose. Most healthy adults may be infectious to others beginning one day before symptoms develop and up to five to seven days after becoming sick. Some people, especially young children and people with weakened immune systems, might shed the virus for even longer. One of the best ways to protect against the flu and its potential severe complications is to get a seasonal influenza vaccine each year. Flu vaccination is recommended for all children aged six months and older. Making healthy choices at school and at home can also help prevent the flu. Encourage children, parents and staff to take the following everyday preventive actions:

- Stay home when you are sick and avoid close contact with people who are sick.
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue away after use and wash your hands. If a tissue is not available, cover your mouth and nose with your sleeve, not your hand.
- Wash your hands often with soap and water. If this is not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Clean and disinfect frequently touched surfaces at home, work or school, especially when someone is ill.

Please see the References section below for the MDHHS and CDC Websites.

COVID-19

COVID-19 is the disease caused by the coronavirus, SARS-CoV-2. COVID-19 is a contagious respiratory illness that can cause mild to severe illness with symptoms including fever, chills, cough, fatigue, shortness of breath, body aches, sore throat, loss of taste or smell, congestion, runny nose, vomiting and diarrhea. Current data indicate that older adults and those with underlying health conditions are more likely to develop serious illness. There is also concern for Multisystem Inflammatory Syndrome in Children (MIS-C) associated with COVID-19. This disease is similar to Kawasaki disease and includes symptoms of abdominal pain, red eyes, fever for five or more days, red / cracked lips, rash, and swollen / red hands and feet. This may be sequalae from a recent COVID-19 infection and often requires intensive care. The virus causing COVID-19 is usually spread by respiratory droplets but may be spread via the airborne route. Individuals can become infected by touching a contaminated surface and then touching their mouth, eyes or nose. Individuals are infectious beginning two days before symptoms and for days or weeks after symptoms resolve. Those with COVID-19 should stay home and away from others until, for at least 24 hours, symptoms are getting better overall AND there has been no fever (without the use of fever reducing medication). After returning to normal activities, take added precaution over the next five days, such as taking additional steps for cleaner air, hygiene, masks, physical distancing and/or testing. Layering multiple prevention strategies can help protect students, teachers, staff, and visitors. Making healthy choices at school and at home can also help prevent COVID-19. Encourage staff and families to take these everyday preventive actions:

- Promote vaccination among teachers, staff, families, and eligible students. Vaccination is the leading public health prevention strategy.
- Students, teachers and staff should stay home when ill; they may need to seek testing and care.
- Avoid close contact with people who are sick.
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue away after use and wash your hands. If a tissue is not available, cover your mouth and nose with your sleeve, not your hand.
- Wash your hands often with soap and water. If unavailable, use an at least 60% alcohol-based hand rub.
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Clean and disinfect frequently touched surfaces at home, work or school, especially when someone is ill.

COVID-19 guidance changes frequently. For the most current information, visit:
https://www.michigan.gov/coronavirus
https://www.cdc.gov/coronavirus/2019-ncov/index.html
https://www.cdc.gov/respiratory-viruses/guidance/

Mpox virus (MPV)

Mpox is a relatively rare disease caused by infection with the mpox virus that can cause flu-like symptoms and a rash that is often painful or itchy. MPV is rarely fatal. A person is infectious until there is full healing of the lesions and fresh skin has formed. Transmission often occurs when there is close, personal contact to someone who is infected with MPV, but can also occur when there is contact to respiratory secretion from someone who has MPV or after touching items, including surfaces or fabrics, that have had contact with a person with MPV. Individuals infectious with MPV should isolate at home, away from others. Individuals who have had contact with a person with MPV do not need to quarantine at home but should watch for signs and symptoms. Depending on the exposure type, contacts may be monitored by the LHD and may be offered post exposure prophylaxis (PEP).

Poliomyelitis

Polio, or poliomyelitis, is a disabling and life-threatening disease caused by the poliovirus. Most people who get infected with poliovirus will not have any visible symptoms. About 25% of those who are infected with poliovirus will have flu-like symptoms that can include sore throat, fever, fatigue, nausea, headache and stomach pain. These symptoms usually last 2 to 5 days. A smaller proportion of infected people will develop more serious symptoms that

affect the brain and spinal cord. Meningitis occurs in 1–5 out of 100 people. Paralysis or weakness in the arms, legs, or both occurs in about 1 out of 200 people to 1 in 2000 people, depending on virus type. Paralysis is the most severe symptom associated with poliovirus because it can lead to permanent disability and death. Between 2 and 10 out of 100 people who have paralysis from poliovirus infection die, because of the effect on the respiratory muscles. Even children who seem to fully recover can develop new muscle pain, weakness or paralysis as adults, 15 to 40 years later. This is called post-polio syndrome. Poliovirus is very contagious and spreads through person-to-person contact. The virus can be identified in an infected person's throat and intestines and can persist in the intestines for many weeks. Even infected people who are asymptomatic can transmit the virus. The virus enters the body through the mouth and can spread through contact with the feces of an infected person or less commonly, droplets from a sneeze or cough of an infected person. Infection with poliovirus can occur if a person has microscopic amounts of feces on their hands or objects (e.g., toys) and then the person touches their hands or object to their mouth. In unsanitary conditions, poliovirus can also contaminate food and water. Because of the routine childhood polio vaccine, dedicated health care professionals, and parents who vaccinate their children on schedule, wild poliovirus has been eliminated in this country for more than 30 years. However, it is important to maintain high immunity against polio in the population through vaccination to prevent the potential for outbreaks around travel-imported cases.

Enterovirus

Non-polio enteroviruses are very common and can infect anyone. Infants, children and teenagers are more likely to get infected and become sick because they do not have immunity from previous exposures to the virus. There are over 60 types of non-polio enteroviruses, including polioviruses, coxsackieviruses and echoviruses. In the United States, enteroviruses cause more than 10 million infections each year and are most likely to occur in the summer and fall. Most people who are infected with an enterovirus do not get sick or have only mild illness, like "the common cold" or a skin rash. Less commonly, an enterovirus infection can result in meningitis and very rarely, myocarditis, encephalitis or paralysis. Infants and people with weakened immune systems have a greater chance of having these complications. The infection is spread via stool or respiratory secretions from an infected person or by contact with contaminated surfaces. Transmission is difficult to interrupt because most infections are asymptomatic. Good hygienic practices, like handwashing, are recommended, especially for pregnant women around the time of delivery as newborns are at risk for very severe illness. A solution containing 10% bleach is an effective way to inactivate the virus. In most instances, it is not necessary to close schools due to enterovirus. However, the decision to close a school for any communicable disease should be made by school officials in consultation with public health officials.

Methicillin-Resistant *Staphylococcus aureus* or MRSA

MRSA is methicillin-resistant *Staphylococcus aureus*, a type of staph bacteria that is resistant to several antibiotics. MRSA can cause skin and other infections. Usually, it is not necessary to close schools because of a MRSA infection in a student. However, the decision to close a school for any communicable disease should be made by school officials in consultation with local and/or state public health officials. When a MRSA infection occurs within the school population, the school clinician should determine, based on medical judgment, whether some or all students, parents, and staff should be notified. If medical personnel are not available at the school, consultation with the public health authorities should be used to guide this decision. Re-infections, indications of spread to other students or complex cases should be reported to the LHD for consultation. MRSA transmission can be prevented by practicing good hand hygiene, especially before eating and after using the bathroom, and ensuring all infections are clean and covered, as this will greatly reduce the risks of surface contamination.

***Clostridium difficile* Infection or CDI**

Clostridium difficile (C. diff) is a spore-forming bacterium that causes inflammation of the colon, known as colitis. It is the most common cause of diarrhea in health care settings. Individuals with other illnesses requiring prolonged use of

antibiotics, and the elderly, are at greatest risk of acquiring CDI. Any surface or material that becomes contaminated with feces can serve as a reservoir for C. diff spores. Use bleach-based products for disinfection of surfaces. Symptoms include watery diarrhea, fever, loss of appetite, nausea and abdominal pain or tenderness. As with other diarrheal diseases, students should be excluded from school while they experience symptoms. Good hand hygiene practices with soap and water will reduce transmission. C. diff spores are resistant to alcohol-based hand sanitizer.

Animals in the Classroom

Animals can be valuable teaching aids in the school setting, but safe practices are required to reduce the risk of infection or injury. The National Association of State Public Health Veterinarians (NASPHV) has developed guidelines for the exhibition of animals in school and other settings. Schools should ensure that:

- Teachers and staff know which animals are inappropriate as residents or visitors in schools.
- Teachers and staff know which animals should not be in contact with children.
- Personnel providing animals for educational purposes are knowledgeable about animal handling and the diseases that can be transmitted between animals and people.
- Staff and students wash their hands after contact with animals, their feed or their habitats.

For complete details and recommendations for schools, please review the NASPHV Animal Contact Compendium, Appendix 4, "Guidelines for Exhibition of Animals in School and Child-Care Settings".

Bedbugs (*Cimex lectularius)*

Bedbugs are small, brownish, flattened insects that feed on the blood of people while they are asleep or inactive. Although the bite does not hurt, it may develop into an itchy welt like a mosquito bite. Bedbugs do not transmit disease, but they can cause significant itchiness, anxiety and sleeplessness. Bedbug infestations are also very difficult and expensive to control. Usually, bedbugs only come out to feed during the night. Unlike head lice, they do not live on a person. However, they can hitchhike from one place to another in backpacks and on other items. Unlike lice or scabies, bedbugs do not infest or require treatment of that person. Bedbugs infest the living area and require extermination. Actual bedbug infestations in schools are uncommon. More commonly, a few bed bugs will hitchhike to school from an infested home by hiding in a student's clothing or backpack. Bedbugs could then be carried home by another student, making schools a potential hub for bedbug spread. This is not a minor concern. Bedbugs are expensive and difficult to eradicate. If a school plans to use pesticides to control pests indoors, they are required under Michigan law to have an integrated pest management (IPM) plan in place. If a bedbug infestation is suspected or students are bitten during class, the school should contact a licensed pest management professional for assistance. Please see the References section below for the MDHHS Bedbugs Fact Sheet for Schools.

Head Lice

Lice are parasitic insects that can be found on people's heads and bodies and survive by feeding on blood. Head lice infestations are spread by close person-to-person contact, usually by direct head-to-head contact, with an infested person. Head lice survive less than one to two days if they fall off a person and cannot feed. Pets do not play a role in the transmission of human lice. Lice move by crawling; they cannot hop or fly. Both over-the-counter and prescription medications are available. Head lice are not known to spread disease. To help control the spread:

- Avoid head-to-head (hair-to-hair) contact during play and other activities at home, school and elsewhere.
- Do not share personal items such as hats, scarves or combs, or lie on areas exposed to an infested person.
- Machine wash contaminated items using the hot water (130°F) laundry cycle and the high heat drying cycle.

Do not use fumigant sprays or fogs as they are not necessary and can be toxic. Treatment may be delayed until the end of the day. If treatment starts before returning the next day, no exclusion is needed, even if nits are still present after treatment. It is recommended that schools review the MDHHS Head Lice Manual and develop a written policy addressing how infestations will be managed.

Planning Considerations for Emerging Health Situations

Implement an Incident Command System to Identify Roles and Responsibilities

Develop a standard strategy for handling all school-related incidents, regardless of the agencies or partners involved. The CDC's Preventing Spread of Infections in K-12 Schools includes a link to the Readiness and Emergency Management for Schools (REMS) course. The "SCHOOL EOPS IN-DEPTH: PLANNING FOR INFECTIOUS DISEASES" course shares strategies to incorporate infectious disease planning into a school emergency operations plan (EOP).

Communication Plan

Partner with public health officials to develop information on a core set of symptoms to be distributed to families, via the parent handbook and the school website. If there is an identified illness cluster, depending on the scope of the incident, public health officials may send this guidance to media, doctors and pharmacies to include key community stakeholders.

Timely and accurate communication is a critical component of the response and recovery phases of the emergency management plan. During a crisis or emergency, communication with parents, staff, families, students and the media is important, and each group may require different, yet consistent, messages.

Messaging efforts should:

- Coordinate with the local health department to correct any inaccurate information released by the media.
- Counter potential stigma and discrimination.
- Share actions taken by school administration.
- Provide information about additional safety precautions in place.
- Stress the importance of student and staff well-being and safety.

Train staff who answer the phone to help ensure that consistent messages are delivered to all callers. At the onset of an incident, schools may want to conduct a brief training session to provide and review scripts that include questions and answers, names and numbers of referrals and resources to those who answer the phones.

Parents: Communication actions may include automated phone systems, formal letters from administration, one letter from the classroom teacher, disease fact sheets and parent meetings. During an outbreak, families often want immediate information and may become concerned if they feel that information is being withheld or delayed. This is a challenge for some infectious disease outbreaks because of the time it takes for results to be reported and for public health interventions to be implemented. Communicate to families that the school is working with public health to stop the outbreak as quickly as possible.

Establish a Partnership with the Media Before an Event Occurs

The district and school should take appropriate measures to deliver information to the media including:

- A designated media holding center.
- Public Information Officer (PIO) identification as outlined in National Incident Management System (NIMS).
- Establishment of media briefing schedules.
- Development procedures for writing and approving news releases.
- Messages with consistent content for dissemination by the various agencies.

Additional Actions for Schools to Consider When Planning for an Infectious Disease Outbreak

Creating memoranda of understanding (MOUs) with mental health professionals

Any type of crisis or emergency involving a school can disrupt the sense of safety that teachers, students, and their families experience. The unpredictable nature of an infectious disease outbreak is a source of stress for all, especially

when someone is hospitalized, seriously ill or passes away. To supplement the district's crisis intervention team efforts to provide counseling to students, staff and parents, districts may want to partner with local mental health providers. These professionals can step in to help respond and recover from the outbreak. It is important that schools create MOUs with area mental health professionals so that in the event of an infectious disease or any other incident, there is a clear plan with designated roles and responsibilities for calming fears and anxieties.

Providing guidelines for physical distancing

Physical distancing refers to procedures to decrease the frequency of contact among people to lessen the risk of spreading an infectious disease. Depending on the type and severity of the infectious disease, closing schools may not be enough to slow the spread. It is recommended that, when closing schools, public health partners encourage physical distancing for students, which will play an integral role in limiting the transmission of disease.

Physical distancing strategies

Select strategies are based on feasibility given the unique space and needs of the school. Not all strategies will be feasible for all schools. For example, limiting hall movement options can be particularly challenging in secondary schools. Many strategies that are feasible in primary or secondary schools may be less feasible in childcare settings. Administrators are encouraged to think creatively about all opportunities to increase the physical space between students and limit interactions in large group settings.

Schools may consider strategies such as:

- **Cancel field trips, assemblies, and other large gatherings.** Cancel activities and events such as field trips, student assemblies, athletic events or practices, performances, school-wide parent meetings or spirit nights.
- **Cancel or modify classes where students are likely to be in very close contact.** For example, in physical education or choir classes, consider having teachers come to classrooms to prevent classes mixing with others in the gymnasium or music room).
- **Increase the space between desks.** Rearrange student desks to maximize the space between students. Turn desks to face in the same direction (rather than facing each other) to reduce transmission caused from virus-containing droplets (e.g., from talking, coughing, sneezing).
- **Avoid mixing students in common areas.** If it is not possible to suspend use of common areas, try to limit the extent to which students mix with each other, and particularly with students from other classes.
    - Allow students to eat lunch and breakfast in their classrooms rather than mixing in the cafeteria.
    - Stagger lunch by class.
    - Separate lunch and recess area by class.
    - Send a few students into the library to pick out books rather than going as a class.
    - Suspend the use of lockers.
    - Restrict hallway use through homeroom stays or staggered release of classes.
    - Try to avoid taking multiple classes to the bathroom at once (e.g., right after lunch or recess).
    - In childcare or elementary school settings, consider staggering playground use rather than allowing multiple classes to play together.
    - Limit other activities where multiple classes interact.
- **Stagger arrival and/or dismissal times.** These approaches can limit the amount of close contact between students in high-traffic situations and times.
- **Reduce congestion in the health office.** For example, use the health office for children with flu-like symptoms and a satellite location for first aid or medication distribution.
- **Limit nonessential visitors.** Limit the presence of volunteers for classroom activities, mystery readers, cafeteria support and other activities.

- **Limit cross-school transfer for special programs.** For example, if students are brought in from multiple schools for special programs (e.g., music, robotics, academic clubs), consider using distance learning to deliver the instruction or temporarily offering duplicate programs in the participating schools.
- **Teach staff, students and their families to maintain a distance of at least three feet from each other in the school.** Educate staff, students and their families at the same time and explain why this is important. Visual markers on the ground may encourage physical distancing and should be considered in places where students, staff and visitors congregate (e.g., lunch lines, in the office, outside classrooms and in bathrooms).

Develop a Continuity of Operations (COOP) Plan

A Continuity of Operations Plan (COOP) or long-term contingency plan ensures that school districts have the capability to continue essential functions across a wide range of crises and emergencies. The purpose of this contingency plan is to continue the performance of essential functions, reduce or mitigate disruptions to operations and achieve a timely recovery and reconstitution of the learning environment.

COOP components that may help districts prepare for, respond to, and recover from a communicable disease outbreak may include, but are not limited to:

- Maintaining essential functions, goods and services, such as payroll, under a variety of conditions.
- Providing the support and technology for functions that can be performed from other remote locations.
- Identifying essential people who must continue to work.
- Identifying and delegating authority for closing schools, continuing functions (such as school lunch provision), identifying schools' potential responsibilities and liabilities, granting exemptions to required school days and modifying statewide assessment dates and requirements.
- Maintaining personnel and human resources policies (leave, disability, potential high absenteeism, non-salaried employees) which may involve prior negotiations with officials from employee unions.
- Reviewing policies and contracts, including ordering warehouse items such as tissues, soap or sanitizer. Identifying financial resources for maintaining a continuous supply of these and other preventive supplies.
- Installing backup power systems or sending all records to other locations for quick retrieval for all "core" functions (e.g., data processing, payroll, student records).
- Developing payroll systems in the event of a long-term closure (establishing alternative regional paycheck distribution sites or requesting employees arrange for direct deposit of paychecks).
- Coordinating with elected officials, government leaders, school officials, response partners and business leaders to plan alternative venues for learning to continue if necessary.
- Planning for the needs of students eligible for free or reduced-price meals during a long-term closure.
- Considering alternative arrangements for students with special health needs that receive physical or occupational therapy at the school during school hours.

Plan for Alternative School Uses

School Based Immunization Clinic suggestions:

- Collaborate with the health department on clinic planning.
- Conduct a walk-through of the school with the building engineer to determine appropriate areas and traffic patterns for orienting families, helping complete intake forms, keeping children occupied while waiting for medications or immunizations (without the use of commonly touched objects like books or toys).
- Consider having families wait in their cars, ready to receive a text message when it is their turn.
- Have people who are familiar to the students, families and community members present at the clinic.
- Provide signage, directional arrows or additional staff to help with moving families through the process.
- Have a central site serve as a check-in and checkout desk for all those who are working at the clinic.

- If several parts of the building will be used, provide radios, walkie-talkies and cell phones to avoid delays when trying to locate someone or transmitting a message. If using radios, have people practice how to use them during regularly scheduled fire or other safety drills.
- Determine if the school building requires cleaning or sterilization and if disposal requires special procedures. Arrange for these services before the clinic is closed to restore the learning environment as soon as possible.

Acknowledgments

The authors gratefully acknowledge guidance from Kent County Health Department, Livingston County Health Department, Washtenaw County Public Health, Genesee County Health Department and Kalamazoo County Health & Community Services.

References

- Animals in Schools (CDC): https://www.cdc.gov/healthy-pets/index.html and https://www.cdc.gov/healthy-pets/schools-daycares/index.html
- Bedbugs Fact Sheet (MDHHS): http://www.michigan.gov/documents/emergingdiseases/Bed_bugs_schools_293498_7.pdf
- Bedbugs (EPA): www.epa.gov/bedbugs, https://www.epa.gov/ipm/bed-bugs-and-schools
- *C. difficile* website (CDC): https://www.cdc.gov/c-diff/index.html
- *C. difficile* Fact Sheet (CDC): https://www.cdc.gov/c-diff/media/pdfs/Cdiff-Factsheet-P.pdf
- Communicable Disease Information & Resources Website (MDHHS): www.michigan.gov/cdinfo
- Control of Communicable Diseases Manual. 19th Edition. David L. Heyman, MD Editor. American Public Health Association
- Coronavirus (COVID-19) website (CDC): https://www.cdc.gov/covid/index.html
- Enterovirus Tip Sheet (MDHHS): http://www.michigan.gov/documents/mdch/Q311_Enterovirus_FINAL_367074_7.pdf
- EPA-Registered Disinfectants: https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants
- Head Lice website (CDC): https://www.cdc.gov/lice/ or https://www.cdc.gov/lice/about/head-lice.html#cdc_disease_basics_prevention-prevention
- Head Lice Manual (MDHHS): https://www.michigan.gov/-/media/Project/Websites/mdhhs/Folder2/Folder41/Folder1/Folder141/MI_HL_Manual_Final_2013.pdf
- Influenza website (MDHHS): www.michigan.gov/flu
- Managing Infectious Diseases in Child Care and Schools. 6th Edition. AAP 2023
- MRSA website (CDC): https://www.cdc.gov/mrsa/prevention/schools-and-daycares.html
- MRSA Brochure (MDHHS): MDHHS MRSA Brochure
- National Association of School Nurses: https://schoolnursenet.nasn.org/covid19ref/home
- National Association of State Public Health Veterinarians Website: http://www.nasphv.org/Documents/AnimalsInPublicSettings2023.pdf (Appendix 4)
- Norovirus Fact Sheet (MDHHS): http://www.michigan.gov/documents/mdch/NorovirusFactsheet_281017_7.pdf
- Norovirus, Guidelines for Environmental Cleaning and Disinfection (MDHHS): http://www.michigan.gov/documents/mdch/NorovirusEnvironCleaning_281018_7.pdf
- Preventing Spread of Infections in K-12 Schools (CDC): https://www.cdc.gov/orr/school-preparedness/infection-prevention/index.html
    - Additional Strategies (CDC): https://www.cdc.gov/orr/school-preparedness/infection-prevention/strategies.html
    - Readiness and Emergency Management for Schools (REM) (CDC Course): https://rems.ed.gov/trainings/CourseInfectious.aspx
    - How Infections Spread: https://www.cdc.gov/orr/school-preparedness/infection-prevention/appendix-a.html
    - Ventilation in Buildings: https://www.cdc.gov/coronavirus/2019-ncov/community/ventilation.html
    - Hand Hygiene in Schools: https://www.cdc.gov/clean-hands/prevention/about-hand-hygiene-in-schools-and-early-care-and-education-settings.html
- Quarantine and Isolation (CDC, 2017): https://www.cdc.gov/port-health/legal-authorities/isolation-quarantine.html
- Red Book: 2012 Report of the Committee on Infectious Diseases. 29th Edition. American Academy of Pediatrics

- Respiratory Virus Guidance (CDC): https://www.cdc.gov/respiratory-viruses/guidance/respiratory-virus-guidance.html
- Scabies Prevention and Control Manual (MDHHS): https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Folder2/Folder49/Folder149/MDCH_Scabies_Manual.pdf?rev=e37ddacdd28444d587557b0b69cd0f2b&hash=D519A9192A2FAC5A3E1B3C811194C0A4
- Seasonal Respiratory Viruses website (MDHHS): https://www.mi.gov/covidflursv

Recent Summary of Changes in Managing Communicable Diseases in Schools

- Added steps for alcohol-based hand sanitizer use.
- Updated language in “Cleaning, Sanitizing, and Disinfection”.
- Updated link in “Vaccination”.
- Updated link in “Individual Case Reporting”.