Infectious Diseases
In Child Care and School Settings

Guidelines for Child Care Providers and Health Consultants, School Nurses and Other Personnel

Colorado Department of Public Health and Environment

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Revisions / Updates

Date	Description of Changes	Pages/Sections Affected
2012	Major revision to content and format; combine previous separate guidance documents for child care and schools into one document	Throughout
Dec 2014	Updated web links due to CDPHE website change; updated several formatting issues; added hyperlinks to table of contents; no content changes	Throughout
May 2015	Added updated FERPA letter from the CO Dept. of Education; added links to additional info to the animal contact section in the introduction; added new bleach concentration disinfection guidance	Introduction
Oct 2015	Corrected reporting information for aseptic meningitis	Aseptic Meningitis
Jan 2016	Added information on animals in child care centers; updated bleach recommendations and EPA cleaners link; ensured that these guidelines are consistent with the new child care center regulations; updated reportable disease list; guidance on *Clostridium difficile*	Introduction, various sections
July 2019	Update content throughout; add guidance for parents/caregivers; add sections for tick borne illness and tularemia	Throughout

These guidelines are not a substitute for the School and Child Care Facility Health and Sanitation Regulations

Child Care Regulations: https://www.colorado.gov/pacific/cdphe/child-care

School Regulations: https://www.colorado.gov/pacific/cdphe/schools

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Diseases in **bold** are conditions reportable to public health in Colorado. Any outbreak, regardless of etiology or setting, is reportable to public health.

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Introduction

Infectious Disease in Child Care and School Settings

Infectious diseases are caused by organisms such as bacteria, viruses and parasites. Some infectious diseases can be spread from one person to another. Illnesses caused by infectious diseases are a common occurrence in children in child care and school settings. Child care providers and health consultants, school personnel, and school nurses should be aware of infectious diseases that affect children, and be familiar with how to minimize their spread. These guidelines address infectious diseases often seen in children, and provide ways to prevent, reduce, and control their spread. Most cases of illness are isolated to one child, but occasionally an outbreak of a particular disease can occur in a child care or school setting. **Suspected outbreaks of any disease in any setting must be reported to the state or local public health agency immediately.**

These guidelines are based on current health information. Recommendations for handling infectious disease issues in child care and school settings may change as new information becomes available. In addition, new infectious disease concerns sometimes emerge. The Communicable Disease Branch at the Colorado Department of Public Health and Environment (CDPHE) is available to assist child care providers, school personnel, and school nurses when infectious disease issues arise, and can be reached at 303-692-2700. Local public health agencies are also available for consultation on infectious disease issues. Contact information for Colorado local public health agencies can be found at: https://www.colorado.gov/pacific/cdphe/find-your-local-public-health-agency

Public Health Reporting Requirements, Case Investigation, and Outbreak Investigation

By law, certain diseases and conditions are reportable to public health for surveillance and investigation purposes, and so disease control measures can be implemented. Per Colorado regulation 6 CCR 1009-1 "Rules and Regulations Pertaining to Epidemic and Communicable Disease Control," people either treating or having knowledge of a reportable disease, whether the disease is suspected or confirmed, must report the case to the state or local public health agency. This includes schools and licensed child care providers. A list of diseases and conditions reportable in Colorado is available on page 9 of this document, and also at the following website: https://www.colorado.gov/pacific/cdphe/report-a-disease. This website also contains a link to the Colorado statutes and regulations that address disease reporting.

When a suspected or confirmed disease case is reported, public health agencies may conduct an investigation to confirm the diagnosis, assess treatment options (if applicable), determine the cause of the illness, determine if anyone else has been exposed, and implement appropriate methods of disease control. **Outbreaks of any disease, in any setting must be reported to the state or local public health agency immediately.** In an outbreak situation, the state or local public health agency will typically work with the child care facility or school to achieve the following:

- Control and prevent further spread of disease;
- Identify ill people so they can receive proper treatment if indicated;
- Attempt to identify the source of the outbreak;
- Determine who might have been exposed to the source or ill people;
- Identify infection risk factors;
- Evaluate existing prevention strategies.

Child care facilities and schools can also contact the state and/or local public health agencies about infectious conditions that are not reportable, especially if the facility has questions about notifying parents, exclusion, and disease control measures. School and facility closure recommendations are made on a case-by-case basis and consider factors such as attendance of students/children and staff, disease or illness severity, and vulnerability of children and staff. Consultation with local or state public health staff can help inform a facility administration's decision to close due to illness.

Per the "Rules and Regulations Governing the Health and Sanitation of Child Care Facilities in the State of Colorado" (available at https://www.colorado.gov/pacific/cdphe/child-care), in addition to consulting with the state or local public health agency, child care facilities should also consult with their child care health consultant about any type of communicable disease issue, case, or outbreak. Child care facilities are inspected routinely by either the state or local public health agency to ensure compliance with the health and sanitation regulations. These inspections are typically conducted by Environmental Health Specialists employed at the state/local public health agency. It is acceptable for a child care facility to report cases of illness or outbreaks to the Environmental Health Specialist who conducts the

health and sanitation inspections. Typically, the Environmental Health Specialist will then consult with the public health nurse or epidemiologist within his/her public health agency to determine the best course of action.

To report a suspected or confirmed disease case or outbreak, please contact your local public health agency (contact information can be found at: https://www.colorado.gov/pacific/cdphe/find-your-local-public-health-agency), or CDPHE at 303-692-2700 or 800-866-2759 (after hours 303-370-9395).

To the extent it is available, the following information should be reported for all suspected or confirmed cases:

- Diagnosis
- Patient's name
- Date of birth
- Gender
- Race and ethnicity
- Address (including city and county)
- Phone number
- Parent/Guardian name
- Name and address of the responsible health care provider
- Laboratory test results
- Case suspected or confirmed

Schools, Public Health Reporting, and FERPA

Regarding student confidentiality and privacy, the federal Family Educational Rights and Privacy Act (FERPA) prohibits sharing of health-related information except in certain well-defined circumstances, including, but not limited to: specified officials for audit or evaluation purposes, and appropriate officials in cases of health and safety emergencies. Notifying the state or local public health agency of a reportable disease in a student or an outbreak in a school does not breach FERPA confidentiality laws. In these situations, schools may disclose personally identifiable information to public health officials without prior parent consent.

COLORADO
Department of Public Health & Environment

Communicable Reportable Conditions

Effective: June 14, 2019

Confidential fax: 303-782-0338
STI/HIV confidential fax: 303-782-5393
Toll-free fax: 800-811-7263

Phone: 303-692-2700
Toll-free phone: 800-866-2759
Evening/weekend hours: 303-370-9395

www.colorado.gov/cdphe/report-a-disease
- Disease Report Forms
- Specimen submission guidance
- Colorado Electronic Disease Reporting System (CEDRS) application

Complete Board of Health rules can be found at: https://www.colorado.gov/pacific/cdphe/regulations-adopted-board-health

Immediate reporting by phone is required of any illness that may be caused by biological, chemical or radiologic terrorism.

As indicated below, reporting by labs (diagnostic results and those highly correlated with disease) and providers (including suspected conditions) is required in accordance with Regulation 6 CCR 1009-1. In addition to reporting positive laboratory results to public health, clinical laboratories are required to submit isolates and/or clinical material to the CDPHE laboratory for select pathogens. For all other pathogens, isolate/clinical material submission may be requested.

Time	Reporter	
4d	L	*Acinetobacter baumannii*, carbapenem-resistant (CRAB)*
4d	P	Acute flaccid myelitis
24h	P	Animal bites (by dogs, cats, rabies reservoir species & other wild carnivores)
4d	P	Animal bites (by any other mammals)
Imm	**L&P**	**Anthrax***
4d	L	Arboviral Diseases (Eastern equine encephalitis, LaCrosse encephalitis virus, Japanese encephalitis virus, California encephalitis serogroup, St. Louis encephalitis virus, Western equine encephalitis virus, Powassan virus and others)
Imm	**L&P**	**Botulism**
4d	L&P	Brucellosis*
4d	L&P	Campylobacteriosis
Imm	**L&P**	***Candida auris* (identified or suspected, including *Candida haemulonii*)***
30d	L	Candidemia [5-county]
4d	L&P	Chancroid ∴
4d	L	Chikungunya
4d	L&P	Chlamydia ∴
Imm	**L&P**	**Cholera***
4d	P	CJD & other transmissible spongiform encephalopathies (TSEs)
30d	L	*Clostridiodes difficile (Clostridium difficile)* [5-county]
4d	L	Colorado tick fever
4d	L&P	Cryptosporidiosis
4d	L&P	Cyclosporiasis
4d	L	Dengue
Imm	**L&P**	**Diphtheria***
4d	P	Encephalitis
4d	L	Enterobacteriaceae, carbapenem-resistant (CRE)*
4d	L	Enterobacteriaceae, extended-spectrum beta-lactamase (ESBL) [Boulder]
4d	L&P	*Escherichia coli* O157:H7 / Shiga toxin-producing *Escherichia coli**
4d	L&P	Giardiasis
4d	L&P	Gonorrhea, any site ∴
4d	L	Gram-negative bacteria, colistin-resistant*
4d	L	Group A streptococci* (+) [5-county]
30d	L	Group B streptococci* (+) [5-county]
1wd	L&P	*Haemophilus influenzae** (+)
4d	L&P	Hantavirus disease
4d	P	Hemolytic uremic syndrome if < 18 years
1wd	L&P	Hepatitis A (IgM+)
4d	L&P	Hepatitis B
4d	L&P	Hepatitis C (positive serum antibody titer and/or +confirmatory assays)
4d	L	Hepatitis C (negative confirmatory assays)
4d	P	Hepatitis, other viral
4d	L&P	Human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS) ∴ • All reactive HIV tests • CD4 counts (any value) • HIV viral load (any value) • HIV genotype
4d	P	Influenza-associated death if <18 years

Time	Reporter	
4d	L&P	Influenza-associated hospitalization
4d	L&P	Legionellosis
4d	P	Leprosy (Hansen's Disease)
4d	L&P	Listeriosis*
4d	L&P	Lyme disease
4d	L&P	Lymphogranuloma venereum (LGV) ∴
4d	L&P	Malaria
Imm	**L&P**	**Measles (rubeola)**
Imm	**L&P**	**Meningococcal Disease (*N. meningitidis* or gm-neg diplococci)*** (+)
4d	L&P	Mumps
4d	L	*Mycobacterium*, nontuberculous (NTM) [5-county]
Imm	**L&P**	**Outbreaks** (incl foodborne, water, person-to-person, healthcare settings)
1wd	L&P	Pertussis (whooping cough)
Imm	**L&P**	**Plague***
Imm	**L&P**	**Poliomyelitis**
4d	L	*Pseudomonas aeruginosa*, carbapenem-resistant
4d	L&P	Psittacosis
4d	L&P	Q fever (*Coxiella burnetii*)
Imm	**L&P**	**Rabies, human (suspected)**
4d	L&P	Respiratory Syncytial Virus (RSV)-associated hospitalization [5-county]
4d	L&P	Rickettsiosis (including RMSF and typhus)
1wd	L&P	Rubella, acute infection
4d	L&P	Rubella, congenital
4d	L&P	Salmonellosis*
Imm	**L&P**	**Severe or novel coronavirus (MERS-CoV or SARS-CoV)**
4d	L&P	Shigellosis*
Imm	**L&P**	**Smallpox (Variola virus or Orthopox virus)**
4d	L	*Staphylococcus aureus*, Vancomycin-resistant/intermediate (VRSA/VISA)*
4d	P	Streptococcal toxic shock syndrome**
4d	L	*Streptococcus pneumoniae*** (+)
1wd	L&P	Syphilis/*Treponema pallidum* (all reactive tests) ∴
4d	P	Tetanus
4d	L&P	Tick-borne relapsing fever (*Borrelia hermsii*)
4d	P	Toxic shock syndrome, non-streptococcal
4d	P	Trichinosis
1wd	L&P	Tuberculosis disease (active)*
4d	L	Tuberculosis infection (+IGRA) ◊
1wd	L&P	Tularemia*
1wd	L&P	Typhoid fever*
4d	L&P	Varicella (chicken pox)
4d	L	Vibriosis*
Imm	**L&P**	**Viral hemorrhagic fever***
4d	L	West Nile virus (acute infection, IgM+)
4d	L	Yellow fever
4d	L	Yersiniosis* [7-county]
4d	L	Zika virus

Send isolates/clinical material to:	All reports and specimens shall be accompanied by the following information:	
8100 Lowry Blvd Denver, CO 80230 Phone: 303-692-3090	• Name of disease or condition • Patient's name • Patient's date of birth, sex, race, ethnicity • Patient's home address and phone	• Healthcare provider's name, address and phone number • Laboratory information (test name, collection date, specimen type and accession number)

Key:

5-county = Adams, Arapahoe, Denver, Douglas and Jefferson

7-county = Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas and Jefferson

Boulder = Boulder county only

(+) = positive test from a normally sterile site

◊ = Positive interferon gamma release assays (IGRAs) are only reportable by laboratories that use electronic reporting (ELR).

IMM = Immediately (by phone within 4 hours of suspected diagnosis)

24h = 24 hours

1wd = 1 working day | 4d = 4 calendar days | 30d = 30 calendar days

L = laboratory | P = provider | L&P = both

⁂ = Healthcare providers need to report sex at birth, gender identity, and relevant treatment.

* Submission of isolate/clinical material required. Testing laboratories shall routinely submit bacterial culture isolates or patient clinical material that yields positive findings to the CDPHE Laboratory Services Division. The isolate or clinical material shall be received at the CDPHE Laboratory Services Division no later than one working day after the observation of positive findings. Clinical material is defined as: (i) A culture isolate containing the infectious organism for which submission of material is required, or (ii) If an isolate is not available, material containing the infectious organism for which submission of material is required, in the following order of preference: (A) a patient specimen; (B) nucleic acid; or (C) other laboratory material. **For TB, only isolates should be submitted.**

** Isolate submission for 5-county area only.

Memo

COLORADO
Department of Education

To: Superintendents and Colorado BOCES
FROM: Randy Boyer, Assistant Commissioner
DATE: February 13, 2015
Re: Communicable Diseases and Conditions Reportable by School Personnel under Colorado Law and Related Confidentiality Duties Under Federal Law

Over the last several months, there has been an increase in incidences of pertussis and flu in Colorado. The Colorado Department of Education (CDE) has been asked to provide updated guidance to school districts regarding: (1) Schools providing timely reports to Colorado Department of Health and Environment (CDPHE) or local health departments about the occurrence of pertussis in public school settings; and (2) state and/or local public health department's duty and authority to conduct public health investigations in response to reports of pertussis and other 24 hour reportable conditions (as defined by the CDPHE) in public school settings.

In response to various media outlets reporting the rise in reported cases of the Enterovirus D68, as well as the Ebola outbreak, on October 3, 2014, the United States Department of Education (USDOE) Family Compliance Office (FPCO) issued the following statement and guidance, affirming that the October 2009 USDOE guidance remains in effect:

> the Family Policy Compliance Office (FPCO) has received a few inquiries regarding the applicability of the Family Educational Rights and Privacy Act (FERPA) in regard to the disclosure of personally identifiable information from education records to local health officials. Given these inquiries, we thought it prudent to remind you of the guidance issued by FPCO in October 2009 in response to concerns at that time regarding the H1N1 flu outbreak. This guidance document is available on our website at: http://www2.ed.gov/policy/gen/guid/fpco/pdf/ferpa-h1n1.pdf. Although, the guidance is specific to H1N1, the context of the guidance is applicable today in terms of Enterovirus D68, Ebola, etc. Additional questions may be forwarded to FERPA@ed.gov .

Set forth below is a summary of applicable law.

State Law Requirements

The State Board of Health is authorized to determine which diseases and conditions are dangerous to the public health. The State Board of Health also has the authority to require reports by persons with knowledge and without patient consent to the CDPHE and local health departments of the occurrences of such diseases and conditions.[1] The reports must contain "the name, address, sex, diagnosis, and such other information as

[1] *See* C. R.S. §§ 25-1.5-102(1)(a)(II) and 25-1-122.

the board determines is necessary to protect the public health."[2] The CDPHE and local health departments are authorized "to investigate and control the causes of epidemic and communicable diseases affecting the public health." [3]

The State Board of Health has designated certain communicable diseases that must be reported to the state or local public health department within 24 hours of confirmation or suspicion. The current list of 24-hour reportable communicable diseases and conditions, which includes "pertussis" can be accessed at: https://www.colorado.gov/pacific/sites/default/files/DC_ComDis_Reportable-Conditions-Health-Care-Providers.pdf.

The communicable diseases and conditions identified are considered emergency public health events due to some combination of the potential seriousness of the illness; degree of communicability (and therefore, potential to cause a disease outbreak); and existence of specific health intervention (e.g., post-exposure vaccination, post-exposure administration of antibiotics, isolation or quarantine) to interrupt transmission (and prevent /control outbreak). To be effective, these public health interventions are, typically, extremely time sensitive.

FERPA Requirements

FERPA applies to all schools that receive federal funding under an applicable program of the U.S. Department of Education. Generally, schools must obtain the parent's written consent before releasing information from his/her child's education records.

FERPA contains several exceptions to the general prohibition of disclosure of information from education records without prior parent consent. Applicable here are the following exceptions:

- Disclosure to appropriate officials in cases of health and safety emergencies[4]
- Disclosure of directory information such as a student's name, address, telephone number, date and place of birth and dates of attendance. [5] It should be noted that, in order to publish directory information, the school district must give the parent notice of the intended publication and an opportunity to opt out of the publication.

Regarding health or safety emergencies, in its recently reaffirmed 2009 guidance, the Family Policy Compliance Office states as follows:

> an educational agency or institution is responsible for making a determination whether to make a disclosure of personally identifiable information on a case-by-case basis, taking into account the totality of the circumstances pertaining to the threat. If the school district or school determines that there is an articulable and significant threat to the health or safety of the student or other individuals and that certain parties need personally identifiable information from education records to protect the health or safety of the student or other individuals, it may disclose that information to such appropriate parties without consent. 34 CFR § 99.36. This is a flexible standard under which the Department defers to school administrators so that they may bring appropriate resources to bear on the situation, provided that there is a rational basis for the educational agency's or institution's decisions about the nature of the emergency and the appropriate parties to whom information should be disclosed. We note also that, within a reasonable period of time after a disclosure is made under this exception, an educational agency or institution must record in the student's education records the articulable and significant threat that formed the basis for the disclosure and the parties to whom information was disclosed. 34 CFR § 99.32(a)(5).

Thus, it continues to be the guidance of the CDE that those communicable diseases and conditions that are required to be reported within 24 hours and considered to be emergency public health events should generally be considered to fall within the "health or safety" exception to FERPA's "prior parent consent" rule.

It should be noted that FERPA applies only to information in education records; it does not apply to information known or obtained from sources other than education records, such as personal observations or verbal communication with parents. Thus, information that is not contained in education records, including direct observation of those communicable diseases and conditions that are considered emergency public health events, should not be considered as falling within FERPA's "prior parent consent" rule.

Finally, a school district may seek to obtain prior written parent consent for release by school officials of information required by Colorado law through a consent form presented to parents during the annual registration process. Prior parent consent obtained in this manner would apply to situations involving not only health emergencies but also to other diseases and conditions, such as varicella (chicken pox), authorized by the State Board of Health to be reported to the CDPHE and local health departments within 7 days of diagnosis.

To report a communicable disease:

https://www.colorado.gov/pacific/cdphe/report-a-disease

Note: This is guidance issued by the Colorado Department of Education and does not constitute legal advice. If you need legal advice, please contact your legal counsel.

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[2] Colo. Rev. Stat §25-1-122(1)

[3] Colo. Rev. Stat. §25-1.5-102(1)(a)(I).

[4] 20 U.S.C. § 1232g(b)(1)(I) and (h); 34 C.F.R. Part 99.36

[5] 20 U.S.C. § 1232g(a)(5)(A) and (B); 34 C.F.R. Part 99.36

Informing Parents/Guardians of Illness in the Facility

When a child care facility or school has a child or staff member ill with an infectious disease, the question often comes up as to whether the facility needs to send a letter home to parents/guardians of other children, or post a notice at the facility informing parents/guardians of the illness. This is often dependent on the disease, the potential risk of spread to others, the presence of symptoms in other children/staff, and policies in place at the facility. Public health can assist a facility in determining whether or not a letter or notice is necessary. In outbreak situations, it is common for public health to work with the facility to draft a letter to share with parents/guardians, as well as a health alert to distribute to health care providers in the area.

Exclusion Guidelines for Children and Staff

Excluding Children

Excluding a child who has an infectious disease from attending child care or school may decrease the spread of illness to others. The decision to exclude is typically based on the disease, and should be made in conjunction with the school nurse or the child care health consultant, the state or local public health agency, health care professionals, and parents/guardians. Exclusion recommendations are included for each disease or condition addressed in these guidelines.

In situations in which a child does not have a diagnosed disease/condition, but has signs or symptoms indicative of a potentially infectious disease, exclusion may also be warranted. Generally, if any of the following conditions apply, exclusion from child care or school should be considered:

- The child does not feel well enough to participate comfortably in usual activities.
- The child requires more care than the child care or school personnel are able to provide.
- The child is ill with a potentially contagious illness, and exclusion is recommended by a healthcare provider, the state or local public health agency, or these guidelines.
- The child has signs or symptoms of a possible severe illness, such as trouble breathing.

In cases in which unvaccinated children are exposed to a vaccine preventable disease (such as measles, mumps, rubella, and pertussis), the state or local public health agency should be consulted in order to determine if exclusion of unvaccinated children is necessary.

The chart below lists common symptoms that could *possibly* be related to an infectious disease. The chart indicates whether it is recommended to exclude a child exhibiting a particular symptom from child care or school. If a child is excluded based on symptoms (and not a diagnosed illness), the child should be allowed to return to child care or school once symptoms have subsided, or a health care provider clears the child or determines the illness is not communicable, provided that the child can participate in routine activities.

Symptom	Exclusion Guidelines
Cough	Exclusion is recommended if the child is experiencing severe, uncontrolled coughing or wheezing, having difficulty breathing, becoming red or blue in the face, making high-pitched whooping sounds after coughing, or vomiting after coughing.
Diarrhea (defined as stools that are more frequent and looser than usual)	Exclusion is recommended if any of the following conditions apply: the child has other symptoms along with the diarrhea (such as vomiting, fever, abdominal pain, jaundice, etc.), the diarrhea cannot be contained in a toilet, there is blood or mucous in the stool, or the child is in diapers.
Earache	No exclusion is necessary.
Fever (defined as a temperature over 100º F orally)	No exclusion is necessary, unless the child has symptoms in addition to the fever, such as a rash, sore throat, vomiting, diarrhea, behavior changes, stiff neck, difficulty breathing, etc.
Headache	No exclusion is necessary, unless the headache is severe and accompanied by additional symptoms like vision problems, stiff neck, or behavior change.
Jaundice or unusual color of the skin, eyes, stool or urine	Exclusion is recommended until a medical exam indicates the child does not have hepatitis A.

Symptom	Exclusion Guidelines
Mouth sores	Exclusion is recommended if the child is drooling uncontrollably.
Rash	Exclusion is recommended if the child has symptoms in addition to the rash such as behavior change, fever, joint pain, or bruising not associated with injury, or if the rash is oozing or causes open wounds. See page 89 for additional information on rashes.
Stomach ache/abdominal pain	Exclusion is recommended if the pain is severe, if the pain appears after an injury, or if the child had symptoms in addition to the stomach ache (such as vomiting, fever, diarrhea, jaundice, etc.)
Swollen glands	Exclusion is recommended if the child has symptoms in addition to the swollen glands such as difficulty breathing or swallowing, fever, etc.
Vomiting	Exclusion is recommended if the child has vomited more than two times in 24 hours, if the vomit appears bloody, if the child has a recent head injury, or if the child has symptoms in addition to the vomiting (such as fever, diarrhea, etc.).

When a child has symptoms while at the school or child care facility, the following actions should be taken :

- Inform the school nurse, child care health consultant, or designated staff of the symptoms.
- Separate the ill child from the other children.
- Document the symptoms on the illness log.
  Sample illness log: https://drive.google.com/file/d/15Sv2z_PpndvJvZZJcTUDPiyN5d0QKr77/view
- Take the child's temperature and record it on the illness log.
- If a child is coughing or sneezing, remind her/him to cover her/his mouth and to wash her/his hands afterward.
- After you touch an ill child, avoid touching other children until you have washed your hands.
- Inform the ill child's parents/guardians of the symptoms. If it is determined that the child needs to be excluded, keep the ill child separated from other children until the parent/guardian can pick up the child.

Excluding Staff

Occasionally, child care and school personnel become ill with an infectious disease. When this occurs, the child care facility or school should consult with the state or local public health agency to determine whether the ill staff member can work. If ill with diarrhea or vomiting, child care and school personnel should not work until at least 24 hours after the last episode of vomiting or diarrhea. This is especially important for staff that work in food service or handle food in any manner, and for staff that work with infants and toddlers (including staff that prepare and serve bottles to infants/toddlers). Diagnosis with some infectious pathogens require staff exclusion longer than 24 hours. Consult state or local public health if a staff member has an infectious disease diagnosis.

Considerations for Developmentally Disabled or Immunocompromised Children

Disease control guidelines for children with developmental disabilities or who are immunocompromised may be different than the guidelines presented in this document. In situations where a child with developmental disability or who is immunocompromised has an infectious disease or is exposed to another child with an infectious disease, the child care health consultant or school nurse should be consulted. The state or the local public health agency is also available for consultation.

Illness Transmission

Infectious diseases can be spread in a variety of ways, referred to as transmission routes.

Droplet Transmission/Infectious Discharges

Diseases with respiratory tract symptoms (runny nose, cough, sore throat, sneezing) are often spread by droplets containing viruses or bacteria or by surfaces contaminated with nose/throat discharges from people with infection. Droplets are generated during coughing, sneezing, or talking. These "large" droplets generally travel less than three feet before falling to the ground and do *not* remain suspended in the air. Before falling to the ground, droplets may be deposited on the mucous membranes of the eye, nose, or mouth of another person within three feet, resulting in disease transmission. In addition, sick people, especially children, will often contaminate their hands and other objects

with infectious nose/throat discharges. When another person comes in contact with these objects and then touches their eyes, mouth, or nose, he/she can become infected. This type of transmission route is common in child care and school settings. Some of the infections passed in this way are the common cold, chickenpox, croup, fifth disease, hand, foot and mouth disease, influenza, meningitis (viral and bacterial), mumps, rubella, pertussis (whooping cough), pink eye (conjunctivitis), RSV, and strep throat.

Airborne Transmission

This mode of transmission is **rare** and only a few diseases are spread by this route (such as measles and tuberculosis). Airborne transmission occurs when a person with infection coughs, sneezes, or talks and generates very small respiratory particles (droplet nuclei) containing viruses or bacteria. These small particles remain suspended in the air for long periods and can be widely dispersed by air currents. When another person inhales these small particles, they can potentially become ill.

Fecal → Oral Transmission

Intestinal tract infections are often spread through oral ingestion of viruses, bacteria, or parasites found in the stool of a person or animal with infection. This type of transmission happens when objects contaminated with microscopic amounts of human or animal feces are placed in the mouth. In child care and school settings, sites frequently contaminated with feces are hands, diaper changing tables, classroom floors, faucet handles, toilet flush handles, toys and tabletops. Fecal→oral transmission can also occur when food or water is contaminated with microscopic amounts of human or animal feces and are then ingested. Organisms spread by this transmission route include: *Campylobacter, Clostridioides difficile, Cryptosporidium,* Shiga toxin-producing *E. coli* (which includes *E. coli* O157:H7), *Giardia,* hepatitis A, *Salmonella, Shigella,* and a variety of intestinal viruses like norovirus. Other infections like hand, foot and mouth disease, and viral meningitis can also be spread through this route.

Skin Contact/Direct Contact

Some infections can be spread directly by skin-to-skin contact, or indirectly by contact with contaminated surfaces like clothing. Chickenpox (varicella), shingles (herpes zoster), herpes, head lice, impetigo, molluscum contagiosum, MRSA, ringworm, scabies, and tetanus are all spread this way.

Blood/Body Secretions Contact

Some infections are transmitted when a cut or mucous membranes (linings of various body parts and internal organs) comes in contact with the blood or other body secretions like saliva, urine, and seminal and cervical fluids of a person with infection. This type of transmission is **very rare** in child care and school settings. Diseases such as hepatitis B, hepatitis C, and human immunodeficiency virus (HIV) can be spread by contact with infected blood. Infected children can possibly transmit these infections through biting if there is visible blood mixed with their saliva (i.e., from bleeding gums). CMV (cytomegalovirus) can be spread by body secretions like urine and saliva, and mononucleosis and some forms of bacterial meningitis can be spread by saliva.

Sexually Transmitted Diseases

These diseases are most commonly transmitted by sexual contact, including genital-to-genital, oral-to-genital, or genital-to-anal contact. The STIs described in this section of the guidelines cover only those most common (i.e., situations with which school/child care nurses and personnel are more likely to be confronted). HIV and AIDS, chlamydia, genital herpes, genital warts, gonorrhea, hepatitis B, pubic lice (crabs), and syphilis can be spread in this way. The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities. The Colorado Child Abuse and Neglect Hotline for reporting possible abuse or neglect is 844-CO-4-KIDS (844-264-5437).

Appropriate Antibiotic Use

Antibiotics are important drugs that treat infections caused by bacteria. Some bacteria are resistant to certain antibiotics, and some resistance has developed due to antibiotic use. Antibiotics save lives, and when a patient needs antibiotics, the benefits outweigh the risks of side effects and antibiotic resistance. However, antibiotics are not always the answer. Antibiotic misuse and overuse contributes to antibiotic resistance. Here are some additional facts about antibiotic use:

- Antibiotics do not work on viruses, such as colds and flu, or runny noses, even if the mucus is thick, yellow or green.
- Antibiotics are only needed for treating certain infections caused by bacteria. Antibiotics also won't help some common bacterial infections including most cases of bronchitis, many sinus infections, and some ear infections.

- An antibiotic will not make a person feel better if they have a virus. Respiratory viruses usually go away in a week or two without treatment. Parents/guardians should be counseled to talk with their child's healthcare provider about the best way to feel better while their body fights off the virus.
- Taking antibiotics creates resistant bacteria. Antibiotic resistance occurs when bacteria develop the ability to defeat the drugs designed to kill them.
- If a person needs antibiotics, they need to take them exactly as prescribed. Parents/guardians should talk with their child's doctor if they have any questions about prescribed antibiotics, or if the child develops any side effects, especially diarrhea, since that could be a C. difficile (C. diff) infection which needs to be treated right away.

Disease Prevention: Hand Hygiene

Hand Hygiene is one of the best tools for controlling the spread of infections. All children and staff should perform effective hand hygiene, which will reduce the amount of illness in child care and school settings.

Hand Hygiene with soap and water:

- Use SOAP and RUNNING WATER.
- Rub hands vigorously as you wash them.
- Wash ALL surfaces including the backs of hands, wrists, in-between fingers and under fingernails.
- Wash for at least 20 seconds.
- Rinse hands well.
- Dry hands with a paper towel or air dryer.
- If using paper towels, turn off the water using a paper towel instead of bare hands.

State health regulations for schools require that soap and paper towels or air dryers be available for all bathroom facilities. Schools often have a problem keeping the restrooms stocked with soap and paper towels due to children playing with the items and clogging toilets or making messes. Schools must find solutions to these problems rather than removing soap and paper towels from the restrooms.

When to wash hands:

- Before, during and after preparing or serving food to children
- Before eating or drinking
- Before and after caring for someone who is sick
- Before and after administering medication
- Before and after caring for a cut or wound
- After coughing, sneezing and/or wiping your nose or someone else's nose
- After using the toilet.
- After changing diapers (wash both the staff person's and child's hands)
- Before and after administering first aid
- After cleaning.
- After touching an animal, animal feed or animal waste
- After handling pet food or treats, or touching an animal's cage or enclosure
- After handling garbage
- Whenever hands are visibly dirty.
- Children who are unable to wash their hands should have assistance from staff.
- Food handlers are required to wash hands before preparing and handling food and when hands are soiled.

Alcohol based hand gels can quickly reduce the amount of germs on the hands is some situations, hand gels do not eliminate all types of germs and are not as effective when hands are visibly dirty or greasy. Children should be supervised when using these products and they should only be used on children over the age of three. The rules and regulations governing both schools and child care prohibit the use of hand sanitizer in lieu of handwashing. It is recommended that these products be used in addition to regular handwashing and only used as the main method of handwashing when facilities are not readily available, such as on a field trip.

Disease Prevention: Immunizations/Vaccines

Childhood Immunizations

Immunizations help prevent serious illnesses. State health regulations require children attending out-of-home child care and school settings to be up to date on all required immunizations or have a valid exemption (either a medical or non-medical exemption). Medical exemptions have a specific form and must be signed by a medical doctor (MD), doctor of osteopathy (DO), delegated physician assistant (PA), or advance practice nurse (APN), and need only be submitted once unless the student's information or school changes. Non-medical exemptions, such as personal belief or religious exemptions, can be submitted on the Colorado Department of Public Health and Environment non-medical exemption form or a parent or guardian can create a "statement of exemption." A nonmedical exemption must be submitted annually for children in grades K-12 (they expire June 30 each year), and at 2, 4, 6, 12, and 18 months of age for children in child care/preschool. Non-medical exemptions for child care/preschool aged children expire when the next vaccines are due or when the child enrolls in kindergarten. Additional information about exemptions can be found at: https://www.colorado.gov/pacific/cdphe/vaccine-exemptions

Required immunizations for school-aged children K through 12th grade include: DTaP (if under 7 years of age) or Tdap (diphtheria, tetanus, whooping cough (pertussis), IPV (polio), MMR (measles, mumps, rubella), HBV (hepatitis B), Varicella (chickenpox). Required immunizations for child care-aged children include those listed above for school-aged children plus Hib (*Haemophilus influenzae* type B), and PCV13 (pneumococcal disease).

Vaccines for hepatitis A, influenza, meningococcal and human papillomavirus diseases are recommended but not required for school attendance. School and child care facilities are required to document immunization dates on the Certificate of Immunization(CI) for all vaccinated children. The CI is to be kept on file either electronically or in hard-copy format. Information on immunization requirements and forms can be found at the following website: https://www.colorado.gov/pacific/cdphe/school-immunizations

Adult Immunizations

It is strongly recommended that child care and school personnel be vaccinated (or have proof of immunity) against pertussis, diphtheria, tetanus, mumps, measles, rubella, polio, chickenpox (varicella), and Hepatitis A. It is especially important for women of childbearing age to be immune to rubella as this infection can cause complications for the developing fetus. Pregnant child care and school personnel who work with young children should tell their physicians they work in these settings. Staff who work in child care and school settings should discuss ACIP recommendations for protection against vaccine preventable diseases: (https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.htm). Child care and school personnel who are exposed to a vaccine-preventable illness or who work in a setting experiencing an outbreak of vaccine-preventable illness may be excluded from work if they lack proof of immunity (e.g., documented vaccination or an antibody titer indicating immunity).

Disease Prevention: Covering Coughs

Influenza and other respiratory illnesses can be spread by coughing, sneezing, or unclean hands. To help prevent the spread of these illnesses, children and staff should try to use proper cough etiquette, including:

- Cover your mouth and nose with a tissue when you cough or sneeze;
- Put used tissues into the trash;
- If a tissue is not available, cough or sneeze into your upper sleeve or elbow, instead of the hands;
- Wash your hands often using proper technique.

Educational materials on cough etiquette for school and child care settings can be found on the CDC website: http://www.cdc.gov/flu/protect/covercough.htm

Disease Prevention: Food Safety

Foodborne illness can often be prevented by adhering to the following safe food handling guidelines:

- Train all food handling staff on food safety.
- Children and staff handling food must wash their hands prior to handling food. A sink dedicated to handwashing must be used; sinks intended for food preparation must not be used for handwashing.
- Ready-to-eat foods like salads, sandwiches, and fruit (basically any food that is not going to be cooked prior to consumption) must not be prepared or handled with bare hands; gloves are required when handling ready to eat foods.

- Ill children and staff must not handle food, especially if they are ill with gastrointestinal symptoms such as vomiting or diarrhea.
- Children or staff with skin lesions on exposed areas like the face, hands, and fingers must not handle food unless the wound is covered with a waterproof bandage and gloves are worn for all food handling activities.
- Store food at proper temperatures. Potentially hazardous cold foods like eggs, milk, dairy products, meat products, etc. must be stored at 41°F or below. Hot foods must be held at 135°F or above.
- Meat and poultry products must be cooked to the proper temperature. Ground beef must be cooked to an internal temperature of 155°F, and poultry must be cooked to 165°F.
- The facility must have a calibrated thermometer to check food temperatures.
- Thaw food in an appropriate manner, such as in the refrigerator, under continuously running cold water in a continuously draining sink, or in the microwave immediately before serving or cooking.
- Raw meat and poultry must be stored on the bottom shelf of the refrigerator to prevent contamination of other food items.
- Thoroughly wash fresh produce in a clean food preparation sink before preparation. This includes fruits with a peel, such as cantaloupe, watermelon, and avocado prior to cutting.
- Use an approved sanitizer on all food contact surfaces. Have a test kit on hand to check the sanitizer concentration to ensure it is at proper levels.
- Avoid cross-contamination by washing hands, cutting boards, utensils and dishes between different foods. Sanitize cutting boards, utensils and dishes with an EPA approved sanitizer after washing.
- Use separate cutting boards for produce and raw meats/poultry.
- All food products must be stored away from medications, first aid supplies, cleaning products and other chemicals.
- Do NOT serve unpasteurized products such as milk, cheese, other dairy products, or juice in the facility.
- For regulations covering infant feeding (hygienic practices, food storage, handling bottles, and solid food), please reference chapter 8 in the Colorado "Rules and Regulations Governing the Health and Sanitation of Child Care Facilities in the State of Colorado" (available at: https://www.colorado.gov/pacific/cdphe/child-care).

For additional information on food safety, please consult with the state or local public health agency.

Disease Prevention: The Facility Environment

Keep Age Groups Separate

Separating children by age groups, particularly in child care facilities, helps to prevent the spread of infections to other groups of children and staff; ill children who are being sent home should also be separated from other children.

Meal Times

Only authorized food handlers should enter kitchen areas to avoid contamination and transmission of disease. Children should not share food, plates, or utensils. Tabletops should be cleaned and sanitized before meals and between different groups of children using the tables. For child care facilities, use a separate utensil for each baby. For meals served family style, clean utensils should be provided for each dish. Children should be supervised while serving themselves to assure they are using utensils to prevent contamination of food. If food does become contaminated, it must be discarded. Each family style serving dish should be clean and sanitized before it is filled or refilled. This means serving dishes returned to the kitchen for seconds should be washed and new serving should be served on clean new plates. During an outbreak of communicable disease, facilities may be required to cease family style meal service.

Nap Times (for child care facilities)

Children should be provided with their own crib (for infants), or cot or mat (for older children). If this is not possible, they should be provided with their own set of mattress covers and linens (linens should be laundered weekly, if possible).

Cleaning, Sanitizing and Disinfecting

Cleaning, sanitizing, and disinfecting surfaces in school and child care settings will help prevent transmission of infectious diseases. These terms all have different meanings and involve different types and concentrations of chemicals/solutions.

A. **Cleaning** removes visible soil and debris, and is done before sanitizing or disinfecting. Cleaning solutions are typically detergent and water.

B. **Sanitizing** kills 99.9% of microorganisms on a surface, so it is unlikely that people having contact with a sanitized surface would be exposed to disease causing organisms. Unscented household chlorine bleach mixed with water is a common sanitizing solution, although other chemicals are available. Generally, a bleach solution made at a concentration of 50 to 200 parts per million is sufficient for sanitizing surfaces and is not toxic to humans. Because several different bleach concentrations are available for purchase, follow the mixing instructions for sanitizing on the specific bottle of bleach used. Bleach solutions may need to be made every couple of days because the concentration declines with time. If a school or child care center is using a sanitizer other than a bleach solution, they should check with their local public health agency to ensure the chemical meets regulatory requirements. Sanitizing solutions should be stored in a labeled container out of the reach of children.

   - In classrooms with young children, toys must be cleaned and sanitized regularly, especially if the toys are soiled or placed in a child's mouth. Common areas, desks/tables, doorknobs and handles, faucet handles, toilet seats, and drinking fountains are examples of areas that should be kept clean and periodically sanitized.

C. **Disinfecting** kills nearly 100% of microorganisms on a surface, so it is very unlikely that people having contact with a disinfected surface would be exposed to disease causing organisms. Unscented household chlorine bleach mixed with water (at higher concentrations than used for sanitizing solutions) is also commonly used as a disinfectant, although other chemicals are available. Use disinfectant according to the label on the product or EPA registration. A list of approved disinfectants can be found at https://www.colorado.gov/pacific/cdphe/child-care. **In an outbreak situation, public health may recommend using an even stronger bleach solution for disinfecting surfaces, depending on the organism causing the outbreak.** If a school or child care center is using a disinfectant other than a bleach solution or one that is on the approved disinfectant list, they should check with their local public health agency to ensure the chemical meets regulatory requirements. If a surface is contaminated with a bodily fluid or excretion like blood or vomit or feces (such as on a diaper changing table), a disinfectant must be used to ensure disease causing organisms are destroyed.

Soft furnishings and linens can be sanitized or disinfected by washing in hot water in a washing machine and using a laundry sanitizer or disinfectant. For additional information about cleaning, sanitizing, and disinfecting, please see the CDPHE guidelines on this topic at: https://www.colorado.gov/pacific/cdphe/child-care

Diaper Changing

Infections that are transmitted by the fecal→oral route can be spread by poor diaper changing procedures. To avoid this, always use the following method for changing diapers:

- Check to make sure the supplies you need are ready (i.e., disposable gloves, fresh diapers, clothes, and damp paper towels or pre-moistened towelette wipes, topical ointment if used).
- Ensure that the diapering table is covered with a dry, non-absorbent, easily cleanable material that has been cleaned and disinfected between diaper changes.
- Individuals changing diapers must wear a new pair of disposable gloves prior to beginning each child's diaper change.
- Hold the child away from your body when you pick him/her up. When you know a child has soiled his/her diaper with fecal material, only use your hands to carry the child.
- Lay the child on the diapering table.
- Remove soiled diaper and clothes soiled with urine/feces.
  - Put soiled cloth diapers in a plastic bag for parents/guardians to take home with the child at the end of the day. Soiled cloth diapers should not be rinsed at the facility.
  - Promptly place soiled disposable in a covered trash receptacle lined with a trash bag.
  - Place clothing soiled with urine/feces should in a plastic bag for the parents/guardians to take home with the child at the end of the day. Soiled clothing should not be rinsed at the facility.
- Clean the child's bottom and any other soiled body area with a damp paper towel or wipe and discard it in a covered trash receptacle lined with a trash bag.
- If topical ointments are applied, clean gloves should be placed on hands. Gloves should be removed before handling clean clothing and diapers.
- Place a clean diaper on the child (and clean clothes if the clothes the child was wearing became soiled with urine/feces) and dress the child.
- Wash the child's hands. The child may then be returned to a clean crib or play area.
- Clean and disinfect the diapering area, equipment or supplies touched during diapering, as well as any equipment (like cribs), surfaces, or toys that may have been soiled from the diaper. Use and EPA approved disinfectant according to the label instructions.

- Wash your hands.

CDPHE DEHS Diapering Procedure poster (April 2019):
https://drive.google.com/file/d/1lB1MuvLRZ9uwmloDkx7wWaslGhp8Bf-o/view

Toilet-training Children

It is recommended that facilities place soiled clothes in a plastic bag for parents/guardians to take home at the end of the day. Parents should supply a clean change of clothes to the facility ahead of time in case of accidents. After helping children use the toilet, show them how to wash their hands. The use of potty chairs in child care facilities is not permitted.

Cleaning Up Bodily Fluids

If a child has a fecal or vomiting accident somewhere in the school or child care facility, adhere to the following procedures to clean the soiled area to prevent widespread contamination. Treat urine, stool, vomit, blood, and bodily fluids, except for human milk, as potentially infectious.

- The person cleaning up the area must wear disposable gloves, mask, and gown or coverall to avoid direct contact with fecal material or vomit, and any potentially contaminated surface. Safety glasses can be worn as well.
- Get a 2½ – 5 gallon bucket.
- Mix a disinfectant solution of one cup of regular household, unscented bleach with one gallon (sixteen cups) of water in the bucket. This will be a 5000 parts per million (ppm) bleach solution. This stronger bleach solution is recommended in order to inactivate norovirus and other viral gastroenteritis agents. This is a concentrated solution so handle with care and ensure the solution is kept out of reach of children. If the contaminated surface will be damaged by a bleach solution, an alternate disinfectant can be used. It is recommended that the disinfectant used be effective against norovirus, since norovirus is a common cause of sudden onset of vomiting and diarrhea. Quaternary ammonia solutions typically are NOT effective at destroying norovirus. A list of disinfectants effective against norovirus can be found at the following US Environmental Protection Agency (EPA) website: https://www.epa.gov/sites/production/files/2018-04/documents/list_g_disinfectant_list_3_15_18.pdf
- Place the disinfectant solution into a spray bottle.
- Obtain disposable paper towels or disposable rags, and two trash bags for the cleanup.
- Wipe up as much visible material as possible with disposable paper towels and carefully place the soiled paper towels and other soiled disposable material in a leak-proof trash bag.
- Immediately use a detergent or combination detergent/disinfectant to clean the affected surface and wipe down with clean towels/rags. Place all soiled towels/rags in a trash bag.
- Apply disinfectant to the cleaned surface again and let the bleach solution stand for several minutes while air drying or follow product instructions if another disinfectant is used.
- Carefully remove the disposable gloves, mask, and gown or coverall and place in the trash bag. If safety glasses are worn, they should be disposed of as well, or sprayed with the 5000 ppm bleach solution or other disinfectant and allowed to air dry.
- Place the trash bag containing the soiled towels/rags and gloves, mask, and gown within another trash bag. Make sure the bags go directly to the dumpster.
- Disinfect all surfaces within a 25 foot radius of the vomit or fecal accident, especially commonly touched surfaces like door knobs, handrails, elevator buttons, faucet handles, etc., with the 5000 ppm bleach solution or another EPA approved disinfectant.
- Be sure to wash hands after cleanup with soap and warm water, rubbing hands together for at least 20 seconds. An alcohol-based hand sanitizer can be applied after handwashing (but hand sanitizers should NOT take the place of proper handwashing with soap and hot water).
- Open the room to outside air at least until the odor of the disinfectant has gone away.
- Launder contaminated linens (sheets, blankets, towels, etc.) in hot water (140°F) with detergent and bleach (if bleach will not damage the material) and dried in a hot dryer (140°F).
- Launder contaminated linens separately to reduce the potential for spreading contamination.
- Steam cleaning carpets and upholstery after cleaning up the vomit or fecal material can be helpful.

Special considerations for food contact surfaces (tables, kitchen counters, food preparation areas, etc.) and items that could potentially be placed in peoples mouths (kitchen utensils, toys or other surfaces in a child care setting, etc.):

- If the 5000 ppm bleach disinfectant solution or other strong disinfecting solution is used on these surfaces or items (or any item that could potentially end up in someone's mouth), it is important that the surface/item be rinsed off with clean water after disinfection after a one minute contact time.
- Any uncovered **food items or single-service items** (drinking straws, takeout containers, paper napkins, paper plates, etc.) that may have been in the vicinity where the vomit or fecal accident occurred should be immediately discarded.

Animals/Pets at Child Care and School Settings

Animals in the classroom can be beneficial in the education process; however, some animals can present potential health and safety risks to humans, including infectious disease transmission, bites, and allergies. For example, many animals, especially reptiles and live poultry like chicks and ducklings, shed *Salmonella* bacteria in their feces without being sick, themselves. People can contaminate their hands with feces when they handle the animal, feed the animal, or clean up after the animal (such as cleaning the cage or other enclosure), and disease can spread through the fecal→oral route. Some animals are not appropriate for the classroom, such as: poisonous animals (like poisonous/venomous spiders, snakes, and insects); wild, stray, or aggressive animals; or animals from an unknown source. To minimize the risk of children and staff acquiring an infectious disease from an animal or from being bitten, simple precautions should be taken, as outlined below:

General information:

- Children (especially those under the age of 5 years) must be supervised carefully when around animals and animal enclosures, especially if children are handling animals.
- Reptiles, amphibians and live poultry (e.g., chicks and ducklings) are prohibited in classrooms and facilities with children who are kindergarten age or younger (under the age of 5 years). This includes hatching eggs in an incubator.
- Inform parents/guardians of animals that are kept onsite or that may be visiting the facility.
- Animal cages or enclosures must be kept clean and in good repair. Do not clean animal cages or enclosures in sinks or other areas used to prepare food and drink or used for handwashing. Children under the age of 5 years must not clean enclosures.
- Children and staff must always wash their hands with soap and running water after any contact with animals, their cages or enclosures, or their food, and after visiting places with animals such as zoos or farms.
- Children must never "kiss" animals or have them in contact with their faces.
- Do not allow animals to roam free in the facility.
- Do not allow animals in areas where food and drinks are prepared or consumed.
- Clean and disinfect all areas where animals have been present.
- Animals kept onsite must receive regular veterinary care, and must be up-to-date on all recommended animal vaccinations.

School Settings (K-12):

- If children over 5 years of age assist in cleaning the cage or enclosure, they must be supervised and should wash their hands afterwards.
- Live poultry (e.g., chicks and ducklings), reptiles, and amphibians are prohibited from classrooms with children kindergarten age or younger or communal areas that these children use. Because infections from these animals spread via fecal→oral transmission (hand-to-mouth behaviors), having these animals in other classrooms where children engage in frequent hand to mouth behaviors is discouraged.

Child Care and Preschool Settings:

- Live poultry (e.g., chicks and ducklings), reptiles and amphibians are **prohibited** in child care and school settings where children are less than 5 years of age. This includes hatching eggs from an incubator.
- In facilities that also have kids over age 5, live poultry (e.g., chicks and ducklings), reptiles, and amphibians are **prohibited** from classrooms with children kindergarten age or younger or communal areas that these children use. This includes hatching eggs from an incubator. Because infections from these animals spread via fecal→oral transmission (hand-to-mouth behaviors), having these animals in other classrooms where children engage in frequent hand-to-mouth behaviors is discouraged.

- The following animals are also prohibited in **all** child care facilities: psittacine birds, ferrets, primates, poisonous fish, poisonous reptiles, poisonous amphibians, aggressive animals and fish, wild-caught animals or any other animals which may pose a hazard to the health of the children.
- Children in child care settings can **not** assist in cleaning cages or enclosures.
- Exposure to farm animals such as goats, sheep or cows is strongly discouraged in child care settings where children less than 5 years of age are present due to the potential risk for disease transmission.
- Mobile petting zoos are strongly discouraged from visiting child care settings where children less than 5 years of age are present due to the potential risk for disease transmission.

The National Association of State Public Health Veterinarians produces a document titled "Compendium of Measures to Prevent Disease Associated with Animals in Public Settings" (available at: http://nasphv.org/documentsCompendiumAnimals.html). This document provides recommendations for controlling disease and minimizing health risks associated with animal contact in a variety of settings. The CDC also has information about the health risks of a variety of animals at http://www.cdc.gov/healthypets/.

Resources

The following resources may be helpful when dealing with infectious disease issues in school and child care settings:

American Academy of Pediatrics (AAP): http://www.aap.org/

Bloodborne Pathogens: contact CDPHE at 303-692-2700

Centers for Disease Control and Prevention (CDC): http://www.cdc.gov/

Children's Hospital Colorado - Denver: http://www.childrenscolorado.org/
School Health Program: 303-281-2790

Colorado Department of Education (CDE): http://www.cde.state.co.us
School Nursing and Health Consultant: 303-866-6779

Colorado Department of Public Health and Environment (CDPHE): https://www.colorado.gov/cdphe
Main Phone: 303-692-2000 or 800-866-7689

- Child and Adolescent Health: https://www.colorado.gov/cdphe/categories/services-and-information/health/personal-and-family-health/children
- Communicable Disease Branch: https://www.colorado.gov/pacific/cdphe/categories/services-and-information/health/diseases-and-conditions
  Main Phone: 303-692-2700
- Hepatitis Program: https://www.colorado.gov/pacific/cdphe/hepatitis
  Main Phone: 303-692-2700
- Immunization Program: https://www.colorado.gov/pacific/cdphe/categories/services-and-information/health/prevention-and-wellness/immunization
  Main Phone: 303-692-2700
- Sexually Transmitted Infections Branch: https://www.colorado.gov/pacific/cdphe/sti-hiv-professionals
  Main Phone: 303-692-2700
- Tuberculosis Program: https://www.colorado.gov/pacific/cdphe/tuberculosis
  Main Phone: 303-692-2700

Healthy Child Care Colorado: www.healthychildcareco.org
Main Phone: 303.339.6800

Local public health departments and/or environmental health services: https://www.colorado.gov/pacific/cdphe/find-your-local-public-health-agency

Rocky Mountain Poison and Drug Center: http://www.rmpdc.org/
Main Phone: 800-222-1222

Publications

"The Red Book," published by the American Academy of Pediatrics: https://redbook.solutions.aap.org/

"Control of Communicable Diseases Manual," published by the American Public Health Association: https://www.apha.org/ccdm

"Managing Infectious Diseases in Child Care and Schools," published by the American Academy of Pediatrics: https://ebooks.aappublications.org/content/managing-infectious-diseases-in-child-care-and-schools-4th-ed

Animal Bites/Rabies

What is an Animal Bite/Rabies?

Animal bites, especially dog and cat bites, occur frequently. Animal bites that break the skin should be evaluated by a healthcare professional to assess the risk of bacterial infection or transmission of rabies. Rabies is a fatal viral infection that affects the nervous system of humans and other mammals. The virus is shed in the saliva of infected mammals and appears in saliva around the same time the animal becomes symptomatic. The few people who die of rabies each year in the United States are usually infected either by a bat bite or after an animal bite that occurred during international travel. As of 2018, the last human case of rabies in Colorado was in 1931. The majority of animal rabies cases in the United States occur in four wild animals species: raccoons, skunks, bats, and foxes. Rabies in domestic animals (like cats and dogs) is infrequent but increasing in Colorado as the number of rabies positive skunks has increased. Rabies in rodents and lagomorphs (hamsters, guinea pigs, squirrels, and rabbits) is extremely rare. In Colorado, the primary reservoir animals for rabies are bats (throughout the state) and skunks (in the eastern part of the state).

Signs and Symptoms of Rabies in Humans

- First signs may be flu-like: weakness, fever, headache
- Discomfort, prickling, itching at the site of the bite
- Within days to weeks: central nervous system dysfunction — anxiety, confusion, agitation, delirium, abnormal behavior, hallucinations, insomnia

Once a person begins to exhibit signs of the disease, survival is rare. To date, fewer than 10 documented cases of human survival from clinical rabies have been reported and only two have not had a history of pre- or post-exposure prophylaxis.

Signs and Symptoms of Rabies in Animals

Rabies virus causes acute encephalitis in all mammals and the outcome is almost always fatal. The first symptoms of rabies may be nonspecific and may include lethargy, fever, vomiting, and anorexia. Signs progress within days to central nervous system dysfunction and may include cranial nerve dysfunction, trouble walking, weakness, paralysis, seizures, difficulty breathing, difficulty swallowing, excessive salivation, abnormal behavior, aggression, and/or self-mutilation. A bat may be unable to fly due to rabies causing weakness or paralysis of the wings. However, it is impossible to know if an animal has rabies based on symptoms along, lab testing is required.

Rabies Incubation Period

The incubation period for rabies is usually 3 to 8 weeks (median of 6 weeks) and up to 6 years or more.

Rabies Contagious Period and Spread

Rabies is transmitted through the saliva of infected mammals, primarily through a bite. Transmission has been rarely documented via other routes such as contamination of mucous membranes (i.e., eyes, nose, mouth), and corneal and organ transplantations. **Bat bite wounds may be unnoticeable upon examination of skin, and children may not report contact with bats to an adult. The most likely way a child at a school or child care facility would be exposed to rabies is through unrecognized contact with a bat.**

Public Health Reporting Requirements

- Report all animal bite incidents or any contact with bats to the local animal control agency, local public health agency, or police department within **24 hours**. Any bat found in a room or on the ground in a fenced yard with an unattended child should be tested for rabies; consult with public health. The parents/guardians of a child bitten by an animal or found unattended with a bat must be notified.
- Occasionally children are found touching or playing with live or dead bats. If this occurs, the local or state public health agency must be notified immediately and the bat must be submitted to the CDPHE laboratory or CSU laboratory for rabies testing.

Control of Spread

- Educate children not to approach, attempt to pet, handle, or feed strange or wild animals.
- Any school or child care facility with a bat colony on the premises should take steps to reduce the chance of contact between children and bats.
- All dogs, cats, and ferrets should be vaccinated against rabies by a licensed veterinarian.

- A dog, cat, or ferret involved in a human bite must be observed for 10 days following the bite. The local animal control agency or police/sheriff department usually enforces this observation period. If the animal is still alive 10 days after the bite, there is no chance that rabies virus was in the saliva of the animal at the time of the bite. This observation period only applies to domestic dogs, cats, and ferrets. There is no established observation period for domestic-wild hybrids (such as wolf-hybrid dogs) or any wild mammal.

Treatment

Any child with an animal bite or contact with a bat should receive medical attention. Animal bite treatment includes thorough cleaning of the wound and tetanus prophylaxis, if appropriate (see page 113). Occasionally, antibiotics are prescribed to treat bacterial infections. Bite sites that develop redness, swelling, drainage, or pain should be reevaluated by a health professional. There is no treatment for rabies after symptoms appear. Rabies vaccine can provide immunity when administered after an exposure. The treating health care provider and local or state public health agency will evaluate each bite incident to determine if rabies vaccine should be given. Rabies post-exposure vaccination for humans is a series of four or five rabies vaccinations over 2-4 weeks, and one dose of human rabies immunoglobulin given as soon as possible after the exposure. This series of vaccinations and wound care usually must be initiated in the ER of a hospital or an urgent care setting. In general, public health assumes that skunks, raccoons, foxes, and bats have rabies until proven otherwise. In Colorado, dog and cat bites usually do **not** require rabies vaccine prophylaxis.

Exclusion

Exclusion of a student or child involved in an animal bite or bat contact is **NOT** necessary.

Role of Teachers, Caregivers and Family

- Provide immediate first aid by washing the bite area thoroughly and applying a cold compress to any bruised area and have the wound evaluated by a health professional.
- The biting animal should be captured or confined if it is safe to do so. If the animal can not be contained safely, note the size, appearance, distinguishing features, and report immediately to animal control or local public health.
- Educate children to never feed or touch wild animals or domestic animals unknown to them and avoid any contact with stray, wild, or dead animals and to report any bats to an adult.
- Supervise all contact between children and animals
- Maintain the health of any pet animal in a child's environment by ensuring they are fully immunized and on recommended parasite control programs.

Resources: https://drive.google.com/open?id=1CmvE6TnPxQDHXm43xe0WPIZvhnJToXwM

Bacterial Meningitis

What is Bacterial Meningitis?

Bacterial meningitis is an inflammation of the tissues surrounding the brain and spinal cord and is a medical emergency caused by several types of bacteria (e.g., meningococcal, pneumococcal, and *Haemophilus influenzae*). A person's blood may also be infected with the bacteria. Some people may carry these bacteria in their nose and/or throat and have no symptoms of disease.

Signs and Symptoms

- High fever
- Severe headache
- Stiff neck
- Sleepiness
- Nausea/vomiting
- Loss of appetite
- Being disoriented, irritable or confused
- Eyes sensitive to light

Incubation Period

- Meningococcal: 1 to 10 days (usually less than 4 days)
- *Haemophilus influenzae (H. flu)*: unknown (probably a few days)
- Pneumococcal: as short as 1-3 days

Contagious Period and Spread

- Cases can be contagious until completing 24 hours of antibiotic treatment.
- Bacteria that cause meningitis can be spread by direct contact with saliva or nose/throat discharges of a person with infection. Infected individuals who do not have symptoms can still pass the bacteria to others.

Public Health Reporting Requirements

- For meningococcal disease, report the infection to the state or local public health agency by phone immediately (within 4 hours) of a suspected or confirmed diagnosis.
- Report *H. flu* to public health within one working day.
- For pneumococcal, report the infection to the state or local public health agency within 4 days of diagnosis.
- Contact state or local public health agency for assistance if the school or child care facility plans to notify parents/guardians about a case of meningitis in the facility.

Control of Spread

- *Haemophilus influenzae type B* (Hib) and pneumococcal vaccines are routinely given to children starting at age 2 months. Meningococcal vaccine is routinely given to pre-teens and college students.
- The Colorado School Immunization Rules require children in child care or preschool to have *Haemophilus influenzae* serotype b(Hib) vaccine and pneumococcal vaccine starting at 4 months of age or an exemption of vaccination.
- Teach children to cover coughs and sneezes with a tissue or with an upper sleeve or elbow if no tissue is available, to wash their hands after using facial tissues or having contact with mucous, and to dispose of tissues that contain nasal secretions after each use. Use good hand hygiene technique at all times.
- Preventive Antibiotics
  - For meningococcal infections, close contacts (such as household members, boyfriend/girlfriend, and child care classroom contacts) should receive a preventive antibiotic. School classmates, teachers, and personnel do **not** routinely require a preventative antibiotic, unless they had prolonged exposure beyond the classroom.
  - For *H. flu* serotype B (Hib) infections, preventive antibiotics may be recommended for household and child care contacts in certain situations. Typically, the state or local public health agency will notify household contacts if a preventive antibiotic is needed.

Treatment

Suspect cases of meningitis should be referred to a health care provider. Cases of bacterial meningitis and bloodstream infections often require hospitalization and treatment with antibiotics.

Exclusion

- Exclude infected students/children and staff until at least 24 hours after treatment with antibiotics
- Readmit the child once cleared to return by a health professional AND when the child is able to participate and the staff members determine they can care for the child without compromising their ability to care for the other children in the group.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination.
- Report the infection to the staff member designated by the childcare program or school for decision-making and action related to the care of ill children.

Bedbugs

What are Bedbugs?

Small insects that feed on humans. They are most active in the late night and can travel 10 to 15 feet to feed. Bedbugs can survive up to 6 months without feeding. The bites are itchy and often occur in a row on areas of the skin that are exposed during the night.

Signs and Symptoms

- Itching
- Bites may have a red dot where the bite occurred in the middle of a raised red bump
- Specks of blood from crushed bugs or dung spots (pen point size) on bedsheets and mattresses
- Live bugs in crevices or seams of bedding and furniture

Image source: www.cdc.gov

Image source: www.aad.org

Incubation Period

Bedbugs do not reproduce on humans like scabies or lice. After biting humans, they hide in crevices during the day. Bites are usually noted in the morning.

Contagious Period and Spread

- Children or staff members may bring bedbugs to school in bags and clothing.
- Bedbugs are not spread from one person to another and are not an indication that people or their homes are dirty.

Public Health Reporting Requirements

The state health department does not respond to or investigate bed bug infestations as there is no evidence that bed bugs transmit disease. The presence of bed bugs in schools is not reportable.

Control of Spread

- Schools and child care facilities should develop a bed bug plan to coordinate their response to the presence of bed bugs in the facility. Plan stakeholders should include at a minimum the school nurse, faculty, administrators and facilities staff. It is important to formulate a response strategy before an infestation is suspected or identified. Schools and child care facilities dealing with bed bugs brought in by a student/child or staff member should make decisions beforehand about how to handle privacy issues, parent or guardian notifications, student/child or faculty exclusions from the school or facility, and bed bug treatment/eradication options. The introduction of bed bugs into the school environment is a complex issue and should be planned for appropriately.

  Resources for Developing a Bedbug Response Plan

  http://www.epa.gov/childcare/bed-bugs-go-school

  https://www.michigan.gov/documents/emergingdiseases/Bed_bugs_schools_293498_7.pdf

  http://webdoc.agsci.colostate.edu/ipm/Recommendations%20bed%20bugs2014.pdf

Treatment

- Avoid scratching bites to prevent infection. Fingernails should be kept clean to avoid damaging and infecting skin due to itching.
- Steroid skin creams or oral antihistamines may relieve itching

- Children with bug bites are not infested and do not require treatment to prevent spread to others.

Exclusion

None

Role of Teachers, Caregivers and Family

- The presence of bed bugs in a child's home may be a significant stressor. Perceptions of social stigma and physical discomfort caused by bed bug bites can affect a child's ability to learn and perform in the school environment.
- People may or may not develop a bite reaction following bed bug bites. For those who develop itching, scratching of bites may lead to secondary infections.
- School nurses and child care health consultants may need to assess students/children who display persistent scratching for insect bites or the presence of lice. There are no characteristics of bed bug bites that are diagnostic of bed bugs; insect bites, in general, appear similar to one another. A history of exposure and discussion with the student/child is often required to determine that the source of bites is bed bugs.
- The school or child care facility's bed bug response plan should identify resources for affected children (and faculty). This may include educational materials, social or environmental health services, or recommendations for the treatment of bed bugs. It is anticipated that recommendations and available resources will differ among school districts and child care programs.

Bedbug Resources: https://drive.google.com/open?id=1u6OKIRv_vSkkahIjrTAsMELZXhot1I6R

Campylobacter

What is *Campylobacter*?

Campylobacter infection causes an intestinal illness referred to as campylobacteriosis. Campylobacteriosis is the most commonly reported bacterial intestinal illness in the United States and while cases are reported year round, infections are more common in the summer months. *Campylobacter* bacteria commonly live in poultry and cattle, but can also be found in puppies, kittens, birds and other animals.

Signs and Symptoms

- Diarrhea (sometimes bloody)
- Low-grade fever
- Abdominal pain
- Malaise
- Nausea
- Vomiting (occasional)

Incubation Period

1-10 days (usually 2-5 days)

Contagious Period and Spread

Campylobacter is spread through the fecal→oral route. People can become ill with *Campylobacter* by drinking contaminated water or unpasteurized milk, eating contaminated food (e.g., raw or undercooked poultry, raw milk products), or coming into contact with animals that are infected (including pets and farm animals). Transmission can occur from person-to-person, but this is not common.

People are contagious as long as they have *Campylobacter* bacteria in their stool, but are most contagious while having diarrhea. The bacteria may be in the stool for a few days after symptoms have resolved.

Public Health Reporting Requirements

- Campylobacteriosis cases are reportable to public health within 4 days of diagnosis
- Staff who become aware of illness should report the infection to the facility director or the school nurse.
- If other children or staff are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or childcare center.

Control of Spread

Please consult with local or state public health on implementation of control measures.

- Encourage and teach the importance of frequent handwashing, especially after animal contact, using the toilet, changing diapers and before eating. Sample signs showing when and how to wash hands are included in the online "Fact sheets and letter template folder". Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19
- Refer to page 18 of this document for information on food safety.
- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.

Treatment

Treatment with antibiotics shortens the illness duration of the illness and prevents relapse when given early in the infection. Antibiotic treatment is typically 5-7 days, and usually eradicates the organism from the stool within 2 or 3 days.

Exclusion

Child Care

- EXCLUDE all infected children and/or caregivers until at least 24 hours after diarrhea has resolved.
- Ill children should not go to another facility during the period of exclusion.

Primary and Secondary School

- EXCLUDE all infected children experiencing symptoms and/or staff until at least 24 hours after diarrhea has resolved.
- In general, students or staff with campylobacteriosis who do not have diarrhea and are not otherwise sick may remain in school.

In rare circumstances, public health may require additional testing before a person with infection can return to work, school, or child care.

EXCLUDE affected individuals from food preparation until at least 24 hours after their diarrhea has resolved or are cleared by the state or local public health agency.

Role of Teachers, Caregivers and Family

- If your child or a child you care for is infected with *Campylobacter*, follow the advice of the child's healthcare provider.
- Although person to person transmission is uncommon, it is important to practice good hand washing, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food. Diapering, bathroom and food preparation areas should be cleaned and disinfected frequently. It is also important to wash hands after touching pets or other animals as they can carry *Campylobacter*.
- Keep food that will be eaten raw, such as vegetables, from becoming contaminated by raw animal-derived food products and thoroughly cook all food products from animals, especially poultry, and avoid consuming unpasteurized milk, or other unpasteurized products.

Campylobacter Resources: https://drive.google.com/drive/folders/1b3HnW-1V6OT7gINGopopbrJZERXewtb6

Chickenpox (Varicella) and Shingles (Herpes Zoster)

What is Chickenpox?

Chickenpox is a highly contagious viral illness. The virus remains inactive in the person's nerve cells after chickenpox resolves, and reactivation can occur later in life resulting in shingles. A vaccinated person may get chickenpox as a mild illness with fewer lesions that might not be blister-like.

Chickenpox Signs and Symptoms

- Rash (small red spots/bumps developing into small fluid-filled sacs over 3-4 days then forming scabs or "crusts")
- Crops of lesions appear over several days resulting in rash in various stages
- Rash may appear inside mouth, ears, genital areas, and scalp
- Fever, runny nose, cough
- Fatigue

Shingles Signs and Symptoms

Itchy or painful rash of red bumps or blisters, usually in a narrow area on one side of the body

Chickenpox in an unvaccinated person

Chickenpox in a vaccinated person

Shingles

(Images from www.cdc.gov)

Incubation Period

Incubation period ranges from 10-21 days (usually 14-16 days).

Contagious Period and Spread

Chickenpox is spread through the air when a person with infection coughs and/or sneezes, or by direct contact with the rash of a person with infection.

Direct contact with a shingles rash (prior to crusting) can cause chickenpox in people not immune to chickenpox.

A person is contagious with chickenpox 1-2 days before the rash appears until all the blisters have crusted over (usually 5 days after rash onset). A person with shingles is contagious until all blisters have scabbed or crusted over.

Public Health Reporting Requirements

- Report cases of chickenpox to the state or local public health agency within 4 days of a suspected or confirmed diagnosis. Shingles does **not** need to be reported.
- Report outbreaks of chickenpox (>3 cases in 21 days)
- A notification letter can be used to notify parents/guardians of exposed children. A sample letter to notify parents and additional information are available on the CDPHE varicella website.
- Notify those who might be pregnant or have a problem with their immune system to check with their health care providers.

Control of Spread

Chickenpox (varicella) vaccines are routinely given to children starting at 12-15 months of age with a second dose at 4-6 years of age. The Colorado School Immunization Rules require children to have age appropriate dose of varicella vaccine for child care entry and 2 doses of varicella vaccination prior to school entry. However, a lab confirmed history of varicella or an exemption to vaccination may be accepted.

- Varicella vaccine administered within 3-5 days of exposure may prevent the disease.
- Properly dispose of articles soiled with nose/throat discharges.
- Use good surface-sanitation technique and good hand-hygiene technique at all times.

Treatment

- Antiviral medication may be used for people at increased risk of severe disease. Consult with a doctor for treatment options.
- If a medicine to lower temperature or reduce discomfort is necessary, acetaminophen-containing medicines (like Tylenol) are recommended. **ASPIRIN SHOULD BE AVOIDED** because it increases the risk of Reye's Syndrome, a serious disorder that can lead to coma and death.

Exclusion

- Exclude all children, students, and/or staff with chickenpox until all vesicles have scabbed or crusted over (usually within 6 days after rash onset). For immunized children with mild infection with no crusts, they can be readmitted once no new red bumps have appeared for at least 24 hours.
- People with shingles may attend school and child care if the rash is covered.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination
- Report the infection to the staff member designated by the child care program or school for decision-making and action related to the care of ill children. That person, in turn, alerts possibly exposed family and staff members and parents of unimmunized children to watch for symptoms and notifies the health consultant.

Chickenpox (varicella) Resources: https://www.colorado.gov/pacific/cdphe/chickenpox

Chlamydia

What Is Chlamydia?

Chlamydia trachomatis, a bacterium, causes chlamydia infection, which is the most frequent bacterial sexually transmitted infection (STI) in the United States. The majority of infections do not cause symptoms and are detected through screening tests. Symptoms of chlamydia, when present, are similar to those of gonorrhea. These two infections often present as co-infections in the same person and his or her partner(s).

Signs and Symptoms

- Many People With Infection Do Not Have Symptoms (Asymptomatic).
- Females may have cervical discharge with swelling, redness and bleeding. Complications can include pelvic inflammatory disease (PID), which can lead to ectopic pregnancy, infertility, and chronic pelvic pain.
- Males may have urethritis, characterized by a whitish or clear discharge, and painful or difficult urination. Complications can include epididymitis, infertility, and reactive arthritis (Reiter's syndrome).

Incubation Period

Usually 1-3 weeks.

Contagious Period and Spread

- Spread through sexual contact: oral, anal, and vaginal.
- Individuals remain infectious for up to 7 days after completion of treatment.
- Public Health Reporting Requirements
- Chlamydia infections must be reported by laboratory and health care providers to the state or local public health agency within 4 days of a suspected or confirmed diagnosis.
- The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities.

Control of Spread

- No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.
- People with infection should be examined by a health care provider and treated as soon as the diagnosis is confirmed to prevent complications. Treatment of partner(s) is a crucial strategy to prevent re-infection. People with infection should seek medical care if symptoms persist or recur. Parental consent is not required for minors to be examined and treated.
- People with infection e should avoid sexual activity until they and their partner(s) are treated and cured.
- People with infection should abstain from sex or use condoms to prevent future infections.
- General education of STI prevention is advocated.

Treatment

Treatment is with antibiotics. Concurrent treatment of sex partner(s) with same regimen is essential to prevent re-infection or spread of disease.

Exclusion

No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals (those who cannot consent to sexual contact for any reason) must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: http://www.cdc.gov/std/chlamydia/default.htm

Clostridiodes Difficile (C. Difficile)

What Is *Clostridiodes Difficile*?

Clostridiodes difficile (C. difficile) is a bacterial infection that can cause diarrhea. Symptoms can range from mild diarrheal illness to severe colitis and can result in death. *C. difficile* causes almost half a million illnesses per year. Most of these illnesses occur in adults and in people who have recent exposures to medical care and antibiotics. However, anyone, including children, can become ill from *C. difficile* under the right circumstances. The burden of *C. difficile* among pediatric patients appears to be much higher in community settings compared to hospital settings. There are two types of *C. difficile* bacteria, toxigenic and non-toxigenic. Only toxigenic *C. difficile* bacteria can cause symptoms. A person must also have an imbalance in their normal, healthy gut flora, which allows *C. difficile* to flourish and cause inflammation and damage to the gut. Normal, healthy gut flora can be disturbed for many reasons, but a major cause is previous exposure to antibiotics.

Signs and Symptoms

- Watery diarrhea (typically at least three bowel movements per day for at least 24 hours)
- Fever
- Loss of appetite
- Nausea
- Abdominal pain and tenderness
- Young children (<5 years) especially infants frequently have no symptoms

Incubation Period

- Variable; symptoms typically develop 3-7 days after the exposure to an antibiotic however symptoms can occur anywhere between 1 day and 10 weeks or more.
- Some people will experience a recurrent infection which may occur after the initial episode of diarrhea has been treated and resolved. People who experience a relapse of diarrhea or have fever, chills, and or abdominal pain should contact their doctor.
- Asymptomatic infants can carry the bacteria for an unknown period without becoming ill.

Contagious Period and Spread

- *C. difficile* is spread through the fecal→oral route and can occur when a person comes into contact with a contaminated surface or it can be spread person-to-person, including via hands of staff in child care facilities and schools.
- People who are ill with *C. difficile* can shed the bacteria into the environment, causing surfaces to become contaminated. *C. difficile* can live on environmental surfaces for several months.
- Improper hand hygiene is a major contributor to the spread of *C. difficile*. Not everyone who ingests *C. difficile* bacteria will become ill.
- *C. difficile* can spread as long as the bacteria are in the stool, but people are most likely to shed the bacteria when they have active diarrhea. The more frequent and uncontrolled the diarrhea is, the more likely they are to shed the bacteria.
- People who are being treated for *C. difficile* are less infectious than those who are not on treatment. A person is generally considered contagious until 48 hours after the last episode of diarrhea. However, it is not fully understood how long a person may continue to shed bacteria after diarrhea stops.

Public Health Reporting Requirements

- *C. difficile* infections are laboratory reportable to the state health department for residents of the Denver metropolitan area (Adams, Arapahoe, Denver, Douglas and Jefferson counties). Single cases outside of these five counties are not reportable.
- The school nurse or Child Care Health Consultant should be consulted for specific concerns, or consultation with state or local public health personnel is available.
- If other children or staff from the same classroom are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak, and all outbreaks are reportable to the state or local health departments.

Control of Spread

Meticulous hand hygiene for staff and students/children: Hand washing with soap and water is *the* most effective method to prevent the spread of *C. difficile*.

Proper hand hygiene with soap and water is required especially after using the bathroom, after changing a diaper, prior to preparing and eating meals and anytime hands are visibly soiled.

Alcohol based hand sanitizer does not kill *C. difficile* spores.

Glove use is required if contact with stool could occur and hand hygiene must be performed with soap and water immediately following removal of gloves.

Environmental Cleaning

- CDC recommends meticulous cleaning followed by disinfection using hypochlorite (bleach) based germicides of potentially contaminated surfaces and items.
- Surfaces that may be contaminated with stool (diaper changing areas and bathrooms) should be:
  - Cleaned and rinsed with detergent and water to remove dirt and debris
  - Disinfected by applying either
    - an EPA registered disinfectant labeled effective against C. difficile spores (http://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants) OR
    - household bleach
      - CDC recommends a 1:10 dilution of 5.25% - 6.15% household bleach with a contact time of 10 minutes in order to inactive C. difficile spores.
      - It is important to note that household bleach concentrations have increased in recent years to 8.25%. More concentrated bleach may require different dilutions and different contact times. For example, bleach with an 8.25% concentration requires a 1:9 dilution to be effective against killing *C. difficile* spores (1 part bleach, 8 parts water) and requires a contact time of 5 minutes.
    - users should read labels carefully to ensure the correct product is applied correctly because many products are designed for a specific purpose and must be used in a certain manner to ensure disinfection
- Gloves must be worn when cleaning areas contaminated with stool, and hand hygiene with soap and water are required immediately after glove removal.
- Soiled Linen and Clothing
  - Clothing, towels and blankets that are soiled or potentially contaminated can be laundered in the hottest water safe for the item with normal detergent. Chlorine bleach should be used if safe for the item being laundered. Dry on high heat. Items with visible stool contamination should be rinsed well before washing.
  - Items that are contaminated with high hazard bodily fluids, such as stool, should be laundered separately.
  - Dry cleaning is not as effective as standard washing at killing spores. This option should only be used for items that cannot be machine washed.

Treatment

Typically antibiotics are prescribed for an initial episode, depending on disease severity and other factors. Some providers may choose to not treat an episode of *C. difficile* under certain circumstances. People with multiple recurrences or severe illness may be treated surgically.

Exclusion

- **EXCLUDE** students/children who have diagnosed *C. difficile* with active diarrhea until 48 hours after the last diarrheal stool.
- In certain cases people might experience recurring or ongoing diarrheal illness with *C. difficile* infection. In these circumstances, the benefits and risks of having the student/child attend school or group care should be considered.
- Factors that should be considered in the decision to allow children with recurring/ongoing diarrheal illness with C. difficile infection include:
  - if the diarrhea is controlled (the student or child is not having accidents and is able to go to the bathroom when needed or if the student or child is in diapers the diarrhea must be able to be contained in the diaper)
  - if the student/child is receiving treatment for the infection

CDPHE and your local public health department are available for consultation as needed.

Role of Teachers, Caregivers and Family

- Bloody diarrhea may be a sign of *C. difficile* but many other pathogens do as well. Any bloody diarrhea should trigger a medical evaluation
- For known cases of *C. difficile* ensure that the advice of the health care provider and public health are followed to prevent transmission.
- Educate and reeducate about the importance of meticulous hand hygiene using soap and water. *C. difficile* spores are not killed by alcohol-based hand sanitizers.

Resources: https://www.cdc.gov/cdiff/prevent.html

Cytomegalovirus (CMV)

What Is Cytomegalovirus?

Cytomegalovirus (CMV) infection is most common in children under 5 years of age. Most infections cause no symptoms or mild symptoms such as a low-grade fever. The disease can be more serious in people with impaired immune systems. The virus is a frequent cause of post-transplant and post-transfusion infections. Most people have been exposed to CMV by the time they are adults and are immune to it. Infants can be infected before they are born. A small percentage of these infants will develop illness, while most will not have symptoms and will be immune to subsequent infections.

Signs and Symptoms

- Generally no symptoms are present in young children.
- Sudden onset of bloody diarrhea
- Abdominal cramps
- Little or no fever
- Sometimes vomiting and watery (non-bloody) diarrhea is present
- Sometimes liver or spleen may become enlarged

Incubation Period

About 3-12 weeks

Contagious Period and Spread

CMV is spread by contact with body secretions of infected individuals (in children, primarily saliva and urine). Infection requires close contact with a person excreting the virus.

People are contagious as long as the virus is in body secretions, which can be months or years.

Public Health Reporting Requirements

Individual cases are not reportable. The school nurse or child care health consultant should be consulted for specific concerns, or consultation with the state or local public health agency is available.

Referral to a health care provider is optional unless symptoms are severe.

Control of Spread

- Women of childbearing age working with young children should pay close attention to proper handwashing procedures (especially those who work with children with developmental disabilities).
- Encourage frequent handwashing and proper hygiene techniques especially after changing diapers.
- Avoid exchange of saliva directly or via objects
- Wash hands and objects carefully after contact with urine

Treatment

There is no treatment for CMV infection in healthy individuals. However, immunocompromised individuals should consult a health care provider regarding appropriate treatment.

Exclusion

None unless the child is unable to participate and be cared for without compromising the health and safety of other children in the group or other exclusion criteria apply.

Role of Teachers, Caregivers and Family

- Practice good hand hygiene at all times
- Review standard precautions, especially for women of childbearing age working with or having their own children younger than 3 years participating in group care settings
- Women of childbearing age should discuss CMV exposure risk with their health care provider

Resources: https://drive.google.com/drive/folders/1mf50aqqYBpWKId0ueCmOkeB4hAn2aYPU

Common Cold

What Is The Common Cold?

Many different viruses cause the common cold. The common cold is an upper respiratory illness characterized by a runny or stuffy nose, sneezing, coughing, watery eyes, mild sore throat, chills, and fatigue.

Signs and Symptoms

- Runny or stuffy nose
- Sneezing
- Coughing
- Chills
- Sore or scratchy throat
- Fatigue

Incubation Period

1 to 14 Days

Contagious Period and Spread

The common cold is spread through contact with droplets (produced by coughing and sneezing) and infectious discharges from a person with infection. Contact with hands, tissues, and other articles contaminated with nose/throat discharges of ill people can spread the virus.

People are usually contagious a few days before symptoms appear and while symptoms are present.

Public Health Reporting Requirements

- Individual cases are not reportable. Suspected outbreaks of all types (including respiratory illness) are reportable to state or local public health.
- The school nurse or child care health consultant should be consulted for specific concerns, or consultation with the state or local public health agency is available.
- If the child develops more severe symptoms or experiences ongoing symptoms, he/she should be referred to a health care provider to be checked for secondary complications (such as bronchitis, sinus infections, middle ear infections, and laryngitis).

Control of Spread

- Encourage frequent handwashing and proper hand-hygiene techniques.
- Teach children to cover their nose and mouth with a tissue or upper arm sleeve when they cough and sneeze, and to throw away the tissue after they use it.
- Properly dispose of articles soiled with nose/throat discharges, such as tissues.
- Clean potentially contaminated surfaces, like doorknobs, tables, handrails, etc. See page 19.
- Avoid sharing cups and eating utensils and touching the face with unwashed hands.

Treatment

There is no specific treatment for the common cold. Check with the child's doctor before giving symptom relieving medications like cough suppressants and decongestants. **ASPIRIN SHOULD BE AVOIDED,** because it increases the risk of Reye's Syndrome, a serious disorder that can lead to coma and death. **Antibiotics should not be used for viral infections such as the common cold**.

Exclusion

Exclusion is not necessary, unless the child is displaying severe symptoms like fever accompanied by behavior change, or difficulty breathing and does not require a level of care that would jeopardize the health and safety of other children, but it is recommended that children experiencing acute respiratory symptoms stay home until they feel better and do not meet exclusion criteria listed on page 14-15.

Role of Teachers, Caregivers and Family

- Practice good hand hygiene at all times
- Teach children to cover their nose and mouth with a tissue or upper arm sleeve when they cough and sneeze, and to throw away the tissue after they use it.
- Properly dispose of articles soiled with nose/throat discharges, such as tissues.

Common Cold Resources: https://drive.google.com/drive/folders/1Yonz7aQ16S0lgunJYJPvjuWribvS3r05

Croup

What Is Croup?

Croup refers to the swelling around the vocal chords and other parts of the upper and middle airway that causes a harsh repetitive cough similar to a seal barking. This type of infection is typically caused by a group of viruses called human parainfluenza viruses. Less often, respiratory syncytial virus (RSV) or other respiratory viruses can cause croup. More cases of croup are typically seen in the fall.

Signs and Symptoms

- Sharp, barking cough (usually at night)
- Labored or noisy breathing
- Fever
- Exacerbated symptoms of chronic lung disease
- Pneumonia
- Bronchitis

Incubation Period

2-7 days

Contagious Period and Spread

Parainfluenza viruses and other respiratory viruses are spread from person to person primarily by respiratory droplets created by coughing or sneezing. Transmission may also occur through contact with contaminated surfaces, hands, used tissues, or other articles soiled by nose and throat secretions.

The infection is passed for up to 1 week before onset of symptoms to 1–3 weeks after symptoms.

Public Health Reporting Requirements

Report the infection to the facility director, school nurse, or child care health consultant. If this becomes an outbreak (three or more ill at one time) report the outbreak to the local or state health department within 24 hours.

Control of Spread

- Ill people should avoid direct and indirect exposure to non-infected individuals.
- Disinfection of eating and drinking utensils and commonly touched surfaces. See page 19.
- Promptly dispose of tissues soiled with nose and throat secretions.
- Teach children to cover their nose and mouth with a tissue when they cough or sneeze and to throw away the tissue after they use it.
- Emphasize frequent and thorough hand washing, especially after coughing or sneezing.
- Please consult with local or state public health if help is needed with implementation of control measures.

Treatment

There is no antibiotic treatment for a viral infection. Most infections are self-limited and require no treatment. Oral and nebulized steroids are sometimes used in severe cases.

Exclusion

Exclusion is not necessary, but it is recommended that children experiencing acute respiratory symptoms stay home until they feel better and no longer meet other exclusion criteria.

Role of Teachers, Caregivers and Family

- Practice good hand hygiene at all times
- Teach children to cover their nose and mouth with a tissue or upper arm sleeve when they cough and sneeze, and to throw away the tissue after they use it.
- Properly dispose of articles soiled with nose/throat discharges, such as tissues.

Cryptosporidiosis

What Is Cryptosporidiosis?

Cryptosporidium is a parasite that causes an intestinal illness referred to as cryptosporidiosis. Cryptosporidiosis is a leading cause of waterborne disease among humans in the United States and while cases are reported year round, infections are most common in the summer and early fall. *Cryptosporidium* can be found in cattle (especially pre weaned calves), humans and other domestic animals.

Signs and Symptoms

- Watery, non-bloody diarrhea
- Abdominal cramps
- Little or no fever
- Weight loss
- Sometimes vomiting
- General Malaise
- Nausea

Incubation Period:

2-10 days (usually seven days)

Contagious Period and Spread

Cryptosporidium is spread by fecal→oral transmission and occurs by ingesting the parasite from the stool of people or animals with infection. People can be exposed to this parasite when they swim in or drink contaminated water, eat contaminated food, or come into contact with infected animals. The parasite can survive outside the body for 2-6 months in moist surroundings.

People are contagious as long as they have the parasite in their intestines, and are most contagious while they have diarrhea. The parasite may be present in the stool for several weeks after symptoms subside.

Public Health Reporting Requirements

Staff who become aware should report the infection to the facility director or school nurse. The facility should report to state or local public health agency within 4 days of diagnosis.

If other children or staff are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or child care center.

Control of Spread

- Encourage and teach the importance of frequent handwashing and proper hygiene techniques, especially after animal contact, using the toilet, changing diapers and before eating. Sample signs showing when and how to wash hands are included in the online "Fact sheets and letter template folder". Post them or similar signs throughout the child care center or school to remind people to wash their hands.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19.
- Chlorine sanitizers (such as bleach) do not kill this organism. A non-chlorine sanitizer should be used to sanitize contaminated articles (such as a 5% ammonia solution or 3% hydrogen peroxide solution for fifteen minutes). Heat (140°F for two minutes) will also destroy the organism. Do not mix bleach and ammonia products.
- Untreated water (such as water from lakes, ponds, springs, rivers, and streams) should not be used as drinking water unless it is boiled for at least 1 minute or adequately filtered by using a filter capable of removing particles 0.1 to 1.0 micrometers in diameter). Chemical disinfectants such as chlorine and iodine are not effective at killing *Cryptosporidium*.
- Affected individuals should not swim or wade in pools or other recreational water **until 2 weeks after their diarrhea has resolved**.
- Refer to page 18 of this document for information on food safety.

- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.

Treatment

The illness usually lasts 1-2 weeks (average of 10 days), but symptoms can come and go for up to 30 days or longer. Although some people can be infected without showing any symptoms, in children, symptoms often begin with loss of appetite and vomiting but the most common symptom is watery diarrhea. Ill people should be given plenty of fluids to prevent dehydration. Healthy children usually get better on their own, however the infection can be more severe in people with weakened immune systems. People with suppressed immune systems should contact their health care provider. A new medication, nitazoxanide, has recently been approved by the FDA for treatment of cryptosporidisosis.

Exclusion

Child Care and Preschool:

- EXCLUDE all infected children and/or caregivers until 24 hours after diarrhea has resolved.
- Ill children should not go to another facility during the period of exclusion.
- Determine if other children or staff have recently had diarrhea. Other children with diarrhea should be excluded, should be seen by their physician, and should submit stool for testing. If other cases in the center are identified, consider sending a letter home to parents.

Primary and Secondary School:

- EXCLUDE all infected children experiencing symptoms and/or staff until at least 24 hours after diarrhea has resolved.
- In general, students or staff with cryptosporidiosis who do not have diarrhea and are not otherwise sick may remain in school.

In rare circumstances, public health may require additional testing before a person with infection can return to work, school, or child care.

EXCLUDE affected individuals from food preparation until at least 24 hours after their diarrhea has resolved or are cleared by the state or local public health agency.

Role of Teachers, Caregivers and Family

- If your child or a child you care for is infected with cryptosporidisosis, follow the advice of the child's healthcare provider.
- Practice good hand washing, especially after changing diapers, going to the bathroom or helping a child to the bathroom, or handling food.
- Since pets and other animals can carry *Cryptosporidium*, wash hands after feeding or touching and make sure that bedding and feeding materials are clean.
- Clean and disinfect diapering, bathroom and food preparation areas frequently.
- Avoid drinking or serving raw milk, unpasteurized dairy products or unpasteurized cider.
- Avoid drinking or serving untreated/unfiltered water from streams, lakes and other bodies of water
- Adhere to local advisories to boil water and avoid drinking or serving waster of unknown quality or safety.
- Do not swim or wade in pools or other recreational water until 2 weeks after diarrhea symptoms resolve.

Resources: https://www.cdc.gov/parasites/crypto/factsheets.html

E. Coli O157 & Other Shiga Toxin-Producing Bacteria

What Is *E. Coli*?

Escherichia coli E. coli serotype O157 and other Shiga toxin-producing bacteria can cause illness ranging from mild intestinal symptoms to severe kidney complications, especially in children and the elderly. While there are over 100 different types of *E. coli*, approximately 25% of reported Shiga toxin-producing *E. coli* (STEC) cases are *E. coli* O157. Sporadic cases of STEC infection occur throughout the year with a peak during the summer months. *E. coli* bacteria commonly live in cattle, however, other animals, such as deer, elk, goats and sheep are also known to carry STEC. Other animals, such as pigs, can be exposed to STEC in the environment and then shed the bacteria in their feces. In addition, humans may also serve as a reservoir.

Signs and Symptoms

- Diarrhea, which can be bloody
- Abdominal cramps
- Sometimes nausea
- Low grade or no fever
- Sometimes vomiting
- Sometimes hemolytic uremic syndrome (HUS)

Incubation Period

Ranges from 1-10 days (usually 3-4 days)

Contagious Period and Spread

E. coli infection is spread through the fecal→oral route. People can become ill with *E. coli* by eating contaminated food (e.g., undercooked ground beef, unpasteurized juice, milk, or other dairy products, contaminated produce - especially leafy greens and sprouts, uncooked flour and dried meats), drinking or swimming in contaminated water, or having contact with animals or their feces, such as at a petting zoo or farm. *E. coli* is highly contagious and can also be spread person-to-person , especially in child care and preschool facilities.

E. coli can be spread as long as the bacteria is in the stool, typically 1-4 weeks, even after symptoms have resolved.

Public Health Reporting Requirements

- Staff who become aware of illness should report the infection to the facility director, school nurse, or child care health consultant.
- The facility should report to the local or state health department within 4 days of diagnosis.
- If other children or staff are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or child care facility.

Control of Spread

Please consult with local or state public health on implementation of control measures.

- Encourage and teach the importance of frequent handwashing, especially after animal contact, after using the toilet, changing diapers and before eating. Sample signs showing when and how to wash hands are included in the online "Fact sheets and letter template folder". Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19.
- Refer to page 18 of this document for information on food safety.
- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.

Treatment

While some people don't experience any symptoms, most people with healthy immune systems will recover without treatment within 5-7 days. Antibiotics are generally not indicated for treatment of *E. coli* O157 or other STEC because

they may increase the risk of developing HUS. HUS develops in up to 20% of *E. coli* O157:H7 cases among children. HUS appears to be less common among people with non-O157 STEC infections, however it does occur. Ill people should be given plenty of fluids to prevent dehydration.

Antidiarrheal drugs like Imodium may also increase the risk of HUS and should not be given to children with inflammatory or bloody diarrhea. Careful follow-up of patients with hemorrhagic colitis is recommended to detect changes suggestive of HUS.

Exclusion

Child Care and Preschool:

- EXCLUDE all infected children and/or caregivers until 24 hours after diarrhea has resolved **AND** they have submitted two consecutive negative stool samples collected at least 24 hours apart.
- If the child has received antibiotics, the specimens must be collected at least 48 hours after completion of antibiotics.
- Ill children should not go to another facility during the period of exclusion.
- Exclusion requirements for children with non-O157 *E. coli* will be determined by public health.

Child Care and Preschool Staff:

- Most STAFF in CHILD CARE should be excluded until 24 hours after diarrhea has resolved AND they have submitted two negative stool samples collected at least 24 hours apart.
- Staff with no role in food preparation or feeding (e.g., office staff) may return to work after diarrhea has been resolved for at least 24 hours. Stool testing will not be required for these workers.
- Consult with public health about the necessity of follow-up testing.

Primary and Secondary School:

- Students or staff with *E. coli* O157:H7 or non-O157 STEC infection should be excluded until at least 24 hours after their diarrhea has resolved.
- Children who wear diapers or have developmental delays resulting in fecal incontinence or hygiene concerns should be excluded until they have two consecutive negative stool samples collected at least 24 hours apart.
- Students or staff who handle food and have an *E. coli* O157:H7 or non-O157 STEC infection must not prepare food until at least 24 hours after their diarrhea has resolved and they have two consecutive negative stool tests taken at least 24 hours apart (collected at least 48 hours after completion of antibiotic therapy, if antibiotics are given).

Role of Teachers, Caregivers and Family

- If your child or a child you care for is infected with *E. coli*, follow the advice of the child's healthcare provider.
- It is important to practice good hand washing, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food.
- Diapering, bathroom and food preparation areas should be cleaned and disinfected frequently.
- It is also important to wash hands after touching pets or other animals as they can carry *E. coli*.
- Keep food that will be eaten raw, such as vegetables, from becoming contaminated by animal-derived food products and thoroughly cook all ground beef, hamburger, and needle-tenderized beef products to an internal temperature of at least 160°F.
- Avoid consuming or serving unpasteurized milk, unpasteurized dairy products or unpasteurized juices, like fresh apple cider.
- Infected individuals should not swim or wade in pools or other recreational water while experiencing diarrhea.

Resources: https://drive.google.com/drive/folders/1A1NL8_nxsY6O67Wy4tm40FJJH-sW2_Sg

Fifth Disease (Human Parvovirus B19)

What Is Fifth Disease?

Fifth disease is a common viral infection and rash caused by a virus called parvovirus B19. The rash usually appears 4-14 days after the start of the infection. People can be infected and infectious without ever having any signs or symptoms. Outbreaks occur in the late winter and early spring. The disease can be severe in people with sickle cell disease or certain blood disorders, as well as those with compromised immune systems..

Signs and Symptoms

- Fever
- Headache
- Rash ("slapped cheek" rash on face and lacy rash on the rest of the body)
- Rash may go away and return over time
- Tired, muscle aches
- Uncommon symptoms are itchiness, cough, diarrhea, or vomiting, runny nose, and joint aches

Incubation Period

Incubation period:4-14 days; sometimes as long as 21 days

Contagious Period and Spread

Person-to-person via respiratory (droplet) route: contact with large droplets that form when a child talks, coughs, or sneezes. These droplets can land on or be rubbed into the eyes, nose, or mouth. The large droplets do not stay in the air; they travel 3 feet or less and fall onto the ground.

Rarely, a baby can be infected before birth from infection of a pregnant mother. Infection can also happen from exposure to blood or blood products but is very rare.

Contagious period: until the rash appears

Control of Spread

- Use good hand hygiene technique at all times.
- Sanitation of contaminated items.
- Disposal of tissues containing nose and throat secretions.

Treatment

There is no specific treatment. Most infections are mild enough that they do not require medicine.

Exclusion

None, unless the student/child has an underlying blood disorder or a compromised immune system. Children with these conditions may appear ill and shed large amounts of virus. Exclude the child if they meet other exclusion criteria or the child is unable to participate and staff are unable to care for the student/child without compromising the health and safety of others.

Role of Teachers, Caregivers and Family

- Report the infection to the staff member designated by the childcare program or school for decision-making and action related to the care of ill children.
- Susceptible pregnant teachers/caregivers and pregnant mothers of children in child care and school settings should carefully practice hand hygiene to reduce their risk of human parvovirus B19 infection and infection from other viruses that could harm a fetus.
- Women of childbearing age should discuss exposure risks with their health care provider.
- Teach children and teachers/caregivers cover coughs and sneezes with a tissue or with an upper sleeve or elbow if no tissue is available, to wash their hands after using facial tissues or having contact with mucous, and to dispose of tissues that contain nasal secretions after each use.

- Teach everyone to remove any visible nasal or cough discharge from surfaces, change or cover contaminated clothing, and practice hand hygiene right after using facial tissues or having contact with mucus. Use good hand hygiene technique at all times.

Resources: https://drive.google.com/drive/folders/1mf50aqqYBpWKId0ueCmOkeB4hAn2aYPU

Genital Herpes (Herpes Simplex Virus (HSV))

What Is Genital Herpes (HSV)?

Genital herpes are caused by the herpes simplex virus (HSV). There are two types of HSV (type one and type two); both can cause genital herpes, although type two is a more common cause. Genital herpes may be recurrent and there is no cure. The first occurrence typically lasts about 12 days. Subsequent, usually milder, occurrences typically last about 4 days. The interval between clinical episodes is called the latent period. Viral shedding occurs intermittently during latency and sexual transmission of HSV may occur at these times.

Signs and Symptoms

- Single or multiple fluid-filled sores appear anywhere on the genitalia.
- Sores spontaneously rupture to form shallow ulcers that can be very painful. The ulcers resolve spontaneously with minimal scarring.
- Central nervous system involvement, development of sores at other sites, and fungal infections are possible (but rare) complications.

Incubation Period

Usually 2-12 days

Contagious Period and Spread

Genital herpes is transmitted through sexual contact: oral, anal, and vaginal.

Once a person is infected with HSV, he/she can shed it intermittently for years, and possibly lifelong.

Public Health Reporting Requirements

- Cases of genital herpes are NOT reportable to public health.
- The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities.

Control of Spread

- People with infection should be examined by a healthcare provider. People with infection should seek medical care if symptoms persist or recur. Parental consent is **not** required for minors to be examined and treated.
- Sexual activity should be avoided if a person has signs and symptoms.
- Patients should abstain from sex or use condoms to prevent future infections.
- General education of STI prevention is advocated.
- Additional information is available at: http://www.cdc.gov/std/herpes/default.htm

Treatment

The antiviral drug acyclovir can reduce shedding of the virus, diminish pain and accelerate healing time. However, the virus may be shed intermittently for years and possibly lifelong.

Exclusion

No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: https://www.cdc.gov/std/herpes/facts-brochures.htm

Genital Warts (Human Papillomavirus (HPV))

What Are Genital Warts (HPV)?

Genital warts are caused by the human papillomavirus (HPV), and are the most common sexually transmitted infection (STI). There are more than 40 types of HPV. A diagnosis may be made based on the typical clinical presentation; however, many people infected with HPV do not have noticeable symptoms and do not know they are infected. Some types of HPV are associated with cervical dysplasia (abnormal cell growth) and cancer; however these types of HPV do not cause genital warts.

Signs and Symptoms

- Single or multiple soft, fleshy, painless growths/bumps anywhere on or around the genitalia. They can be small or large, raised or flat.
- HPV may also infect the mouth and throat, although this is rare.
- Generally symptoms are minor or not present at all.

Incubation Period

Variable

Contagious Period and Spread

Genital warts are transmitted through sexual contact: oral, anal, and vaginal.

Once a person is infected, they may spread the infection to others throughout life.

Public Health Reporting Requirements

- Cases of genital warts or HPV infections are NOT reportable to public health.
- The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities.

Control of Spread

- People with infection should be examined by a health care provider and should seek medical care if symptoms persist or recur. Parental consent is **not** required for minors to be examined and treated.
- Sexual activity should be avoided if a person has signs and symptoms.
- Patients should abstain from sex or use condoms to prevent future infections.
- There is a vaccine available for the most common types of HPV. The vaccine is given in three doses; it is important to get all three doses to get the best protection. The vaccine is most effective when given before a person's first sexual contact. Females can receive either Cervarix or Gardasil vaccines. Males can receive Gardasil.

Treatment

There is no treatment for HPV, but visible genital warts can be physically removed by a health care provider. Wart removal does not eradicate HPV; however, it will decrease the amount of virus shedding that may limit. Removal regimens include cryotherapy, electrodessication, electrocautery or other topical treatments.

Exclusion

No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination.
- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: https://www.cdc.gov/std/hpv/facts-brochures.htm

Giardia

What Is Giardia?

Giardia is a parasite (*Giardia lamblia)* that causes an intestinal infection in people and animals referred to as giardiasis. Giardiasis has a worldwide distribution. Children are infected more often than adults and infections are more common in the summer and fall. The infectious dose may be as few as 10 cysts.

Signs and Symptoms

- Diarrhea
- Foul-smelling stools
- Greasy stools that tend to float
- Abdominal cramping
- Excess gas or bloating
- Nausea/vomiting
- Fatigue
- Anorexia/weight loss

Incubation Period

1-3 weeks, commonly 7-10 days

Contagious Period and Spread

Giardia is spread by the fecal→oral route and occurs by ingesting the parasite from the stool of people or animals with infection. People can become ill by drinking contaminated water, eating contaminated food, or coming into contact with infected animals. Person to person transmission can occur in child care centers and other institutions.

People are contagious as long as they have *Giardia* in their stool, but are most contagious while having diarrhea. The parasite generally appears in the stool when symptoms begin and can sometimes remain in a person's stool for several months.

Public Health Reporting Requirements

- Staff who become aware of illness should report the infection to the facility director, school nurse, or child care health consultant.
- The facility should report to the state or local public health agency within 4 days of diagnosis.
- If other children or staff are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or childcare center.

Control of Spread

Please consult with local or state public health on implementation of control measures.

- Encourage and teach the importance of frequent handwashing, especially after animal contact, using the toilet, changing diapers, and before eating. Sample signs showing when and how to wash hands are included in the online "Fact sheets and letter template folder". Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19.
- Untreated water (such as from lakes, ponds, springs, rivers, and streams) should not be used as drinking water unless it is boiled for at least one minute, adequately filtered, or adequately treated with chemical disinfectants like chlorine or iodine.
- Affected individuals should not swim or wade in pools or other recreational water **until 2 weeks after their diarrhea has resolved**.
- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.

Treatment

Illness lasts anywhere from 1-6 weeks, and occasionally longer. Symptoms sometimes start and stop so it can take several weeks before an ill person seeks medical care and is diagnosed. Many people infected with *Giardia* have no symptoms. Individuals experiencing symptoms can be treated with a variety of antiparasitic medications. Treatment of ill children with appropriate antibiotic/antiparasitic medication usually makes them non-infectious within a few days. Testing and treatment of students/children with no symptoms is not generally recommended.

Exclusion

Child Care:

- EXCLUDE all infected children and/or caregivers who have diarrhea until at least 24 hours after diarrhea has resolved.
- Ill children should not go to another facility during the period of exclusion.
- Determine whether additional children have or have recently had diarrhea. Other children with diarrhea should be excluded, see their physician, and submit a stool sample.
- If additional cases are identified consider sending a letter home to parents. Sample letters are included in the online "Fact sheets and letter template folder"

Primary and Secondary School:

- EXCLUDE all infected children experiencing symptoms and/or staff until at least 24 hours after diarrhea has resolved.
- In general, students or staff with giardiasis who do not have diarrhea and are not otherwise sick may remain in school.
- In certain circumstances, public health may require additional testing before a person with infection can return to work, school, or child care.
- EXCLUDE affected individuals from food preparation until at least 24 hours after diarrhea has resolved or they are cleared by the state or local public health agency.

Role of Teachers, Caregivers and Family

- If your child or a child you care for is infected with giardiasis, follow the advice of the child's healthcare provider.
- Practice good hand washing, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food. After changing diapers, wash the child's hands as well as your own.
- It is also important to wash hands after touching pets or other animals as they can carry giardiasis.
- Diapering, bathroom and food preparation areas should be cleaned and disinfected frequently.
- Avoid drinking or serving untreated/unfiltered water from streams or lakes, unboiled water while traveling in developing countries, or whenever the water quality is unknown.
- Avoid swallowing water when swimming. Lakes, streams and other bodies of water as well as swimming pools can be contaminated with *Giardia*.
- To prevent others from becoming ill, individuals infected with *Giardia* should not swim or wade in pools or other recreational water until 2 weeks after their diarrhea has resolved.

Gonorrhea

What Is Gonorrhea?

Neisseria gonorrhoeae, a bacterium, causes gonorrhea infection (sometimes referred to as gonococcal infections). The majority of infections do not cause symptoms and are detected through screening tests. Symptoms of gonorrhea, when present, are similar to those of chlamydia. These two are often seen together as co-infections in the same person and his or her partner(s).

Signs and Symptoms

- Many people with infection do not have symptoms (asymptomatic).
- Females may have abnormal vaginal discharge, abnormal menses, or have painful or difficult urination. Ten percent to 20% of infected females develop pelvic inflammatory disease (PID), which can lead to ectopic pregnancy, infertility, and chronic pelvic pain.
- Males may have painful or difficult urination, increased frequency of urination, and urethral discharge. Males are at risk for epididymitis.
- Anorectal and pharyngeal (throat) infections occur and a person may or may not have symptoms.

Incubation Period

Usually 1-14 days.

Contagious Period and Spread

Spread through sexual contact: oral, anal, and vaginal.

Individuals are contagious as long as the bacteria are present and up to 7 days after completion of treatment.

Public Health Reporting Requirements

- Gonorrhea infections must be reported to the state or local public health agency within 4 days of a suspected or confirmed diagnosis.
- The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities.

Control of Spread

- People with infection should be examined by a health care provider and treated as soon as the diagnosis is confirmed to prevent complications. Treatment of partner(s) is a crucial strategy to prevent re-infection. People with infection should seek medical care if symptoms persist or recur. Parental consent is **not** required for minors to be examined and treated.
- People with infection should avoid sexual activity until they and their partner(s) are treated and cured.
- People with infection should abstain from sex or use condoms to prevent future infections.
- Additional information is available at: http://www.cdc.gov/std/gonorrhea/default.htm

Treatment

Treatment is with antibiotics. Concurrent treatment of sex partner(s) with same regimen is essential to prevent re-infection or spread of disease.

Exclusion

No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: https://www.cdc.gov/std/gonorrhea/facts-brochures.htm

Hand, Foot and Mouth Disease (HFM)

What Is Hand, Foot and Mouth Disease?

HFM is a common set of symptoms associated with viral infections that are most frequently seen in the summer and early fall. This illness is mild and common in children. Several different types of viruses can cause HFMD sometimes people can develop the disease more than once if exposed to a different virus. HFM is most common in children under 5 years of age, but can sometimes occur in adults.

Signs and Symptoms

- Tiny blisters in the mouth and on the fingers, palms of the hands, buttocks, and soles of the feet
- One, few, or all of these body sites may have blisters
- Poor appetite due to mouth blisters/pain
- Common cold signs or symptoms with fever
- Vomiting and diarrhea are rare but do occur
- May cause neurologic symptoms such as balance issues or muscle jerking

Image source: www.aad.org

Incubation Period

Usually 3-6 days

Contagious Period and Spread

Contagious period: virus may be shed for weeks to months in the stool after the infection starts; respiratory shedding of the virus is usually limited to 1-3 weeks.

Spread through:

- Respiratory (droplet) route: contact with large droplets that form when a child talks, coughs, or sneezes. These droplets can land on or be rubbed into the eyes, nose, or mouth. Most of these droplets do not stay in the air; usually, they travel no more than 3 feet and fall onto the ground.
- Contact with respiratory secretions from or objects contaminated by children carry these viruses.
- Fecal-oral-route: contact with feces of children who are infected. This generally involves an infected child contaminating his own fingers, and then touching an object that another child touches. The child who touched the contaminated surface then puts her fingers into her own mouth or another person's mouth.

Public Health Reporting Requirements

- Report the infection to the facility director, school nurse, or child care health consultant. That person, in turn, alerts possibly exposed family and staff members to watch for symptoms.
- Individual cases do not need to be reported to public health
- Contact local or state public health agency for guidance if notification of families via letter is planned.

Control of Spread

- Teach children and teachers/caregivers to cover their mouths and noses when sneezing or coughing with a disposable facial tissues, if possible, or with an upper arm sleeve or elbow if no facial tissue is available in time.
- Teach everyone to practice hand hygiene right after using facial tissues or having contact with mucus. Change or cover contaminated clothing.
- Dispose of facial tissues that contain nasal secretions after each use.
- Use good hand-hygiene technique at all times, especially after diaper changing.
- Promptly disinfect contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys).
- Please consult with local or state public health with implementation of control measures if the spread is ongoing among children/students.

Treatment

There is no specific treatment. Over-the-counter medications can provide some degree of relief from fever or aches and pains associated with the sores.

Exclusion

No, unless the child meets other exclusion criteria, is drooling uncontrollably and has mouth sores, or is unable to participate and staff determine they cannot care for the child without compromising the health and safety of others.

Role of Teachers, Caregivers and Family

- Seek medical advice if the child is uncomfortable with signs of illness from the infection, such as an inability to drink or eat, or if the child seems very ill.
- Practice good hand hygiene and cover mouths and noses when sneezing or coughing.
- Clean and disinfect contaminated surfaces.

Resources: https://drive.google.com/drive/folders/13WaCYc5vXS_UbFyvpUQFeLVpQYmmudlF

Head Lice (Pediculosis)

What Is Pediculosis (Head Lice Infestation)?

Head lice are tiny insects about the size of a sesame seed that live on the skin of the scalp and on the hair. They feed on blood and lay eggs that they attach to the hair shaft. Eggs hatch in about a week, and the young lice feed and molt three times before molting again to an adult. Adult lice will live about a month. Lice are common among children in all socioeconomic groups and are not a health hazard or a sign of uncleanliness.

Signs and Symptoms

- Presence of lice or attached eggs on the scalp or on the hair
- Itching behind the ears and at the back of the neck. Scratching may lead to secondary infections.

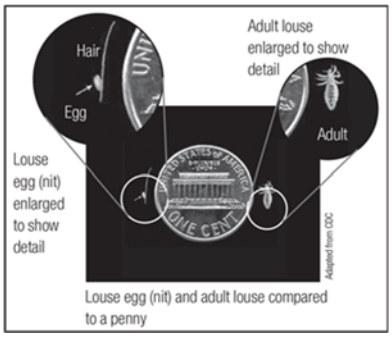


Image source: www.healthychildren.org

Incubation Period

There is no incubation period. An infestation begins with the transfer of a louse or several lice to a new human host. Rarely, a shed hair with an attached nit can hatch and start an infestation. Shed hairs may be present on clothing or bedding.

Contagious Period and Spread

Head lice are spread by direct contact with the head of a person with infestation, or by contact with items used by a person with infestation such as combs, brushes and hats. Lice walk, they cannot hop or fly.

A person can transfer lice to others as long as they are infested with live lice. Even when no live lice are present, there may be nits close to the scalp that have not hatched. Once these eggs hatch, live lice are once again present and can be transferred.

Public Health Reporting Requirements

Individual cases are not reportable. The school nurse/facility director should be consulted for specific concerns. Consultation with the state or local public health agency is also available.

Control of Spread

- Teach children not to share personal items like hats, combs, brushes, scarves or coats.
- Hang coats separately. Do not hang or pile them on top of each other.
- Clothing and personal items should be stored separately (different hooks, cubby holes, etc.).
- Students/children likely to have had direct head-to-head contact with someone who is infested should be checked for lice and treated if live lice are found.
- Parents of infested students/children should be instructed about in-home control measures and should check other household members for lice.
- Checking entire classrooms or schools has not been shown to be effective at controlling the spread.
- No-nit policies are not recommended because they have not been shown to be effective at controlling head lice infestations, and such policies may keep children out of the program needlessly.
- ENVIRONMENTAL CONTROL MEASURES
  - Carpet and furniture can be vacuumed or gently ironed (not sprayed with insecticide).
  - Combs and brushes should be soaked in a disinfectant or lice-killing solution for at least 10 minutes.
  - Launder clothing and bedding in hot water (130° F) and dry them on high heat setting for at least 40 minutes, OR dry clean them. This should be done for items in the facility and at home.
  - Items that cannot be cleaned should be placed in a plastic bag for 2 weeks.

Treatment

- Over-the-counter and prescription treatments are available. Parents should consult with their pediatrician if they have any questions about which treatment to use.
- Follow treatment instructions closely. Nits can survive treatment, so a second treatment is needed 7-10 days after the first treatment to kill lice that have hatched from those eggs.

- Flammable or toxic substances such as gasoline or kerosene should never be used.
- Use a nit comb to remove nits from the hair.
- Herbal and "natural" remedies, like ylang-ylang and tea tree and lavender oils, have not been scientifically studied and are not regulated by the FDA. Therefore, the content, safety, and effectiveness cannot be assumed and use of these remedies does not represent treatment.

Exclusion

- Exclude a child or children with an active infestation from the end of the program or school day until after a pediculocide treatment has been applied.
- Until the end of the program or school day, avoid any activity involving head-to-head contact or sharing of head gear.

Role of Teachers, Caregivers and Family

- Report infestation to the staff member designated for decision-making and action related to care of affected children in the facility. That person, in turn, will alert potentially exposed close-contacts and staff members to watch for symptoms.
- Check children observed scratching their heads for lice - if lice are found, check all contacts.
- Educate staff and families on how to recognize lice and nits.

Resources: https://drive.google.com/drive/folders/1sh2I_LQte_rQKIFzSkxAv9hgtiEJ_Uae

Hepatitis A

What Is Hepatitis A?

Hepatitis A is a viral infection that causes inflammation of the liver. The severity of illness ranges from mild, lasting 1-2 weeks, to severe, lasting several months. Older children and adults are more likely to have symptoms, while young children may have mild symptoms or no symptoms at all. A blood test for hepatitis A antibodies (IgM) is needed to diagnose this infection. Animals do not carry or spread this virus.

Signs And Symptoms

- Yellow skin and eyes (jaundice)
- Abdominal cramps
- Diarrhea
- Dark urine
- Pale stools
- Low-grade fever

Incubation Period

2-6 weeks, usually four weeks

Contagious Period and Spread

The disease is spread through the fecal→oral route (through consumption of contaminated food and water or through person-to-person transmission) and can be spread by people who do not have symptoms.

A person is most contagious in the 2 weeks before symptoms begin, and remains contagious for a week after jaundice begins.

Public Health Reporting Requirements

- Report the infection to the local or state health department within **24 hours** of a suspected or confirmed diagnosis.
- Notify local or state public health department if the Hepatitis A case prepares food for others or attends or works in a **child care facility**.

Control Of Spread

Please consult **immediately** with local or state public health for implementation of control measures.

- Unvaccinated people who are exposed to someone with hepatitis A (through close contact or eating food prepared by the ill person) can be given vaccine and/or immune globulin (IG) in the 2 weeks after exposure in order to prevent illness or lessen the severity of symptoms. The local public health agency will evaluate whether anyone should receive IG or hepatitis A vaccine. Parents/ guardians, siblings, or close playmates may need IG/vaccine.
  - SCHOOLS: In **most** instances, teachers and classmates are **not** at risk of becoming infected.
  - CHILD CARE: Consult with public health **as soon as possible** to determine risks of transmission and people who may require IG/vaccine.
- Encourage frequent handwashing, especially after using the toilet, changing diapers and before eating.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19.

Treatment

There is no specific treatment for hepatitis A after symptoms have developed. Vaccination for hepatitis A is effective in preventing the disease and is recommended for all children at age 1.

Exclusion

- EXCLUDE all infected children and/or staff until 1 week after the onset of jaundice.
  - CHILD CARE: Ill children should not go to another facility during the period of exclusion.
- EXCLUDE affected individuals from food preparation until cleared by the state or local public health agency.

Role of Teachers, Caregivers and Family

- Follow instructions of health care providers for treatment and care
- Practice good hand hygiene at all times
- Clean and disinfect potentially contaminated surfaces and objects frequently
- Encourage routine vaccination and routinely check that children in the facility are vaccinated

Hepatitis B

What Is Hepatitis B?

Hepatitis B (HBV) is a viral infection. Like hepatitis A (HAV) and C (HCV), HBV causes inflammation of the liver. Young children living with HBV may have few or no symptoms. Only a blood test can identify HBV infection and distinguish HAV, HBV, and HCV from one another. HBV can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. There is a safe and effective vaccine to prevent HBV.

Signs and Symptoms

An estimated 1.2 million people in the United States have chronic HBV. Most are unaware of their infection because they have never experienced symptoms. Symptoms may include

- Nausea
- Loss of appetite
- Fatigue
- Abdominal pain
- Vomiting/Diarrhea
- Joint pain
- Dark urine
- Fever
- Clay-colored stools
- Jaundice (yellowing of the skin and whites of eyes)

Incubation Period

45-160 days (average 90 days)

Contagious Period and Spread

HBV is transmitted by direct contact with blood or body fluids of a person living with HBV. It can also be transmitted by sharing non-sterilized needles or syringes, sexual contact, or from a pregnant mother to her infant at birth. When an infant acquires HBV at birth, they have a 90% chance of living with HBV for life and a 25% chance of experiencing complications from HBV. HBV is not spread through casual activities such as hugging, kissing, or by sharing eating utensils. It is uncommon in school/child care facilities.

People living with HBV are infectious as long as the virus is in the blood. This can be several weeks before the onset of symptoms, throughout the clinical course of the illness, and in some cases for life.

Public Health Reporting Requirements

- Report the infection to the facility director or school nurse
- Report to the local or state health department within 4 days of diagnosis.

Control of Spread

- Cover open wounds or sores and prevent scratching, biting, or combative behavior.
- Vaccination is recommended for children and staff of school and child care facilities in addition to all residents and staff of facilities for people with developmental disabilities.
- Surfaces contaminated with blood should be cleaned and sanitized while wearing medical exam quality gloves. Disinfect areas contaminated with blood spills using an EPA-registered (List B) tuberculocidal agent See page 19.
- Dispose of soiled items in plastic bags.
- Encourage proper handwashing techniques.
- Please consult with local or state public health with implementation of control measures.

Treatment

There is no specific treatment for acute HBV. Antiviral medications are available for people living with chronic HBV.

Exclusion

Exclusion is not necessary in most cases. The Colorado School Immunization Rules requires children in child care and schools to be vaccinated against Hepatitis B or have an appropriate exemption.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination and routinely check that children in the facility are vaccinated.
- Use universal precautions for handling body fluids and blood at all times.

Hepatitis C

What Is Hepatitis C?

Hepatitis C (HCV) is a viral infection. Like HAV and HBV, HCV causes inflammation of the liver. For every one hundred people living with HCV, 75-85% of people will develop a chronic infection. Chronic infections can lead to serious liver problems, including liver damage, cirrhosis (scarring), liver failure, or liver cancer. It is estimated that 70-80% of people living with HCV do not have symptoms.

Signs And Symptoms

An estimated 3.5 million people in the United States have chronic HCV. Most are unaware of their infection because they have never experienced symptoms. Symptoms may include:

- Nausea
- Loss of appetite
- Fatigue
- Abdominal pain
- Vomiting
- Diarrhea
- Joint pain
- Dark urine
- Fever
- Clay-colored stool
- Jaundice (yellowing of the skin and whites of eyes)

Incubation Period

14-180 days (average: 45 days)

Contagious Period and Spread

HCV is transmitted by direct contact with blood of a person living with HCV. This can occur by sharing personal items such as razors, nail clippers, toothbrushes or glucose monitors. It can also be spread by sharing non-sterilized needles or syringes. Having a sexually transmitted disease or sex with multiple partners also increases the risk of acquiring HCV. If a pregnant woman is living with HCV, there is a 5% chance that she will pass HCV to her infant during childbirth. HCV is not spread through casual contact in a typical school/child care setting.

People living with HCV are infectious 1 or more weeks before onset of symptoms and as long as the virus is present in the blood. Seventy-five to 85% of people living with HCV will have HCV for life if left untreated.

Public Health Reporting Requirements

- Report the infection to the facility director or school nurse
- Report to local or state health department within 4 days of diagnosis.

Control of Spread

- Cover open wounds or sores and prevent scratching, biting, or combative behavior.
- Surfaces contaminated with blood should be cleaned and sanitized while wearing medical exam quality gloves. Disinfect areas contaminated with blood spills using an EPA-registered (List B) tuberculocidal agent. See page 19.
- Dispose of soiled items in plastic bags.
- Encourage proper handwashing techniques.
- Please consult with local or state public health with implementation of control measures.

Treatment

There is no vaccine available to prevent HCV. There are several medications available to treat chronic HCV and treatments have gotten much better in recent years. Current treatments usually involve just 8-12 weeks of oral therapy and cure over 90% of people with few side effects.

Exclusion

No exclusions or environmental interventions are necessary since transmission requires close sexual contact or blood exposure

Role of Teachers, Caregivers and Family

Use standard precautions for handling body fluids and blood at all times.

Herpes (Cold Sores, Fever Blisters)

What Is Herpes?

Herpes is a common infection that causes fluid-filled sores on the face or lips caused by the Herpes simplex virus (HSV) types 1 and 2. Type 1 usually causes cold sores/fever blisters, and type 2 usually causes genital herpes (see page 50). Sometimes herpes infections are referred to as cold sores or fever blisters, although herpes is not related to having a cold or a fever. The sores can be painful, and usually heal within several days. After the initial outbreak, the virus is usually dormant in the skin or in the nerves until something triggers another eruption. In some people, overexposure to sunlight, fever, physical or emotional stress, hormonal changes, or certain foods and drugs seem to reactivate the virus. In rare cases, the herpes virus can infect the brain and other parts of the nervous system. This complication is usually seen only in immunocompromised individuals.

Signs and Symptoms

- Painful fluid-filled blisters on the face or lips
- Tingling, itching or burning of the skin before the blisters appear

Incubation Period

2-12 days

Contagious Period And Spread

Herpes is spread by direct contact through kissing and contact with open sores. Less commonly, it can be spread through articles contaminated by the fluid from the blisters or saliva (for example, mouthed toys).

Cases are contagious until the sores heal.

Public Health Reporting Requirements

Individual cases are not reportable. The school nurse or the state or local public health agency should be consulted for specific concerns.

Control Of Spread

- A person with sores should wash their hands often and avoid touching their eyes after touching the sore.
- Disinfect objects or toys that have come into contact with saliva. See page 19.
- Do not share food or drinks.
- Please consult with local or state public health with implementation of control measures.

Treatment

There is no cure for herpes. Over-the-counter medications can help reduce the irritation while the sores heal. The antiviral drug acyclovir has been shown to reduce shedding of the virus, diminish pain, and accelerate healing time. The virus may be shed intermittently for years and possibly lifelong.

Exclusion

Exclusion is not necessary unless the student has open sores and is drooling uncontrollably.

Role of Teachers, Caregivers and Family

- Report the infection to the designated staff member to develop and action plan for care and notification of possibly exposed family and staff.
- Emphasize hand hygiene and measures to control contact with infected secretions.
- Avoid contact with cold sores with bare hands when possible. If contact with sores does occur, immediate hand hygiene is recommended.

HIV and AIDS

What Is HIV And AIDS?

The human immunodeficiency virus (HIV) causes HIV infection and Acquired Immune Deficiency Syndrome (AIDS). There are two types of HIV: HIV-1 and HIV-2. HIV attacks certain cells of the immune system and typically leads to an increased susceptibility to disease. AIDS is the most severe manifestation of HIV infection. There has not been a cure for HIV infection identified; however, treatment regimens are highly effective.

Signs and Symptoms

Many people with HIV infection feel and appear completely healthy. People with HIV-related illness may have generalized lymphadenopathy (swollen lymph nodes all over their body), weight loss, chronic fever, chronic diarrhea, and/or fatigue, which may progress to AIDS or other illnesses due to a weakened immune system.

Incubation Period

Variable. The time from HIV infection to the development of detectable antibodies is generally 1-3 months. The time from HIV infection to diagnosis of AIDS can be less than 1 year to more than 15 years. Infants who acquire HIV infection before or during birth from infected mothers typically develop symptoms between 12 and 18 months, although some remain symptom-free for more than 5 years.

Contagious Period and Spread

HIV is present in the blood and some body fluids (semen, vaginal secretions, breast milk), and infection is spread by sexual contact, sharing injectable drug needles and syringes, transfusion of infected blood or blood products (which rarely occurs due to blood screening), transplantation of infected tissues or organs (also very rare), and from mother to child before or during birth, or through infected breast milk. All people with HIV infection can spread the disease by these routes. HIV is **not** spread by casual social contact in the workplace, school, or child care setting. Sharing food, eating utensils, dishes, or toilet facilities does **not** spread the disease, nor is it spread through touching or insect bites.

All people with HIV infection can spread the virus throughout their lifetime unless virally suppressed through adherence to treatment medications.

Public Health Reporting Requirements

- HIV/AIDS must be reported by laboratory and health care providers to the state or local public health agency within 4 days of a suspected or confirmed diagnosis.
- The identity of people with HIV or AIDS should be known only to the people providing direct care to the person with infection. The penalties for a breach of confidentiality are severe.

Control of Spread

- People cleaning surfaces contaminated with blood should wear latex gloves, and the surface should be cleaned with soap and water, followed by disinfection with a bleach solution (1 cup bleach in 1 gallon of water). See pg 19.
- School health education should stress that having unprotected sex and sharing drug paraphernalia increase the risk of acquiring HIV.

Treatment

Effective antiretroviral treatment is available.

Exclusion

Students/children with HIV or AIDS should be able to attend child care and school without special restrictions. Contact the CDPHE STI/HIV Branch at 303-692-2700 for further guidance on this issue.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended.
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: https://www.cdc.gov/hiv/group/age/youth/index.html

Impetigo

What Is Impetigo?

Impetigo is a skin infection caused by streptococcal and staphylococcal bacteria. It can occur in people of any age, but is more common in children. Impetigo can affect skin anywhere on the body, although it most often occurs on the face.

Signs and Symptoms

- Area of itchy skin where tiny blisters develop
- Blisters will eventually burst to reveal areas of red skin that may weep fluid
- Most commonly found on the arms, legs and face

Image source: aad.org

Incubation Period

7-10 days for Streptococcal; variable for Staphylococcal

Contagious Period and Spread

Infections may be spread by direct contact with infected skin. Less commonly, it can be spread through direct contact with articles (such as clothing, bedding, towels, etc.) that have come in with the rash. This infection is common in contact sports such as wrestling. Additional resources are available for coaches.

Treated people are no longer contagious after 24 hours of antibiotic therapy. Untreated people are contagious as long as there is discharge from affected areas.

Public Health Reporting Requirements

- Report the infection to the facility director or school nurse.
- Individual cases of impetigo are not reportable to public health.
- Suspected outbreaks of all types (including impetigo) are reportable to state or local public health.

Control of Spread

- Discourage scratching or touching the sores and scabs.
- Keep the sores covered with a bandage.
- Encourage frequent handwashing, and wash hands after touching anything that could be contaminated with fluid from the sores.
- Sharing of towels, clothing and other personal items should be discouraged.
- Cleanliness and prompt attention to minor wounds will help prevent impetigo.
- Wash contaminated clothes, linens and towels.
- Please consult with local or state public health with implementation of control measures.

Treatment

Oral or topical antibiotics may be prescribed to treat impetigo. Antibiotics will decrease the spread of disease and the risk of secondary infections, and speed healing.

Exclusion

EXCLUDE infected students until 24 hours after beginning antibiotics.

- **Child Care**: Children should be excluded until 24 hours after antibiotic treatment has begun.
- **Schools**: Children should be excluded until 24 hours after antibiotic treatment has begun.
- **Coaches**: Skin checks are important in prevention of this illness and are recommended as part of the weigh in protocols for contact sports.

Role of Teachers, Caregivers and Family

- Report the infection to the designated staff member to develop and action plan for care and notification of possibly exposed family and staff.
- Emphasize hand hygiene and measures to control contact with infected secretions.

- Wear gloves and avoid contact with sores with bare hands when possible. If contact with sores does occur, immediate hand hygiene is recommended.
- Use medication recommended by the child's health care professional.
- Wash contaminated clothing and towels daily.

Skin infection resources: https://drive.google.com/drive/folders/1KKUuVYMcDDSMwh3sQiQ8dUIzWzkAnNWv

Influenza

What Is Influenza?

Influenza (flu) is a very contagious viral illness caused by the influenza virus and should not be confused with "stomach flu" (viral gastroenteritis). Influenza causes community-wide outbreaks every winter, usually from October through May. In general, healthy children tolerate influenza well and suffer only a few days of discomfort. People most at risk for complications from influenza are infants, the elderly, and those with certain chronic underlying medical conditions (including, but not limited to, asthma, neurological and neurodevelopmental conditions, chronic lung disease, heart disease, blood disorders, endocrine disorders, kidney disorders, liver disorders, metabolic disorders, weakened immune system, and individuals with a BMI >40).

Signs and Symptoms

- Fever (typically sudden onset)
- Headache
- Muscle aches
- Cough
- Sore throat
- Runny or stuffy nose
- Chills
- Fatigue

Incubation Period

1-4 days (usually 2 days)

Contagious Period and Spread

The influenza virus is spread from person to person primarily by respiratory droplets created by talking, coughing or sneezing. These droplets can land on or be rubbed into the eyes, nose or mouth. Droplets do not stay in the air but can travel less than 3 feet and fall onto the ground. Transmission may also occur through contact with contaminated surfaces, hands, used tissues, or other articles soiled by nose and throat secretions.

People with infection are contagious from 24 hours before to 5-7 days after the onset of symptoms. Children may be contagious for longer than 10 days.

Public Health Reporting Requirements

- Outbreaks of influenza can cause large increases in absenteeism rather suddenly; schools should report significant increases in school absenteeism resulting from influenza-like illness to local public health agencies. Outbreak thresholds may be difficult to determine schools, but if absences due to influenza-like illness are higher than baseline, then you should contact your local health department.
- Influenza hospitalization and pediatric deaths are reportable to public health

Control of Spread

The flu vaccine is available every year and recommendations for who should receive the vaccine are revised annually. It is recommended that everyone 6 months of age and older receive the vaccine each year, especially people at higher risk for flu-related complications as noted above. People who live with or care for those at high risk should also receive the vaccine.

Teach children to:

- Cover their nose and mouth with a tissue when they cough or sneeze, and to throw away the tissue after they use it;
- Avoid touching their eyes, nose, or mouth;
- Wash their hands frequently with soap and water, especially after they cough or sneeze; an alcohol-based hand rub can be used if soap and water are not nearby.
- Avoid sharing cups and eating utensils with others

School closure is not indicated to control spread; however, some schools may decide to close based on local considerations, such as high student/child and staff absenteeism.

Consult with local public health for assistance with implementation of control measures/school closures.

Treatment

In certain circumstances, a health care provider may prescribe antiviral medications. These medications may reduce symptoms and duration of illness by 1 or 2 days. Acetaminophen-containing medicines (such as Tylenol) can be used to lower temperature or reduce discomfort. Avoid using aspirin as it increases the risk of Reye syndrome, a serious complication. **Antibiotics should not be used for viral infections such as influenza**.

Exclusion

- EXCLUDE children/students/staff with flu-like symptoms from child care/school/work until at least 24 hours after they no longer have a fever or signs of a fever (chills, feeling very warm, flushed appearance, or sweating) without the use of fever-reducing medicine.
- Ill children/students/staff should be separated from others until they can be picked up/go home.

Role Of Teachers, Caregivers, And Family

- Encourage routine seasonal flu vaccination for all people 6 months and older.
- If you or your child is diagnosed with influenza, follow your healthcare providers instructions and take all prescriptions and medications as indicated.
- Reduce crowding and touching in classrooms as much as possible during flu season.

Resources: https://drive.google.com/drive/folders/1Yonz7aQ16S0lgunJYJPvjuWribvS3r05

Measles

What Is Measles?

Measles is a highly contagious and acute viral disease caused by the measles virus. Humans are the only natural host for the measles virus.

Outbreaks occur when unimmunized people become infected, travel to the United States, and infect others who are not immunized. Measles is rare in this country but can result in serious complications, such as ear infections, pneumonia, seizures, brain damage and death.

Signs and Symptoms

- Fever, cough, runny nose and red, watery eyes
- Appearance of rash at hairline spreading downward over body
- Koplik's spots (tiny white spots with bluish-white centers found inside the mouth)
- May have diarrhea, pneumonia, or ear infection as complications

Koplik spots

Measles rash

Image source: www.cdc.gov

Incubation Period

8-12 days from exposure to onset of signs of symptoms

Contagious Period and Spread

Contagious period: from 4 days before the rash until 4 days after the appearance of the rash (9 days total).

Spread through airborne route: breathing small particles containing virus floating in the air. These particles travel along air currents and can infect people in another room.

Even brief exposure or shared airflow poses a high risk of infection for people who have not had the disease before, have not been protected by the measles vaccine, or have a problem with their immune system.

Public Health Reporting Requirements

Report any suspected or confirmed measles to the state or local public health agency **immediately** by phone. A single case of measles anywhere in the United States is considered to be a reportable outbreak.

Control of Spread

If a child attends a school or childcare facility while infectious, public health will work with the facility to provide recommendations on disease control activities and possible exclusion of un- or under-immunized students and staff.

- Measles is a vaccine-preventable infection. Immunize according to current recommendations, when a child is 12-15 months of age and with a second dose at 4 to 6 years of age. The Colorado School Immunization Rules requires students in K through 12 to have two measles-containing immunizations and child care/preschool students 15 months of age to kindergarten to have one dose unless the child has an exemption to immunization. Review immunization status of all children and staff members.
- Use good hand hygiene technique at all times and routine infection control measures.
- Do not transfer children to other facilities.

Treatment

There is no specific treatment for measles.

Exclusion

- Exclude children with measles until 4 days after the rash starts when they are no longer contagious. Measles is a highly contagious infection. Because measles viruses are spread by the airborne route, infected children should not be cared for in any child care area and should be sent home as soon as possible. They should not be placed in a special room for children who are ill.
- Exclude exposed children who have not been immunized (or who are incompletely immunized for their age) until they become immunized. If they are not immunized because of an exemption, exclude them until the local health department determines it is safe for them to return.

Readmit when the following criteria have been met:

- 4 days after the beginning of the rash
- When the child is able to participate and staff members determine they can care for the child without compromising their ability to care for the health and safety of the other children in the group.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination. Review and ensure all children have received measles, mumps, and rubella (MMR) vaccine according to current immunization recommendations.
- Report the infection to the local or state health department. If the health professional who makes the diagnosis does not inform the local health department that the infected child is a participant in a child care program or school, this could delay controlling the spread.
- Report the infection to the staff member designated by the child care program or school for decision-making and action related to the care of ill children. That person, in turn, alerts possibly exposed family and staff members and parents of unimmunized children to watch for symptoms and notifies the health consultant.
- Ensure staff members who have had fewer than 2 doses of vaccine are properly immunized unless documented to have had the disease or were born before 1957. Individuals born before 1957 are presumed immune because measles was so widespread before vaccine became available, although being in this group is not a guarantee of immunity. A laboratory test is available for testing immunity.
- During investigation of a suspect case, exposed children with weakened immune systems or who have not received MMR vaccine routinely may be excluded from the facility. In an outbreak, if public health makes a recommendation, infants 6 to 11 months of age can be immunized and then re-immunized at the age-appropriate time. The immunization at 12 months is still necessary because the child's immunity from the previous dose of vaccine may be blocked by the mother's measles antibodies that cross the placenta during pregnancy and are present in the child for a year.

Measles Resources: https://www.colorado.gov/pacific/cdphe/measles

Molluscum Contagiosum

What Is Molluscum Contagiosum?

Molluscum contagiosum is caused by a pox virus and causes a mild skin disease similar to warts. It is characterized by small, pearly, flesh-colored bumps with a tiny, hard, central depression that may be itchy.

Signs and Symptoms

Image from aad.org

- 2-20 discrete flesh colored papules
- Lesions on adults are usually found on the lower abdomen, pubis, and inner thigh
- Lesions on children are usually on the trunk, face and arms
- Occasionally the lesions may appear linearly due to patient scratching

Incubation Period

Ranges from 2-7 weeks and may take as long as 6 months.

Contagious Period and Spread

The virus is spread from person to person through direct and indirect physical contact. Direct contact may be either through play, rough housing, touching, or sexual contact. Indirect contact is when the lesions (virus) come in contact with towels, toys, or clothing and another person uses those items prior to cleaning.

It is not known how long a person is infectious; however, it is presumed to be as long as the lesions are present.

Public Health Reporting Requirements

- Report the infection to the facility director or school nurse.
- Report to the local or state health department only if two or more cases are identified within 7 days of diagnosis of the first case as this may be an outbreak.

Control of Spread

- Encourage frequent and proper hand washing.
- Scratching the bumps should be avoided as that can spread the virus to another site or allow bacteria to enter.
- Make sure all lesions are covered by clothing. If lesions are not covered by clothing, make sure to cover with a water tight bandage.
- If a child with growths in the underwear/diaper area needs assistance going to the restroom or needs a diaper change, then the lesions in this area needs covering too if possible.
- All infected individuals should not participate in contact sports as long as the lesions are present.
- Activities that use shared gear should be avoided unless the lesions can be covered.
- Swimming should also be avoided unless the lesions can be covered with a water tight bandage.
- Do not share items such as hair brushes, unwashed cloths, soap, and towels.
- If the lesions are in the pubic area avoid sexual contact until seen by your healthcare provider.
- Please consult with local or state public health for help with implementation of control measures.

Treatment

There is generally no treatment required as the lesions usually go away on their own within 6 months, however this may take up to 4 years. When a therapy is recommended by a healthcare provider, the physical destruction of the lesions should be done in a physician's office. Do not follow any treatment methods that are not directly recommended by a physician.

Exclusion

Exclusion is not necessary for child care or school.

Role of Teachers, Caregivers and Family

- Use and encourage regular hand hygiene
- Do not let children pick or scratch bumps

Mononucleosis

What Is Mononucleosis?

Mononucleosis is caused by the Epstein-Barr virus and is characterized by swollen lymph glands, sore throat, and fever lasting from 1-4 weeks. Enlargement of the spleen can occur as well. Some infected children do not have symptoms or develop very mild symptoms, but 35-50% of adolescents or young adults develop infectious mononucleosis. The disease is most common in high school and college-aged children.

Signs and Symptoms

- Swollen lymph glands
- Fever
- Sore throat
- Fatigue

Incubation Period

Usually 4-6 weeks

Contagious Period and Spread

Mononucleosis is spread person-to-person through saliva.

Individuals with mononucleosis can excrete the virus for a period of weeks or months after initial infection. The virus can be present over the lifetime of a person with an infection in throat or blood cells. Most people who have had a previous infection are not susceptible to a second infection.

Public Health Reporting Requirements

Individual cases are not reportable. The school nurse or child care health consultant should be contacted for specific concerns. Consultation with the local or state health department is available.

Control of Spread

- Suspect cases with severe tonsil and throat swelling should be referred to a healthcare provider.
- Dispose of tissues soiled with throat secretions.
- Encourage frequent handwashing.
- Promptly sanitize contaminated articles soiled by throat secretions. See page 19.
- Avoid kissing that involves the transfer of saliva directly or indirectly through objects.
- Please consult with local or state public health with implementation of control measures.

Treatment

There is no specific treatment for mononucleosis other than treating the symptoms. Over-the-counter medications can provide some relief from fever or sore throat. A health care provider may prescribe steroids to control severe swelling of the tonsils and throat.

Exclusion

Exclusion is not necessary.

Role of Teachers, Caregivers and Family

- Use and encourage good hand hygiene technique at all times
- Clean and sanitize toys and utensils before they are shared
- Ensure all students/children have their own toothbrushes, cups, utensils
- Avoid kissing children on the mouth

Methicillin-Resistant Staphylococcus Aureus (MRSA) & *Staphylococcus Aureus*

What Is Methicillin-Resistant Staphylococcus Aureus (MRSA) And *Staphylococcus Aureus*?

Staphylococcus aureus (often referred to as "staph") is a type of bacteria commonly found on the skin or in the nose of healthy people (referred to as colonization). Staph is a common cause of skin infections, but it can also cause serious infections such as surgical wound infections, bloodstream infections, and pneumonia, most frequently among patients in healthcare settings. Some staph bacteria are resistant to certain classes of antibiotics. These resistant bacteria are called methicillin-resistant *Staphylococcus aureus*, or MRSA. Historically, MRSA infections occurred in hospitalized patients, but now these infections are also common in the community. People who have MRSA infections acquired in the community typically have infections of the skin.

Signs and Symptoms

- Carriers have no signs or symptoms.
- Signs and symptoms will vary by the type of infection.
- In child care and school settings, most staph and MRSA infections are skin or soft tissue infections that may appear as pustules or boils which are often red, swollen, painful, and/or have pus or other drainage.
- Often, MRSA skin and soft tissue infections may look like spider or insect bites. Pictures of MRSA skin and soft tissue infections can be found at the CDC website: http://www.cdc.gov/mrsa/community/photos/index.html

Incubation Period

Variable; depends on the type and severity of infection.

Contagious Period and Spread

MRSA and other staph bacteria are usually spread from one person to another by direct skin-to-skin contact or contact with a contaminated item (such as towels or bandages) used by someone with MRSA or staph on their skin. People who have draining skin infections are more likely to spread MRSA and staph.

As long as the bacteria are present.

Public Health Reporting Requirements

- Report the infection to the facility director, school nurse, or child care health consultant.
- Individual cases of MRSA skin or soft tissue infections are not reportable to public health.
- Suspected outbreaks of all types (including staph and MRSA) are reportable to state or local public health. Outbreaks have been documented in school sports teams, such as football and wrestling teams.

Control of Spread

- Use standard precautions (e.g., hand hygiene before and after contact, wearing gloves) when caring for broken skin (open wounds) or potential infections.
- Use barriers such as gowns, masks, and eye protection if splashing or other contact with potentially infected body fluids is anticipated.
- In general, it is not necessary to close entire facilities to "disinfect" them when MRSA infections occur. Routine cleaning practices are enough in most situations.
- MRSA skin infections are transmitted primarily by skin-to-skin contact and by contact with surfaces that have come into contact with someone else's infection.
- Spread can be prevented by simple measures such as hand hygiene and covering wounds.

Treatment

Treatment for staph and MRSA will vary by the type and location of infection. People infected with staph or MRSA should seek care from a healthcare professional so proper treatment can occur.

Exclusion

None, unless

- health care provider instructs exclusion
- there is wound drainage that cannot be covered and contained with a clean, dry bandage
- they cannot maintain good personal hygiene.
- For athletes, if sport-specific rules do not exist, in general, athletes should be excluded if wounds cannot be properly covered during participation.
    - The term "properly covered" means that the skin infection is covered by a securely attached bandage or dressing that will contain all drainage and will remain intact throughout the activity. If wounds can be properly covered, good hygiene measures should be stressed to the athlete such as performing hand hygiene before and after changing bandages and throwing used bandages in the trash.
- Athletes with active infections or open wounds should not use whirlpools, therapy pools, and other water facilities like swimming pools until infections and wounds are healed.

Role of Teachers, Caregivers and Family

- Use and encourage good hand hygiene technique at all times.
- Use standard precautions when cleaning or touching open sores or lesions.
- Cover red or draining skin lesions.

Resources: https://drive.google.com/open?id=1T3QkAfRWaBOFipRmsm6IvFqpfKL4WQAE

Mumps

What Is Mumps?

Mumps is caused by a virus and is usually more severe in adults. Mumps typically starts with a few days of fever, headache, muscle aches, tiredness, and loss of appetite, and is followed by swelling of salivary glands. The most common complication in adolescent and adult males is swollen testicles; however, mumps rarely leads to sterility. Other complications may include meningitis (inflammation of the tissue surrounding the brain and spinal cord), inflammation of the ovaries, and deafness. Approximately one-third of individuals infected with mumps do not develop symptoms, but are contagious.

Signs and Symptoms

- Swollen glands in front of and below the ear or under the jaw
- Fever (usually low-grade)
- Headache
- Earache
- Muscle aches
- In males, painful swelling of the testicles may occur. Females may have swelling of the ovaries, which may cause abdominal pain.

Image source: www.cdc.gov

Incubation Period

Incubation period ranges from 12-25 days (usually 16-18 days).

Contagious Period And Spread

A person is contagious from 2 days before to 5 days after swelling onset.

Transmission is by nose/throat secretions and direct contact with saliva from an infected individual. Infected individuals who do not have symptoms can still infect others.

Public Health Reporting Requirements

- Report confirmed or suspect mumps to the facility director, school nurse, or child care health consultant.
- Confirmed and suspected cases should be reported to local or state health department within **4 days** of diagnosis.

Control of Spread

Mumps virus vaccine is routinely given at 12-15 months of age in combination with measles and rubella (MMR) vaccine and sometimes varicella vaccine (MMRV) with a second dose recommended at age 4-6 years. The Colorado School Immunization Rules requires children to have two mumps immunizations prior to school entry and child care/preschool children 15 months of age to kindergarten to have one dose of mumps vaccine, unless the child has an exemption to immunization.

- Recommend mumps vaccination for children and staff without mumps immunization or positive immunity lab results. Post-exposure vaccination may not protect against the disease but may provide protection against future exposure.

Treatment

There is no specific treatment for mumps.

Exclusion

- EXCLUDE all infected students/children and/or staff until 5 days after swelling onset.
- Children should not transfer to new schools or facilities during the exclusion period
- Exclusion of unimmunized children may be considered in consultation with public health department. If unimmunized, exposed children are excluded for this reason, they may be readmitted once they receive mumps vaccine. If they remain unimmunized, they should be excluded until at least 26 days after onset of swelling of the last case.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination. Review and ensure all children have received measles, mumps, and rubella (MMR) vaccine according to current immunization recommendations.
- Report the infection to the local or state health department. If the health professional who makes the diagnosis does not inform the local health department that the infected child is a participant in a child care program or school, this could delay controlling the spread.
- Report the infection to the staff member designated by the child care program or school for decision-making and action related to the care of ill children. That person will work with public health to alert possibly exposed family and staff members and parents of unimmunized children to watch for symptoms and notifies the health consultant.

Resources: https://www.colorado.gov/pacific/cdphe/mumps

Norovirus and Other Viral Gastroenteritis

What Is Viral Gastroenteritis?

Often referred to as "stomach flu" (a misnomer, as it is not caused by the influenza virus) these viruses include rotavirus, adenovirus, calicivirus, astrovirus and norovirus and are the leading cause of foodborne illness in the US. Viral gastroenteritis is common year round but is seen more often in the winter months (November-April). Animals do **not** carry or spread this type of bacteria.

Signs and Symptoms

- Low-grade fever
- Abdominal cramps
- Diarrhea
- Vomiting
- Nausea
- Headache
- Body aches

Incubation Period

Varies depending on the specific virus, but often 1-3 days.

Contagious Period and Spread

Viral gastroenteritis is highly contagious and is spread mainly through the fecal→oral route, either by consumption of fecally-contaminated food or water, or by direct person-to-person spread. It may also be spread by touching contaminated surfaces or objects and then touching your mouth, placing contaminated objects in your mouth (pacifier, toys, cigarettes, etc.), or inhaling virus particles that have been released into the air when a person with infection vomits.

People infected with norovirus and other viral gastroenteritis are most contagious while symptomatic and for several days after symptoms resolve. However, studies have shown that you can still spread these viruses for several weeks after symptoms have resolved.

Public Health Reporting Requirements

- Single cases of illness do not need to be reported to public health.
- Clusters of illness (such as two or more people ill with similar symptoms closely grouped in terms of time and place) should be reported to the state or local public health agency immediately as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or childcare center.

Control of Spread

Please consult with local or state public health on implementation of control measures.

- Immediately throw away any food handled or prepared by an ill person.
- Encourage and teach the importance of frequent handwashing, especially after using the toilet, changing diapers and before eating. Sample signs showing when and how to wash hands are included at the end of this document. Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- Ensure all handwashing facilities have soap and paper towels.
- Hand sanitizing gels or wipes are not as good at cleaning the hands as proper handwashing, and some are ineffective against norovirus
- Immediately clear the room or area after a public display of vomiting.
- People cleaning up vomit/fecal material are encouraged to wear disposable gloves, mask, and gown/coverall to avoid direct contact with vomit/fecal material. Review the Clean-up Procedures for Vomit and Diarrheal Accidents guide in the online "Fact sheets and letter template folder".
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. Review the Clean-up Procedures for Vomit and Diarrheal Accidents guide in the online "Fact sheets and letter template folder".

- **Noroviruses** are resistant to many commonly used disinfectants. If norovirus is suspected, it is important to use a 5000 part per million (ppm) bleach solution (1 cup bleach in 1 gallon water) or a disinfectant approved by the EPA with specific claims for activity against norovirus. A list of EPA-registered disinfectants effective against norovirus is available on the EPA's website under "List G: EPA's Registered Antimicrobial Products Effective Against Norovirus" (https://www.epa.gov/pesticide-registration/list-g-epas-registered-antimicrobial-products-effective-against-norovirus). For help mixing disinfectants, refer to the Bleach Dilution Calculator Tool in the online "Fact sheets and letter template folder" (https://drive.google.com/file/d/0B7npKf07QiaAVFduUDhLdnZPejY2M2dBWFNKU0IrWU10NIpV/view).
- Refer to page 18 of this document for information on food safety.
- People with severe or prolonged diarrhea (lasting longer than 2-3 days) or who have a high fever or bloody diarrhea should be referred to a health care provider.
- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.

Treatment

Most people with healthy immune systems will recover without treatment in 1-3 days. There is no specific treatment for viral gastroenteritis although fluids are important to prevent dehydration. No immunization is available.

Exclusion

- EXCLUDE all infected children and/or staff until at least 48 hours after diarrhea and vomiting symptoms have resolved.
- Infected students or staff who handle food must not prepare food for others until they have been symptom free for at least 48 hours.

Role Of Teachers, Caregivers, And Family

- If your child or a child you care for is infected with norovirus or other viral gastroenteritis, follow the advice of the child's healthcare provider.
- Norovirus is HIGHLY contagious. Good handwashing using warm water, soap, and paper towels is one of the best ways to prevent the spread of GI illness, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food. Most hand sanitizers don't work against norovirus and should not be used instead of proper handwashing with soap and hot water.
- Noroviruses are resistant to many commonly used disinfectants. If norovirus is suspected, it is important to use a 5000 part per million (ppm) bleach solution (1 cup bleach in 1 gallon water) or a disinfectant approved by the EPA with specific claims for activity against norovirus. A list of EPA-registered disinfectants effective against norovirus is available on the EPA's website under "List G: EPA's Registered Antimicrobial Products Effective Against Norovirus" (https://www.epa.gov/pesticide-registration/list-g-epas-registered-antimicrobial-products-effective-against-norovirus). For help mixing disinfectants, refer to the Bleach Dilution Calculator Tool at https://drive.google.com/file/d/0B7npKf07QiaAVFduUDhLdnZPejY2M2dBWFNKU0IrWU10NIpV/view.
- Throw out any food handled by an ill person and wash contaminated linens (towels, sheets, clothes, etc.) in hot water with detergent and bleach and dry in a hot dryer. If you can't use bleach on linens, carpets or upholstery, find an alternative disinfectant against norovirus on EPA's website. It may be helpful to do a final steam clean.

Resources: https://drive.google.com/open?id=1j5jmuzUcjILnvZj4MhfpDLwRKgCdy52I

Pertussis (Whooping Cough)

What Is Whooping Cough (Pertussis)?

Whooping cough, also known as pertussis, is a contagious bacterial infection caused by *Bordetella pertussis*. Pertussis may be severe in infants and young children, especially those who have not had three doses of vaccine, resulting in hospitalizations, pneumonia, neurologic problems, and death. The cough may last as long as 3 months. Pertussis may not be as severe in adults and fully immunized children.

Signs and Symptoms

- Begins with cold-like symptoms including mild cough and low-grade or no fever
- Cough becomes more severe, causing coughing spells or fits
- Coughing spells may be followed by vomiting, difficulty catching breath, face turning blue, and/or high-pitched whoop
- Appears well between coughing spells

Incubation Period

Incubation period ranges from 5-21 days; usually 7 to 10 days.

Contagious Period and Spread

A person is most contagious in the early stages of the disease and will remain contagious for 21 days after cough begins or after 5 days of appropriate antibiotic treatment has been completed. An infant who has no pertussis immunizations may remain infectious for 6 weeks or more after the cough starts.

Bacteria that cause pertussis are spread by direct contact with respiratory droplets of a person with infection. Respiratory droplets that form when a child talks, coughs, or sneezes do not stay in the air, but may travel up to 3 feet and can infect others when they land on or are rubbed into eyes, noses, or mouths.

Public Health Reporting Requirements

- Report confirmed and suspected pertussis to the facility director, school nurse, or child care health consultant.
- Report the infection to the state or local public health agency by phone within **1 working day** of a suspected or confirmed diagnosis.
- Contact state or local public health agency for assistance if the school or childcare facility plans to notify parents/guardians about a case of pertussis in the facility.

Control of Spread

- Monitor incompletely immunized children and staff members for respiratory signs or symptoms and recommend treatment if cough develops within 21 days of exposure to pertussis.
- An antibiotic to prevent infection is frequently recommended for child care/preschool classroom contacts and rarely recommended for school classroom contacts.
- Pertussis vaccination after exposure will not prevent infection; however, it may provide protection against future exposure. Review pertussis immunization records and recommend DTaP or Tdap vaccines for under-immunized students/children and staff.
- Follow the most recent ACIP immunization recommendations for children and adults.
  - Children >2 months should receive five doses of DTaP by 4-6 years of age or four doses if the fourth dose is given $\geq$ 4 years of age and the dose is administered 6 months after the previous dose.
  - Children >10 years and adults should receive one pertussis booster (Tdap). (In Colorado Tdap is required at 6th grade entry so a 10 year old student will need Tdap). Tdap can be given as early as 7 years of age to complete an incomplete series of DTaP
- The Colorado School Immunization Rules require all children older than 3 months of age to have begun their pertussis immunization series or submit an exemption to immunization.

Treatment

Pertussis is treated with antibiotics. Early treatment of pertussis is very important. The earlier a person, especially an infant, starts treatment the better. If a patient starts treatment for pertussis early in the course of illness, during the first 1 to 2 weeks before coughing paroxysms occur, symptoms may be lessened

Exclusion

- Pertussis is a highly contagious illness for which routine exclusion of infected children is warranted. Exclude infected children/students and close contacts (including siblings, caregivers and teaching staff) who are coughing until they receive appropriate evaluation and treatment with antibiotics.
- Readmit after 5 days of appropriate antibiotic treatment or until 21 days after the onset of cough (whichever is first).
- Readmit the student/child or staff member once cleared to return by a health professional or no longer meets exclusion criteria AND when the child is able to participate and the staff members determine they can care for the child without compromising their ability to care for the other children in the group.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination. Review and ensure all children have received pertussis vaccine according to current immunization recommendations.
- Report the infection to the local or state health department. If the health professional who makes the diagnosis does not inform the local health department that the infected child is a participant in a child care program or school, this could delay controlling the spread.
- Report the infection to the staff member designated by the child care program or school for decision-making and action related to the care of ill children. That person, in turn, alerts possibly exposed family and staff members and parents of unimmunized children to watch for symptoms and notifies the health consultant.

Resources: https://www.colorado.gov/pacific/cdphe/pertussis-information-schools-and-health-care-professionals

Pink Eye (Conjunctivitis)

What Is Pink Eye (Conjunctivitis)?

Pink eye can be caused by a variety of bacterial, viral, and fungal pathogens, as well as allergies (such as pollen, mold, or cosmetics), contact lens use, indoor or outdoor air pollution (such as smoke or dust), and chemical irritation (such as after swimming, or exposure to chemical fumes). Pink eye is common in children and adults, and it can be difficult to determine the exact cause.

Signs and Symptoms

- Excess amount of blood in the whites of the eye and eyelid, giving the eye a pink or red appearance
- Eye itchiness, irritation, swelling, watery, light sensitivity, and/or burning
- **Bacterial or viral**: One or both eyes can be affected. There is usually a discharge (thicker, whitish-yellowish in bacterial infections) from the eye. Respiratory infection symptoms or swollen lymph nodes near the front of the ear may be present. Bacterial pink eye symptoms can last a couple of days to 3 weeks, but generally symptoms improve in 2-5 days without treatment. Viral pink eye symptoms can last from 1-3 weeks or more.
- **Allergies**: Usually both eyes are affected. Symptoms like itchy nose, sneezing, or scratchy throat may be present, and symptoms may be seasonal. Typically symptoms clear once the allergen is removed.
- **Chemical irritation**: One or both eyes can be affected.

Incubation Period

- Bacterial: 24-72 hours
- Viral: usually 1-12 days
- Allergies or chemical irritation: variable

Contagious Period and Spread

Allergies or chemical irritation: Not contagious.

Bacterial and viral: Can be easily spread by direct contact with discharge from the eye of a person with infection or by direct contact with objects contaminated with eye discharge. Contaminated fingers, clothing, towels, shared eye makeup applicators, etc. may spread the infection.

Bacterial: People with infection are contagious as long as they have symptoms or until antibiotic eye drops or ointment are started.

Viral: Some types are contagious as long as a person has symptoms (which can be variable).

Public Health Reporting Requirements

- Individual cases are not reportable.
- Suspected outbreaks of all types (including pink eye) are reportable to state or local public health.
- If two or more children from separate families in one classroom have red eyes with watery discharge, consult with public health to prevent further spread.

Control Of Spread

- Encourage frequent handwashing.
- Avoid touching or rubbing eyes and avoid sharing personal items.
- Ensure good cleaning and sanitizing practices are being followed. See page 19.

Treatment

Bacterial: A health care provider may prescribe antibiotic eye drops or topical ointment. Antibiotic treatment will generally speed recovery and reduce spread to others.

Viral: There is usually no treatment.

Allergies: May be treated with allergy medications.

Chemical irritation: Symptoms generally resolves once the irritant is removed.

Exclusion

Children do **NOT** need to be excluded for pink eye unless the child meets other exclusion criteria, such as fever or behavioral change.

Role of Teachers, Caregivers and Family

- Report the infection to the staff member designated for decision-making and action related to care of ill children. That person, in turn, alerts possibly exposed family and staff members to watch for symptoms.
- Parents/guardians should consult with the child's health care provider about diagnosis and treatment.
- Complete all medications as prescribed.

Pinworm

What Are Pinworms?

Enterobius vermicularis is a small thin white roundworm (nematode) that lives in the large intestine. While a person with infection sleeps, female pinworms leave the intestine through the anus and deposit their eggs on the surrounding skin.

Signs and Symptoms

- Itching and irritation around the anal or vaginal area
- There is the potential for a secondary infection of scratched sites
- Noticeable worms seen in the perianal region 2-3 hours after child goes to sleep

Incubation Period

1-2 months (or longer) from the ingestion of an egg until the adult females are noticeable in the perianal region

Contagious Period and Spread

Pinworm infections are spread through direct transfer of eggs through the fecal→oral route, or indirectly through clothing, bedding, food, or other articles contaminated with the parasite eggs. A dust borne infection is possible in heavily contaminated areas.

A person is infectious as long as eggs are present on the perianal skin. Eggs remain infective in an indoor environment for about 2-3 weeks.

Public Health Reporting Requirements

- Individual cases are not reportable to public health
- Report the infection to the facility director or school nurse.
- If more than one child is ill, refer them to a physician and contact public health as this may be an outbreak.

Control of Spread

- Educate children and staff on good personal hygiene, particularly the need for hand washing before eating and food preparation
- Keep fingernails as short as possible.
- Make sure those infected with pinworms, as well as household contacts and caregivers, are receiving proper treatment.
- Daily bathing in the morning with showers or stand up baths is recommended over sit-down bathing in a bathtub. Co-bathing children should be avoided.
- Frequent changing of underclothing, night clothes, towels and bedding.
- Launder clothing, towels and bedding in hot water daily for several days post treatment.
- Clean home/daycare/classroom daily for several days post treatment.
- Please consult with local or state public health for help with implementation of control measures.

Treatment

There are appropriate anti-worm medications that will be prescribed by a physician, which are taken 2 weeks apart. Control is difficult in child care centers and schools due to high reinfection rates. In such situations, mass and simultaneous treatments, repeated in 2 weeks, may be effective.

Exclusion

- EXCLUDE infected individuals from food preparation until cleared by a physician.
- Children/students and staff with pinworm infection should not otherwise be excluded.

Role of Teachers, Caregivers and Family

- Suspect pinworms if a child has intense itching around the anal or vaginal area
- Avoid shaking bedding or underwear to prevent spreading ova through the air
- Wash toys frequently and clean and sanitize surfaces used for eating, toileting, hand hygiene, food preparation, and diapering.

Pubic Lice (Crabs)

What Are Pubic Lice (*Phthirus Pubis*)?

Pubic lice, which resemble crabs through a magnifying glass, are an infestation of the louse *Phthirus pubis*. Adult pubic lice are about 1.5 to 2 millimeters in length, are tan to grayish-white in color and are typically found attached to hair in the pubic area. Occasionally pubic lice may be found on coarse hair elsewhere on the body such as the eyebrows, chest, or armpits. Pubic lice feed on human blood and have a life cycle similar to head lice. They are most commonly spread through sexual contact, though transfer of live lice through contact with the clothing or bedding of a person with an infestation is possible.

Signs and Symptoms

- Itching in the pubic/genital region.
- Adult lice or lice eggs may be visible on pubic hair.

Incubation Period

There is no incubation period. An infestation begins with the transfer of a louse or several lice to a new human host.

Contagious Period and Spread

Pubic lice are most commonly transmitted through sexual contact. Rarely a shed hair with an attached nit can hatch and start an infestation. Live lice or shed hairs may be present on clothing or bedding that has been used by a person who is infested.

Pubic lice can be spread to others as long as nymphs (immature lice) or adult lice are present.

Public Health Reporting Requirements

- Cases of pubic lice are not reportable to public health.
- The possibility of sexual abuse must be considered when infestations occur in prepubescent children. These occurrences must be reported to the appropriate authority.

Control of Spread

- People with pubic lice should be examined by a healthcare provider and be treated for lice.
- They should also be evaluated for other sexually transmitted infections.
- Sexual contacts should be likewise evaluated and treated.
- Parental consent is not required for minors to be examined and treated.
- People with pubic lice, or who have signs or symptoms of pubic lice, should avoid sexual activity until after treatment.
- General education on STI prevention should be provided to people with an infestation.
- Environmental Control Measures
  - Launder clothing and bedding of people with infestation in hot water (130º F) and dry them on the high heat setting for at least 40 minutes.
  - Alternately items may be dry cleaned.
  - Items that cannot be cleaned can be placed in a plastic bag for 2 weeks.

Treatment

- Over-the-counter and prescription treatments are available. People with infestation should consult with a healthcare provider if they have any questions about which treatment to use.
- Follow treatment instructions closely. Nits can survive treatment, so depending on the medication a second treatment may be needed to kill lice that have hatched from those eggs.
- If pubic lice are present on the eyebrows or eyelashes special care must be taken. Follow the product directions for applying treatments, or consult with a healthcare provider for guidance on product use.
- Use a nit comb or fingernails to remove nits from the hair.

Exclusion

No exclusions are necessary since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Rashes

A rash involves a change in the color and/or texture of skin, and can have many different causes. It can be a symptom of a contagious or non-contagious disease. Contact dermatitis (an inflammation of the skin caused by direct contact with an irritating substance) can occur following an exposure to dyes and chemicals found in clothing, chemicals found in elastic and rubber products, cosmetics, poison ivy, and poison oak. This type of rash usually occurs where the irritating agent touches the skin. Eczema (a chronic hypersensitivity reaction in the skin) can cause a scaly and itchy rash. Medications, foods, or insect bites that cause allergic reactions can also cause a rash. The table below outlines eleven different illnesses that can cause rashes.

Illness	Appearance	Distribution	Itching	Comments/Exclusion
Chickenpox — viral (Varicella)	Blister-like rash that scabs over 	More abundant on trunk than extremities	Yes	• Highly contagious. • Immunization is available. • Exclude until blisters scab over
Fifth Disease — viral (Erythema Infectiosum, Human Parvovirus)	• Red cheeks ("slapped cheek"). • Red, lace-like rash on body. • May fade and then reappear	Begins on cheeks, spreads to trunk and extremities	Slight, if any	• No exclusion necessary for healthy people. • Exposed pregnant women should contact their health care provider
Hand, Food and Mouth – viral (Entero- and Coxsackieviruses, Viral Exanthem	Small blister-like sores 	Palms, soles of feet, mouth and buttocks	No	No exclusion necessary unless the child has mouth sores and is drooling uncontrollably.
Impetigo — bacterial (Streptococcal and Staphylococcal bacteria)	Small blisters that burst to reveal red skin 	Usually the face, arms, or legs but can occur anywhere	Yes	Exclude until 24 hours after appropriate antibiotic treatment.
Measles — viral (Rubeola, Hard Measles)	• Red, raised and flat spots. • Rash turns white on pressure 	Begins on face along hairline, spreads to trunk and extremities	Slight, if any	• Highly contagious. • Immunization is available. • Exclude for 5 days after rash onset.

Illness	Appearance	Distribution	Itching	Comments/Exclusion
Ringworm — fungal (Tinea)	Small red bump or ring that spreads outward Ringworm on the back Ringworm on the arm Ringworm on the scalp	A single area of skin	Yes	Exclude from the end of the day until after the first treatment.
Roseola — viral (Exanthem subitum, Sixth Disease)	• Small, discrete pinkish-red spots. • Almond shaped flat spots appear on trunk and neck	Begins on face, chest and abdomen, spreads to the entire body	No	• Most common in children 6 to 24 months of age. • No exclusion necessary unless child has a fever along with the rash.
Rubella — viral (German Measles)	• Small pink spots. • May become confluent but remains pink	Begins on face, spreads to neck, trunk & extremities	No	• Immunization is available. • Exclude for 7 days after rash onset.
Scarlet Fever — bacterial (Group A streptococci)	• Small red bumps. • Rash turns white on pressure. • Pigmented areas in skin creases	Small red bumps. Rash turns white on pressure. Pigmented areas in skin creases.	No	• Strep throat symptoms are present. • Exclude until 24 hours after appropriate antibiotic treatment.
Shingles — viral (Herpes Zoster)	• Blister-like rash that scabs over. • Painful in affected area 	A single area of skin	Sometimes	• Reactivation of the chickenpox virus. • No exclusion necessary if blisters are covered
Smallpox — viral	• Deep-seated, hard, round, fluid-filled blisters	Entire body	No	Highly contagious. Notify public health immediately. Exclude immediately.

Respiratory Syncytial Virus (RSV)

What Is RSV ?

Respiratory Syncytial Virus causes respiratory tract illness in people of all ages. Symptoms can be severe in infants, young children, older adults, and immunocompromised people and hospitalization may be required. Premature infants, children under 2 years of age and adults with chronic lung or heart conditions, and children as well as adults with weakened immune systems are at particularly high risk for developing severe infections. RSV is more common in the late fall, winter, and early spring. Almost all children will be infected with RSV by their second birthday and people can get RSV more than once.

Signs and Symptoms

- Similar to the common cold – runny/stuffy nose, sneezing, coughing
- Fever
- Decreased appetite
- Sometimes wheezing
- Pneumonia and/or bronchiolitis (inflammation of the small airways in the lungs) can occur in infants and young children
- Infants may only have symptoms of irritability, poor feeding, decreased activity, and breathing difficulties

Incubation Period

Ranges from 2-8 days (usually 4-6 days)

Contagious Period and Spread

RSV is spread by inhaling or having contact (typically through the mouth, nose, or eyes) with virus-containing droplets produced by a person with infection when talking, coughing, and sneezing. Virus-containing droplets do not stay in the air for very long, but can settle on surfaces that are touched by others and live on hard surfaces for several hours and soft surfaces such as tissues and hands for shorter amounts of time. Contact with hands, tissues, and other articles contaminated with nose/throat discharges of ill people and then touching your face before washing your hands can spread the virus as well as direct contact with the virus, like kissing the face of someone who has RSV.

People with infection are usually contagious for 3-8 days. Some infants and people with weakened immune systems can be contagious for 4 weeks or longer.

Public Health Reporting Requirements

- Individual cases are not reportable. RSV hospitalizations are reported in the Denver Metro area.
- Suspected outbreaks of all types (including RSV) are reportable to state or local public health.
- Consultation with the state or local public health agency is available.

Control of Spread

- Encourage frequent handwashing and proper hand-hygiene techniques.
- Encourage children to cover their nose and mouth with a tissue or upper arm sleeve when they cough/ sneeze, and to throw away the tissue after they use it.
- Clean potentially contaminated surfaces, like doorknobs, tables, handrails, etc. See page 19.
- Avoid sharing cups and eating utensils and touching face with unwashed hands.
- People with respiratory symptoms should not interact with people at high-risk for severe disease.

Treatment

There is no specific treatment for RSV, and it usually resolves on its own. Antibiotics should not be used for viral infections, such as RSV. Aspirin should be avoided because it increases the risk of Reye's Syndrome, a serious disorder that can lead to coma and death.

Exclusion

Exclusion is not necessary unless the child is displaying severe symptoms like fever/difficulty breathing, and does not require a level of care that would jeopardize the health and safety of other children but it is recommended that children experiencing acute respiratory symptoms stay home.

Role of Teachers, Caregivers and Family

- Report the infection to the staff member designated by the child care program or school of decision-making and action related to care of ill children. That person, in turn, notifies possibly exposed family and staff members to watch for symptoms.
- Practice control measures listed above at home and in group care settings.

Resources: https://drive.google.com/drive/folders/1WqhjwwcsrxtfnavPms2mAKtAsTwAYQwK

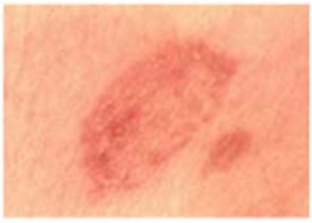
Ringworm and Other Fungal Skin Infections (Tinea, Dermatophytes)

What Is Ringworm and Other Fungal Skin Infections?

Some fungi, called dermatophytes, can cause skin, hair, and nail infections. Examples of fungal skin infections include ringworm (also known as tinea – it is not caused by a worm) and athlete's foot (also known as tinea pedis). These types of infections are very common and can affect anyone. people with weakened immune systems and people involved in contact sports (such as wrestling) may be affected more often. These infections typically have no long-term health consequences and can be effectively treated.

Signs and Symptoms

- Fungal infections can affect skin on almost any area of the body, including the scalp. Moist areas of skin (such as skin folds) can be affected more often.
- Affected areas can be itchy and become infected if scratching is excessive.
- Ringworm begins as a small red bump or ring that spreads outwards. Affected areas have a red, scaly outer ring with a clear central area, or may appear wet and crusty.
- If the scalp is affected, a bald patch of scaly skin may appear.



Ringworm on the back

Ringworm on the arm

Ringworm on the scalp

Image source: www.cdc.gov

Incubation Period

Between 4-14 days

Contagious Period and Spread

Fungal infections, including ringworm, are spread by direct contact with the rash on an affected human or animal, or by direct contact with a contaminated object/surface (such as clothing, towels, and bedding). Animals like dogs, cats, cows, goats, pigs, and horses can have ringworm and can transmit it to people. Contact sports such as wrestling have been known to spread this skin infection.

The infection can be spread to others as long as the rash is present on the skin.

Public Health Reporting Requirements

- Individual cases are not reportable.
- Suspected outbreaks of all types (including fungal infections/ringworm) are reportable to state or local public health.

Control of Spread

- Ensure all people and pets with infection are treated.
- Avoid sharing personal items.
- Encourage good hygiene and handwashing.
- See page 19 for sanitizing and disinfecting guidelines.
- Skin checks during weigh in for wrestlers

Treatment

Fungal infections, including ringworm, can be treated with antifungal medicine that can be taken in tablet or liquid form by mouth, or as a topical cream applied directly to the affected area. The particular medication used and duration of treatment is based on the location of the infection. Some treatments require a prescription by a health care provider, and some topical creams can be purchased over-the-counter.

Exclusion

Ringworm: Exclude children/students or staff with ringworm infection from the end of the program or school day until after treatment has started. Until the end of the program or school day, avoid any activity involving skin contact.

Other fungal infections: Consult with public health about exclusion.

Role of Teachers, Caregivers and Family

- Report the infection to the staff member designated by the child care program or school for decision-making and action related to care of ill children. That person, in turn, alerts possibly exposed family and staff members to watch for symptoms.
- Complete medication as prescribed by your health care professional.

Skin infection resources: https://drive.google.com/drive/folders/1KKUuVYMcDDSMwh3sQiQ8dUIzWzkAnNWv

Roseola (Sixth Disease)

What Is Roseola (Sixth Disease)?

Roseola is a rash illness caused by a virus, either human herpesvirus 6 or 7. Roseola occurs mainly in children between the ages of 6 and 24 months. Most children have had roseola before 4 years of age. Sometimes it is referred to as Sixth Disease, or exanthem subitum.

Signs and Symptoms

- High fever (often > 103º F) lasting 3-7 days.
  Seizures may occur with the high fever although often the child is not very ill when fever is present.
- Red, raised rash lasting from hours to several days that becomes apparent the day the fever breaks (usually the 4th day).
- Not every infected child will have a fever and the rash; many children have no symptoms at all.

Incubation Period

9 to 10 days for human herpesvirus 6; incubation for human herpesvirus 7 is unknown.

Contagious Period and Spread

Contagious period: after infection, the virus is present in the saliva on and off for the rest of a person's life

Spread through: Respiratory (droplet) route. Contact with large droplets that form when a child talks, coughs, or sneezes. These droplets can land on or be rubbed into the eyes, nose, or mouth. Most of the droplets do not stay in the air; they travel 3 feet or less and fall onto the ground.

- Nearly all children have had human herpesvirus 6 infection by the time they are 2 years old; human herpesvirus 7 infection may occur later in childhood.
- Most likely source of transmission to children is healthy adults. Saliva from three-fourths of adults without symptoms contains infectious virus.

Public Health Reporting Requirements

- Individual cases are not reportable to public health
- Outbreaks are uncommon and unlikely, but should be reported to public health

Control of Spread

Use good hand hygiene at all times.

Treatment

There is no specific treatment other than supportive care.

Exclusion

No, unless the child/student meets other exclusion criteria or the child is unable to participate and staff members determine they cannot care for the child/student without compromising the health and safety of others.

Role of Teachers, Caregivers and Family

- Report the infection to the staff member designated by the child care program or school for decision-making and action related to care of ill children. That person, in turn, alerts possibly exposed family and staff members to watch for symptoms.
- Inform parents/guardians about the nature of the illness, and that, while the fever phase of the illness can cause concern, once the rash appears, the child is in the recovery phase.

Rotavirus

What Is Rotavirus?

Rotavirus is a virus that causes gastrointestinal illness. Infants and young children are most often affected, and the illness can be severe in these populations. Older children and adults can also become infected, but illness generally is not as severe as in younger children. Symptoms generally last 3-8 days. There are two rotavirus vaccines licensed for use in the US (RotaTeq and Rotarix), which have been shown to be safe and effective at preventing severe illness. Vaccinated and unvaccinated people may develop rotavirus infection more than once because there are many different types of rotavirus. Usually a person's first infection with rotavirus causes the most severe symptoms. Rotavirus infection can occur any time of the year, but is more likely to occur in the winter and spring months.

Signs and Symptoms

- Watery, non-bloody diarrhea (can be severe)
- Abdominal pain/cramps
- Loss of appetite
- Vomiting
- Fever
- Dehydration

Incubation Period

Ranges from 1-3 days

Contagious Period and Spread

People ill with rotavirus shed the virus in their feces (stool). The virus is easily spread (especially among young children) by the fecal→oral route, meaning that the virus is shed by people with infection in their feces and then enters susceptible people mouths (by contaminated hands, toys, surfaces, food, water, etc.) to cause infection.

The infection can be spread to others as long as the virus is in the feces, which can occur before symptoms appear and up to 21 days after a person becomes ill.

Public Health Reporting Requirements

- Report all cases of watery diarrhea to the facility director, school nurse, or child care health consultant.
- Individual cases of rotavirus are not reportable to public health.
- Suspected outbreaks of all types (including rotavirus and other diarrheal illness) are reportable to state or local public health.

Control of Spread

- Encourage frequent hand washing, especially after using the toilet, changing diapers, before eating, and before food preparation.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys), and discard food or water if it is thought to be contaminated. See page 19.
- Encourage routine rotavirus vaccination in infants.
- Consult with local or state public health for help with implementation of control measures.

Treatment

There is no treatment for this infection; since it is caused by a virus, antibiotics will not help. People with infection should drink plenty of fluids to prevent dehydration. Oral rehydration fluids (like Pedialyte and similar fluids) should be used if possible.

Exclusion

- EXCLUDE all infected children and staff, including food preparation staff, until at least 48 hours after diarrhea symptoms have resolved.
- Children should not transfer to other schools or facilities during the exclusion period

Role of Teachers, Caregivers and Family

- Encourage routine vaccination according to current immunization recommendations.
- Practice good hand washing, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food.
- Diapering, bathroom and food preparation areas should be cleaned and disinfected frequently.
- Ensure proper cooking and storage of food.

Rubella (German Measles)

What Is Rubella (German Measles)?

Rubella is a mild viral infection that usually lasts 3 days and is very rare in the United States because of routine vaccination. While rubella is mild in children, infection during the first trimester of pregnancy can cause fetal death, premature delivery, and serious birth defects known as congenital rubella syndrome.

Signs and Symptoms

- Red or pink rash appearing first on the face, then spreading downward over the body. The rash is usually gone within 3 days.
- Swollen glands, usually at the base of the skull and behind the ears.
- Mild or no fever.
- May experience joint aches or pain (more common in adults).
- 20-50% of infected individuals will not have symptoms.

Incubation Period

14 to 21 days, usually 16 to 18 days.

Contagious Period and Spread

Contagious period: 7 days before to 14 days after the rash onset; however, children are most contagious from 3 to 4 days before the rash starts until 7 days after the rash.

Spread through respiratory (droplet) route: Contact with large droplets and respiratory secretions that form when a child talks, coughs, or sneezes.

Public Health Reporting Requirements

- Report the infection to a staff member designated by the childcare program or school for decision-making and action related to the care of ill children.
- Schools and child care facilities should report the infection to the local or state health department within 1 day of diagnosis.
- Schools and child care facilities should work with state or local public health agency to notify parents/guardians about a case of rubella in the facility.
- Suspect rubella cases should be referred to a health care provider.

Control of Spread

- Immunize according to current ACIP recommendations, when a child is 12 to 15 months of age and a second dose at 4-6 years of age.
- Review vaccination status of all children.
- Unvaccinated children should be excluded from group settings if there is an outbreak.
- Exposed pregnant women, especially those in the first trimester, should contact their healthcare provider to find out if they are immune to rubella.

Treatment

There is no specific medicine to treat rubella or make the disease go away faster. In many cases, symptoms are mild. For others, mild symptoms can be managed with bed rest and medicines for fever, such as acetaminophen.

Exclusion

Yes. Rubella is highly contagious so infected children should be excluded for 7 days after onset of rash.

For outbreaks, exclude exposed children who have not been immunized (or, if older than 4-6 years, received fewer than 2 doses of vaccine) or lack evidence of rubella immunity by laboratory methods until they become immunized or until the local health department determines it is safe for them to return. This may be more than 3 weeks.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination. Review and ensure all children have received measles, mumps, and rubella (MMR) vaccine according to current immunization recommendations.
- Report the infection to the local or state health department. If the health professional who makes the diagnosis does not inform the local health department that the infected child is a participant in a child care program or school, this could delay controlling the spread.
- Report the infection to the staff member designated by the child care program or school for decision-making and action related to the care of ill children. That person will work with public health to alert possibly exposed family and staff members and parents of unimmunized children to watch for symptoms and notifies the health consultant.

Salmonellosis

What Is Salmonellosis?

Salmonella infection can cause an intestinal illness referred to as salmonellosis. While infections occur year-round, they are most common in the summer months. *Salmonella* bacteria live in a very wide range of animals including reptiles, amphibians, poultry and other birds, rodents, pets and livestock such as cattle.

Signs and Symptoms

- Diarrhea (sometimes bloody)
- Abdominal cramps
- Nausea
- Vomiting
- Fever

Incubation Period

6-72 hours (usually 12-36 hours), but could be up to 7 days

Contagious Period and Spread

Salmonella is spread through the fecal→oral route. People can become ill with Salmonellosis by eating contaminated food (e.g., raw or undercooked poultry, eggs, egg products; undercooked meats, contaminated produce, and raw milk or milk products), drinking contaminated water, or putting contaminated objects in the mouth. *Salmonella* is also spread from person-to-person and from animals to people (especially reptiles and chicks). A wide variety of foods have been associated with infection include undercooked meat/poultry or eggs, unpasteurized milk, produce, and a number of processed items including peanut butter, cereals and snack foods.

People are contagious as long as they have *Salmonella* bacteria in their stool, but are most contagious while having diarrhea. People may continue to shed *Salmonella* bacteria in their stools for weeks to months after their illness has gone away.

Public Health Reporting Requirements

- Staff who become aware of illness should report the infection to the facility director or school nurse.
- The facility should report to the local or state health department within 4 days of diagnosis.
- If other children or staff are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or childcare center.

Control of Spread

Please consult with local or state public health on implementation of control measures.

- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19.
- Refer to page 18 of this document for information on food safety.
- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.

Treatment

Most people with healthy immune systems will recover without treatment in 4-7 days. Ill people should be given plenty of fluids to prevent dehydration. Ill people are usually not given antibiotics for mild *Salmonella* infections because antibiotics do not shorten the duration of illness and may prolong shedding of the bacteria in the stool. However, antibiotics are recommended for cases with gastroenteritis and an increased risk of invasive disease, such as:

- Infants <3 months of age
- Chronic gastrointestinal tract disease
- Malignant neoplasms
- HIV infection

- Immunosuppressive illnesses and therapies
- Severe colitis

Exclusion

EXCLUDE all infected children and/or staff until at least 24 hours after diarrhea has resolved, **AND**

Child Care:

- Ill children should not go to another facility during the period of exclusion.
- Children returning to childcare are not required to provide follow up stool tests.
- Reinforce and teach the importance of meticulous hand washing with child care facility staff after diaper changing and toileting children. If possible, this should be verified by environmental health. Sample signs showing when and how to wash hands are included at the end of this document. Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- When a case of salmonellosis is identified in a child attending childcare, determine whether additional children have or have recently had diarrhea. Other children with diarrhea should be excluded, should be seen by their physician, and should submit stool for Salmonella testing. If other cases in the center are identified, consider sending a letter home to parents. A sample letter is available in the resource folder (https://drive.google.com/drive/folders/1fU6dODeqSzrBAdToDbbXHkRxfQvAuSp1).
- If the case is the only child in the classroom or center who has been ill, no further action is indicated for other children in that classroom or center.

Schools:

- In general, students/children or staff with *Salmonella* who do not have diarrhea and are not otherwise sick may remain in school.
- Encourage and teach the importance of frequent handwashing, especially after animal contact, after using the toilet, changing diapers and before eating. Sample signs showing when and how to wash hands are included at the end of this document. Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- Children who wear diapers or have developmental delays resulting in fecal incontinence or hygiene concerns may be excluded until they have two consecutive negative stool samples collected 24 hours apart. If the child has received antibiotics, the specimens must be collected at least 48 hours after completion of antibiotics.

In rare circumstances, public health may require additional testing before a person with infection can return to work, school, or child care.

Students or staff who handle food and have a Salmonella infection must not prepare food until at least 24 hours after their diarrhea has resolved or until cleared by the state or local public health agency. See Disease Control Measures, section D (Food Handlers) above.

Role of Teachers, Caregivers and Family

- If your child or a child you care for is infected with *Salmonella*, follow the advice of the child's healthcare provider.
- Practice good hand washing, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food.
- Diapering, bathroom and food preparation areas should be cleaned and disinfected frequently.
- Infants, children, elderly, and immunocompromised individuals should avoid contact with reptiles and reptiles' cages as they are more likely to carry *Salmonella*. It is also important to wash hands after touching any pets or other animals as they can also carry *Salmonella*.
- Keep food that will be eaten raw, such as vegetables, from becoming contaminated by animal-derived food products and thoroughly cook all food products from animals, especially poultry and eggs, and avoid consuming raw or cracked eggs, unpasteurized milk, or other unpasteurized products. Ill individuals should not prepare food for other individuals until symptoms resolve.

Resources: https://drive.google.com/drive/folders/1fU6dODeqSzrBAdToDbbXHkRxfQvAuSp1

Scabies

What Is Scabies?

Scabies is a condition caused by *Sarcoptes scabiei* var. *hominis*, a microscopic mite that infests the top skin layer of humans. Scabies is not a result of poor personal hygiene, but is contracted through skin to skin contact with someone who is infested. People with scabies usually have only 10 or 12 mites on their body. Scabies should only be diagnosed by a healthcare provider; misdiagnoses by lay people are common.

Signs and Symptoms

- Initial symptoms consist of small itchy bumps, blisters, or pus-filled bumps that break when scratched
- Intense itching may occur, particularly at night or after a bath
- Commonly affected areas include the hands and feet, especially the webbing between digits, the inner wrists and armpits
- Other areas of the body may also be affected
- Tiny, raised, crooked, grayish-white or skin-colored burrows may be seen in the skin

Image source: aad.org

Incubation Period

The incubation period is the time from the mite's penetration and entry into the top skin layer until the time the person with infestation develops symptoms. People who have never had scabies before may not develop symptoms until 2-6 weeks after they are infested. For people who have had scabies before, the incubation period is much shorter, and can be as little as 1-4 days.

Contagious Period and Spread

Scabies is transmitted by direct, prolonged, physical contact (skin-to-skin) with a person with infestation or through contact with infested clothing or bedding. A person with infestation can spread the scabies mite before he/she shows signs and symptoms. Mites cannot reproduce or survive without a human host, so objects like toys and desks are not important in the spread of scabies.

People with infestation can spread the mites until the mites and eggs are destroyed by treatment.

Public Health Reporting Requirements

- Individual cases are not reportable.
- The facility director, school nurse, or child care health consultant should be consulted for specific concerns. Consultation with the state or local public health agency is available.

Control of Spread

- Refer suspect people with infestation to a health care provider for diagnosis and treatment.
- Close contacts of a person with infestation should be monitored for symptoms, or may be treated prophylactically.
- The type and duration of contact will determine whether prophylaxis is needed. Sexual contacts are at high risk for scabies.

  Environmental Control Measures
  - Scabies mites cannot live for longer than 4 days away from humans, thus mites in the environment will die in a few days if there is no host to feed on.
  - Clothing and bedding used by person with scabies in the 3 days before treatment is started should be laundered using hot water and the high heat setting on the dryer.
  - Items from a person with scabies that cannot be laundered can be placed in a plastic bag for 4 days.
  - Carpet and furniture can be vacuumed. Do not use pesticides

Treatment

- Treatments for scabies are only available with a prescription. Anyone who suspects they have scabies should consult their health care provider for a diagnosis and prescription.

- Itching is due to a reaction to the mite, its eggs, and its feces in the skin. Itching may increase and even continue for several weeks following a successful treatment as the mites die.
- Mites can be resistant to treatment. A health care provider should be consulted if symptoms persist for more than 3 weeks after treatment.
- Family members and very close contacts should be treated at the same time as a child/student, even if no signs or symptoms are present.

Exclusion

- Exclude children/students with scabies from the end of the program or school day until after treatment has started.
- Until the end of the program or school day, avoid any activity involving prolonged skin contact

Role of Teachers, Caregivers and Family

- Scabies affects people from all socioeconomic levels without regard to sex, age, or personal hygiene. Perceptions of social stigma and physical discomfort caused by scabies can affect a child's ability to learn and perform in the school environment.
- Use and encourage good hand hygiene technique at all times.
- Use standard precautions when cleaning or touching open sores or lesions.

Resources: https://drive.google.com/open?id=1AZrvCXydLYIXrzYYfZ3e1eYOjY0Y7WmU

Sexually Transmitted Infections (STIs)

What Are Sexually Transmitted Infections (STIs)?

Over 16 infectious diseases are recognized as being STIs. The STIs described in this section of the guidelines cover only those most common (i.e., situations with which school/child care nurses and personnel are more likely to be confronted). Teens have very high reported rates of STIs for several reasons:

- Many STIs do not cause symptoms, sexual partners do not know that they are infected and can spread the disease;
- Social stigma attached to STIs may cause embarrassment and result in hesitance to be examined for fear that others will "find out" about the infection;
- Lack of knowledge about STIs and how they are transmitted.

Signs and Symptoms

Varies depending on the disease. See the disease-specific chapters in these guidelines.

Incubation Period

Varies depending on the disease. See the disease-specific chapters in these guidelines.

Contagious Period and Spread

STIs are transmitted through various forms of sexual contact: oral, anal, and vaginal. People with an STI are generally contagious until they receive treatment, although some STIs are potentially communicable for life (like HIV, genital herpes, and genital warts).

Varies depending on the disease. See the disease-specific chapters in these guidelines.

Public Health Reporting Requirements

- Chlamydia, gonorrhea and Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) must be reported to the state or local public health agency within 4 days of diagnosis.
- Syphilis must be reported within 1 work day of a suspected or confirmed diagnosis.
- The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities.

Control of Spread

- People with infection should be examined by a health care provider and treated (if treatment is available) as soon as the diagnosis is confirmed to prevent complications. Treatment of partner(s) is a crucial strategy to prevent re-infection. People with infection should seek medical care if symptoms persist or recur. Parental consent is **not** required for minors to be examined and treated.
- People with infection should avoid sexual activity until they and their partner(s) are treated (if treatment is available) and cured.
- People with infection should abstain from sex or use condoms to prevent future infections.
- General education of STI prevention is advocated.
- A vaccine exists for the most common types of Human Papillomavirus (HPV) (the virus that causes genital warts); there are currently no other vaccines for STIs.

Treatment

People with infection should be taught how to take prescribed medications correctly.

Exclusion

No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: https://www.colorado.gov/pacific/cdphe/sti-hiv and https://www.cdc.gov/std/healthcomm/fact_sheets.htm

Shigellosis

What Is Shigellosis?

Shigella infection causes an intestinal illness referred to as shigellosis. While less common than many of the other enteric pathogens, the number of shigellosis cases has been increasing in recent years. Humans are the only significant reservoir for *Shigella*; animals do **not** carry or spread this type of bacteria.

Signs and Symptoms

- Diarrhea (sometimes with blood or mucus)
- Abdominal cramps
- Nausea
- Fever
- Vomiting

Incubation Period:

1-7 days (usually 1-3 days)

Contagious Period and Spread

Shigella is spread by the fecal→oral route. People can become ill with *Shigella* from person-to-person contact, by eating food contaminated by people with infection (in particular foods eaten raw), drinking or swimming in contaminated water, or by coming into contact with contaminated surfaces. Shigellosis is highly contagious and spreads easily from person-to-person, especially in child care facilities.

People are contagious as long as the organism is present in the stool, which can be several weeks. People with diarrhea are more likely to spread it than those who are infected but do not have symptoms.

Public Health Reporting Requirements

- Staff who become aware of illness should report the infection to the facility director or school nurse.
- The facility should report to the local or state health department within 4 days of diagnosis.
- If other children or staff are ill with diarrhea, refer them to their health care providers and contact public health as soon as possible as this could be an outbreak. Generally speaking, it is considered an outbreak if there is an increase in the number of ill children and/or staff members at the school or childcare center.

Control of Spread

- When a case of shigellosis occurs in a child care center attendee or worker, immediate involvement of
- public health authorities is critical. *Shigella* spreads very quickly through child care centers, but can be
- controlled if appropriate action is taken.
- Please consult with local or state public health with implementation of control measures.
- Encourage and teach the importance of frequent handwashing, especially after using the toilet, changing diapers and before eating. Directly supervise handwashing of children under 5 years of age. Sample signs showing when and how to wash hands are included in the resource folder. Post them or similar signs throughout the childcare center or school to remind people to wash their hands.
- Perform more frequent cleaning and disinfection of toys, bathrooms, diapering areas, and
- food preparation areas during this time. Suspend the use of "play" dough and water tables.
- Promptly sanitize contaminated surfaces (like diaper changing areas) and other commonly touched surfaces (like toys) and discard food or water if it is thought to be contaminated. See page 19.
- Refer to page 18 of this document for information on food safety.
- Alert possibly exposed family and staff members to watch for symptoms and provide them with prevention tips. See recommendations for caregivers and the family section below.
- Refer to *Shigellosis Outbreak Investigation & Control In Child Care Centers / Pre-Schools* - https://drive.google.com/file/d/0B0tmPQ67k3NVSXBuUFNXNmZnM2s/view

Treatment

Most shigellosis infections are self-limited, resolve in 4-7 days, and do not require antibiotics, but some people can experience symptoms for 4 or more weeks. Some people can be infected and not show any symptoms. Antibiotics may be effective in slightly shortening the duration of diarrhea and eradicating organisms from feces, although some antibiotics will not eliminate these bacteria. Antibiotic treatment is recommended for cases with severe disease,

dysentery, or underlying immunosuppressive conditions. Some *Shigella* bacteria have become resistant to certain antibiotics. Laboratory tests can determine which antibiotics are effective for a specific *Shigella* case.

Exclusion

EXCLUDE all infected children and/or staff until at least 24 hours after diarrhea has resolved, **AND**

Child Care and Preschool:

- Children should be excluded until they have been treated with an effective antibiotic for 3 days OR they have two consecutive negative stool samples collected at least 24 hours apart. If case being re-tested has received antibiotics, stool should be collected at least 48 hours after antibiotics are completed.
- Ill children should not go to another child care or preschool facility during the period of exclusion.
- Look for symptoms consistent with Shigella infection (diarrhea and fever) in other children or staff during the previous 3 week period.
- If the index case is the only child or worker in the classroom or facility who has been ill, that child may return as outlined above and no further action is indicated for other children in that classroom or child care facility.
- If others in the facility are identified with Shigella-like symptoms, they should be excluded from the facility, referred to their health care provider, and instructed to submit a stool specimen or rectal swab for Shigella testing.

Child Care and Preschool Staff:

- Staff in child care and preschool facilities should be excluded until at least 24 hours after diarrhea has resolved **and** they have two negative stool samples collected at least 24 hours apart (and submitted at least 48 hours after cessation of antibiotics, if antibiotics are given). If case being re-tested has received antibiotics, stool should be collected at least 48 hours after antibiotics are completed. Consult with public health about the necessity of follow-up testing.
- Staff with no role in food preparation or feeding (e.g., office staff) may return to work after diarrhea has been resolved for at least 24 hours. Stool testing will not be required for these workers.
- People preparing food in the child care facility should not be changing diapers or providing care to symptomatic or stool positive children. Family style meals should be suspended. A
- Gloves should be used when handling or preparing food at all times.

Primary and Secondary Schools:

- Students or staff with *Shigella* infection should be excluded until at least 24 hours after their diarrhea has resolved.
- Children/students who wear diapers or have developmental delays resulting in fecal incontinence or hygiene concerns should be excluded until they have two consecutive negative stool samples collected 24 hours apart OR the child has been treated with an effective antibiotic for 3 days.
- Students or staff who handle food should be excluded until at least 24 hours after their diarrhea has resolved **and** they have two consecutive negative stool samples collected at least 24 hours apart or until cleared by the state or local public health agency. If case being re-tested has received antibiotics, stool should be collected at least 48 hours after antibiotics are completed.

Role of Teachers, Caregivers and Family

- If your child or a child you care for is infected with Shigella, follow the advice of the child's healthcare provider.
- Practice good hand washing, especially after changing diapers, going to the bathroom/helping a child go to the bathroom, or handling food. Diapering, bathroom and food preparation areas should be cleaned and disinfected frequently.
- Keep flies from contaminating food.
- Ill individuals should not prepare food for other individuals until symptoms resolve.
- Infected individuals should not swim or wade in pools or other recreational water while experiencing diarrhea.

Resources: https://drive.google.com/drive/folders/19eCY22zKWtPehWvY_5IykPeErS0EqH-1

Streptococcal Sore Throat (Strep Throat)

What Is Streptococcal Sore Throat (Strep Throat)?

Streptococcal sore throat, also referred to as strep throat, is caused by the bacteria *Streptococcus pyogenes* (also known as Group A streptococcus). Not all sore throats are caused by streptococcal bacteria. people ill with a sore throat should see a health care provider to determine the cause. Strep throat is usually diagnosed by a rapid strep test or a throat culture.

Signs and Symptoms

- Sore throat – throat appears red and there may be white pus on the tonsils
- Fever
- Enlarged lymph nodes in the neck
- Runny nose (toddlers may only have a runny nose and/or fever)
- Sometimes headache, stomach pain, nausea, and/or vomiting
- Some people may develop a skin rash called a scarlatiniform rash

Complications of Strep Throat Can Include:

- Rheumatic fever, an inflammatory disease that can involve the heart, joints, skin, and brain. The risk of rheumatic fever is reduced by promptly treating strep throat with the appropriate antibiotics.
- Acute glomerulonephritis, a disease of the kidneys.
- Toxic shock syndrome.

Incubation Period

2-5 days

Contagious Period and Spread

Strep throat is usually transmitted through contact with droplets and respiratory secretions from a person with infection, such as through coughing and sneezing.

People are no longer contagious within 24 hours of appropriate antimicrobial therapy. Communicability of people who are not treated gradually diminishes over a period of weeks.

Public Health Reporting Requirements

- Report the infection to the facility director, school nurse, or child care health consultant.
- Individual cases of strep throat infections, scarlet fever, and rheumatic fever are not reportable to public health.
- Suspected outbreaks of all types (including strep throat) are reportable to state or local public health.

Control of Spread

- Family members and household contacts of an ill person do not need to be routinely tested unless they are symptomatic, or contacts are at increased risk of developing sequelae from strep infection, or the child has rheumatic fever or acute glomerulonephritis.
- Follow-up testing of symptomatic people with a positive strep test is not routinely recommended. If symptoms persist after antibiotic therapy, a health care provider should be consulted.
- Encourage frequent handwashing.

Treatment

Typically antibiotics (usually penicillin or amoxicillin) are prescribed to treat strep throat. Treatment instructions should be followed closely in order to prevent complications such as rheumatic fever.

Exclusion

- EXCLUDE symptomatic children and staff in child care centers and schools with strep throat until 12 hours after the first dose of antibiotic treatment.
- A student/child or staff member *without* symptoms, regardless of a positive test result, does not need to be excluded.

Role of Teachers, Caregivers and Family

- Teach children to cover their cough and avoid contact with respiratory droplets.
- Practice and encourage good hand hygiene techniques

Syphilis

What Is Syphilis?

Syphilis is caused by *Treponema pallidum*, a bacterium. Syphilis can affect the entire body, and has three stages: primary, secondary, and late. Symptoms vary and can be indistinguishable from other diseases, and often people with syphilis do not have noticeable symptoms for years.

Signs and Symptoms

- Primary stage: One or more small, round, hard, painless sores (called chancres) appear at the site of exposure, usually around the penis, mouth, vagina, and/or anus. Chancres generally resolve after 3-6 weeks without treatment.
- Secondary stage: If not treated, a non-itchy, reddish, rough rash develops on the palms of the hands and on the bottoms of the feet. A rash with a different appearance may occur on other parts of the body. Sometimes the rash is faint and not noticed. Second-stage symptoms can also include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and tiredness. Even without treatment, the symptoms of secondary syphilis usually resolve.
- Late stage: A person with untreated syphilis can experience a period of many years without any symptoms following the primary and secondary stages. Signs and symptoms of the late stage of syphilis include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and dementia. The damage may be serious enough to cause death.

Incubation Period

10 days to 3 months (usually 3 weeks).

Contagious Period and Spread

Direct exposure to a chancre through sexual contact: oral, anal, and vaginal.

People with a chancre(s) who are in the primary or secondary stage can spread syphilis.

Public Health Reporting Requirements

- Syphilis infections must be reported by laboratories and health care providers to the state or local public health agency within 1 work day of a suspected or confirmed diagnosis.
- The possibility of sexual abuse must be considered when infections occur in prepubescent children and must be reported to appropriate authorities.

Control of Spread

- People with infection should be examined by a health care provider and treated as soon as the diagnosis is confirmed to prevent complications. Treatment of the partner(s) is a crucial strategy to prevent re-infection. People with infection should seek medical care if symptoms persist or recur. Parental consent is **not** required for minors to be examined and treated.
- People with infection should avoid sexual activity until they and their partner(s) are treated and cured.
- Patients should abstain from sex or use condoms to prevent future infections.
- General education of STI prevention is advocated.

Treatment

Treatment is with antibiotics. Syphilis is easy to cure in its early stages. Late stage syphilis complications require more extensive antibiotic treatment.

Exclusion

No exclusions or environmental interventions are necessary, since STIs require close intimate physical contact for transmission, virtually always of a sexual nature.

Role of Teachers, Caregivers and Family

- General education about sexual health and STI prevention is recommended
- Infections in prepubescent children and other high risk individuals must be reported to appropriate authorities to address the possibility of sexual abuse.

Resources: http://www.cdc.gov/std/syphilis/default.htm

Tetanus

What Is Tetanus?

Tetanus is caused by *Clostridium tetani*, which is a spore-forming bacteria found in soil and in human and animal feces. The spores enter the body through breaks in the skin, often wounds, and grow under low oxygen conditions. The bacteria excrete a potent toxin (poison) that affects the central nervous system. Tetanus can be fatal. There are very few cases of tetanus in the United States due routine vaccination.

Signs and Symptoms

- The jaw and neck are usually involved first, causing lockjaw, stiff neck, and difficulty swallowing
- Painful, severe muscular contractions (spasms)
- Generalized tonic seizure-like activity
- Eventually the entire body is affected (usually in a descending pattern)

Incubation Period

Ranges from 2 days to several months (usually 8-14 days)

Contagious Period and Spread

Tetanus is not contagious person-to-person, so there is no contagious period.

People get tetanus when spores from the bacteria enter the body through breaks in the skin (wounds).

Public Health Reporting Requirements

- Confirmed or suspected cases of tetanus must be reported to the local or state health department within 4 days of diagnosis.
- Report the infection to the facility director, school nurse, or child care health consultant.
- Consult with the state or local public health agency about sending out notifications.

Control of Spread

- Tetanus can be prevented with vaccination and is part of DTaP, DT, Tdap, and Td vaccines.
- Tetanus vaccine is routinely given starting at 2 months of age.
- Tetanus vaccine and/or tetanus immune globulin (TIG) may be recommended after an injury in certain situations depending on the type of wound and the person's tetanus vaccination status.
- Instances where tetanus vaccine and/or TIG may be needed include animal bites, cuts, burns, puncture wounds, and wounds contaminated with soil, feces, or saliva.

Treatment

Treatment of tetanus is an emergency that requires hospitalization.

Exclusion

Exclusion is not necessary because tetanus is not spread person-to-person.

Role of Teachers, Caregivers and Family

- Encourage routine vaccination
- Don't delay first aid of even minor, non-infected wounds like blisters, scrapes, or any break in the skin.
- Wash hands often with soap and water or use an alcohol-based hand rub if washing is not possible.

Tick-Borne Illness

What Are Tick-Borne Illnesses?

Tick-borne illnesses are caused when bacteria or viruses are transmitted when ticks attach to a person's skin and feed on that person's blood. The ticks that transmit Lyme disease are not found in Colorado. However, bites from ticks found in Colorado (American dog ticks, Rocky Mountain wood ticks, and Brown dog ticks) can transmit several tick-borne diseases, though most are infrequently seen in Colorado.

Signs and Symptoms

Colorado Tick Fever

Fever, chills, headache, body aches, and feeling tired. Some patients have sore throat, vomiting, abdominal pain, or skin rash. About half of patients have several days of fever, feel better for several days, then have a second short period of fever and illness. Weakness and fatigue may last several weeks but most people recover completely. In rare cases, severe illness affecting the central nervous system may occur.

Tick-borne relapsing fever (TBRF)

High fever (e.g., 103° F), headache, muscle and joint aches. Symptoms can recur, producing a telltale pattern of fever lasting roughly 3 days, followed by 7 days without fever, followed by another 3 days of fever. Without antibiotic treatment, this process can repeat several times.

Rocky Mountain Spotted Fever (RMSF)

Early signs and symptoms are not specific and include fever and headache. However, the disease can rapidly progress to a serious and life-threatening illness. Rash is common and usually develops 2-4 days after fever begins. The look of the rash can vary widely over the course of illness. Some rashes can look like red splotches and some look like pinpoint dots. While almost all patients with RMSF will develop a rash, it often does not appear early in illness, which can make RMSF difficult to diagnose.

Incubation Period

Tick bites are not painful and many people do not know that they've been bitten

Colorado Tick Fever: ranges from 1 to 14 days from the time of the tick bite

Tick-borne relapsing fever (TBRF): approximately 7 days from the time of the tick bite

Rocky Mountain Spotted Fever (RMSF): 3-12 days from the time of the tick bite

Contagious Period and Spread

Tick-borne diseases are not spread person-to-person; except in the unusual circumstance that follows so there is no contagious period. Those infected with the virus that causes Colorado Tick Fever could potentially transmit the virus to others through blood or bone marrow donations, so it is advised not to donate for 6 months following this viral infection.

Colorado Tick Fever

Caused by a virus spread from Rocky Mountain wood tick bites.

Tick-borne relapsing fever (TBRF)

Caused by bacteria transmitted from the bite of soft ticks (commonly *Ornithodoros hermsi* in Colorado) which are often found in rodents nests associated with rustic cabins in forested high-elevation habitats. As long as the chipmunks or tree squirrels are available for the soft ticks to feed on they will stay in the nests, but if the rodents leave or are removed the soft ticks will attach and feed on people for short periods at night while they sleep. They don't stay attached like the hard ticks do; so exposure often goes unnoticed.

Rocky Mountain Spotted Fever (RMSF)

Caused by bacteria transmitted from the bite of Rocky Mountain wood ticks, American dog ticks and Brown dog ticks.

Public Health Reporting Requirements

Tick-borne illnesses are reportable to local or state public health within 4 days of diagnosis.

Control of Spread

- Tick-borne diseases are not spread person-to-person
- Educate children and staff about tick prevention
- Treat clothing and gear and use insect repellants
- Check children for ticks after outdoor activities and safely remove attached ticks

Treatment

Colorado Tick Fever:

There are no medications to treat this viral infection. Severe cases require hospitalization for supportive care.

Tick-borne relapsing fever (TBRF):

Treated with antibiotics. Cases require close observation during initiation of treatment, about 50% of cases have a severe reaction.

Rocky Mountain Spotted Fever (RMSF):

Early treatment with Doxycycline can prevent death or severe illness. Treatment must be started before the diagnosis can be confirmed due to the delay in detectable antibodies which do not reliably appear until 2-3 weeks after illness onset.

Exclusion

Exclusion is not necessary since tick-borne diseases are not spread person-to-person.

Role of Teachers, Caregivers and Family

- Locate play areas away from areas with lots of trees, tall grass, and brush.
- Use barriers of dry wood chips or gravel between play areas and areas with trees, tall grass, and brush.
- Inspect children's skin and scalp after possible exposure and wear gloves to remove attached ticks as soon as possible.
- Use veterinary-approved tick preventative products on pets.

Resources: https://www.cdc.gov/ticks/index.html

Tuberculosis (TB)

What Is Tuberculosis (TB)?

Tuberculosis (TB) is a disease caused *by Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but can attack any part of the body such as the kidney, joints/bones, spine, and brain. If not treated properly, it can be fatal.

Signs and Symptoms

There are TB-related conditions.

Latent TB Infection:

TB bacteria can live in your body without making you sick. This is called latent TB infection (LTBI). In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop it from growing. People with latent TB infection do not feel sick and do not have any symptoms.

Active TB Disease:

TB bacteria become "active" if the immune system cannot stop it from multiplying. When TB bacteria are active (multiplying in your body), this is called TB disease. TB disease will make you sick. People with TB disease may spread the bacteria to people they spend time with every day.

A Person with Latent TB Infection	A Person with Active TB Disease
Has no symptoms	Has symptoms that may include: • A cough lasting 3 weeks or longer • Pain in the chest • Coughing up blood or sputum • Weakness or fatigue • Weight loss and/or no appetite • Chills and/or fever • Sweating while sleeping
Does not feel sick	Usually feels sick
Cannot spread TB bacteria to others	May spread TB bacteria to others
Usually has a skin test or blood test result indicating TB infection	Usually has a skin test or blood test result indicating TB infection
Has a normal chest x-ray and a negative sputum smear	May have an abnormal chest x-ray, or positive sputum smear or culture
Needs treatment for latent TB infection to prevent active TB disease	Needs treatment to treat active TB disease

Incubation Period

Infection is detectable by skin test 2-10 weeks after initial exposure to someone with active disease

The risk of progression to active disease is elevated in the first 2 years and when the body's immune system is not able to fight off the disease (i.e., diabetes, HIV, renal disease, TNF inhibitors, etc.). Young children are at a higher risk of progression to active TB disease because their immune system cannot fight the TB germ as well as an adult. However, the infection may be present for many years before progression to active disease.

Contagious Period and Spread

TB is contagious only during active disease. Generally, infants and children younger than 12 years with active TB disease are not contagious because they don't form cavities in their lungs with enough bacteria to be expelled into the air when they cough.

TB is spread through the air from one person to another. When a person with active TB disease of the lungs or throat coughs, sneezes, speaks, or sings, the bacteria enters the air. People nearby may breathe in the bacteria and become infected. TB is NOT spread by shaking hands, sharing items (like food, drinks, toothbrushes), touching objects, or kissing.

Public health officials will determine when a person is no longer infectious after starting effective treatment.

Public Health Reporting Requirements

- Report the name of the child or staff member with **active TB** to the facility director or school nurse and the local or state health department within 1 working day of diagnosis.
- Report **positive TB skin tests** to the facility director or school nurse and the local or state health department within 7 days of diagnosis.
- Positive IGRA (TB blood tests) are reported to CDPHE by labs in Colorado

Control of Spread

- Tuberculosis risk assessment should be a routine part of health assessments for adults working in early childhood education, child care programs, and schools.
- Referral to local or state public health is mandatory for suspected or confirmed case of TB. Recent skin or blood test converters should have a chest x-ray and medical evaluation to determine if treatment is indicated.
- People with previously positive skin test results, especially those who were not treated for TB infection, should be evaluated by a health care provider if any symptoms of TB disease are noted - fever, night sweats, weight loss, or persistent cough to assess their disease status and determine the need for treatment.
- Skin or blood testing of all exposed children and staff may be necessary in some instances.
- No immunization is recommended in the United States.
- Consultation with the state or local public health agency is encouraged for situations that may arise in child care or school settings. The CDPHE Tuberculosis Program can be reached at 303-692-2638.

Treatment

Tuberculosis is treated with antibiotics. There are three treatment regimens for TB infection that range in duration from 3 months to 9 months. TB disease is treated with multiple antibiotics that can last from 6 months to more than a year. TB treatment requires observation, often public health or designee will need to directly observe the administration of each dose of treatment.

Exclusion

- EXCLUDE children with active TB disease from child care or school until they are receiving treatment and/or are cleared by a health care provider or a public health official.
- Children should not transfer to a new school or facility during the exclusion period.
- Children/students and staff who do not have symptoms should not be excluded from child care or school solely based on a positive skin or blood test.

Role of Teachers, Caregivers and Family

- Protect the privacy of the student/child and family.
- Collaborate with public health to help discreteness is practiced and help ensure that all prescribed medications are taken as indicated. Local public health may wish to interview teachers or caregivers at some point during this process during what is referred to as a contact investigation. It is imperative that staff protect the child's and family's identity.

Resources: https://www.colorado.gov/pacific/cdphe/tuberculosis OR http://www.cdc.gov/tb/

Tularemia

What Is Tularemia?

Tularemia is a bacterial infection that can be transmitted to people through exposure to infected animals or environmental contamination. Hares, rabbits and rodents are particularly susceptible to the disease and often die in large numbers during an outbreak.

Signs and Symptoms

Tularemia illness ranges from mild to life-threatening and symptoms depend on how the bacteria enter the body. All forms of tularemia result in a fever, which can be very high, and lymph glands usually swell. Ulcers can form at the site of exposure through skin due to fly or tick bites or direct contact. Eye exposure can result in irritation and inflammation. Oral exposure symptoms following ingestion of contaminated food or water include sore throat, mouth ulcers, and tonsillitis. Inhalation results in the most severe form of tularemia and symptoms include cough, chest pain, and difficulty breathing. Respiratory symptoms can also result from other forms of tularemia left untreated when the bacteria spreads to the lungs.

Incubation Period

Usually 3-5 days, but can be up to 14 days

Contagious Period and Spread

Tularemia is not known to spread person-to-person. It is spread through:

- Bites from deer flies or ticks (dog ticks and wood ticks in Colorado)
- Handling infected animals
- Breathing dust or aerosol containing bacteria
- Eating or drinking contaminated food or water

Public Health Reporting Requirements

- Tularemia infections are reportable to local or state public health within 1 working day
- Report die offs of hares, rabbits or rodents to public health

Control of Spread

- Tularemia occurs naturally in many parts of Colorado
- Use insect repellents and treat clothing and gear to prevent tick and fly bites
- Teach children to avoid touching or handling sick or dead animals. Adults should use care and wear gloves when handling sick or dead animals and avoid ticks (or fleas) that may be on the carcass looking for a new blood meal
- Cook food thoroughly and make sure water is from a safe source
- Check for ticks after outdoor activities and safely remove attached ticks as soon as possible

Treatment

Tularemia is treated with antibiotic regimens that usually last from 10 to 21 days, depending on the stage of illness and medication prescribed.

Exclusion

None.

Role of Teachers, Caregivers and Family

- Note any change in behavior of pets or livestock and consult a veterinarian if they develop unusual symptoms
- Check the area for carcasses prior to mowing and safely discard them to avoid mowing over dead animals.
- Report die-offs of rabbits and rodents to public health

Viral Meningitis (Aseptic Meningitis)

What Is Viral Meningitis?

Viral meningitis is a relatively common illness but rarely is serious. Meningitis is an infection of the tissue that covers the brain and spinal cord with a virus. Viral meningitis is the most common type of meningitis and is usually caused by a group of viruses called enteroviruses. Other causes of viral meningitis include: measles, chickenpox, mumps, herpes virus, and West Nile virus. Viral meningitis can sometimes be confused with bacterial meningitis, which is much more serious. Increases in cases of viral meningitis occur regularly in the summer and fall and are not cause for alarm. People suspected of having meningitis should be seen by a health care provider.

Signs and Symptoms

- Fever
- Severe headache
- Stiff neck
- Trouble waking up
- Sensitivity to light
- Confusion
- Nausea/vomiting
- Irritability

Incubation Period

Dependent on the virus involved (i.e., incubation for enterovirus is 3-7 days).

Contagious Period and Spread

Contagious period: Varies by the virus causing the infection, but for viral meningitis caused by enterovirus, shedding of the virus in feces can continue for several weeks. Shedding from the respiratory tract usually lasts a week or less.

How the infection spreads varies among the viruses that cause viral meningitis. Viral meningitis is most often spread through direct contact with nose/throat discharges or the stool of a person with infection.

Public Health Reporting Requirements

- Individual cases of viral meningitis do not need to be reported to the state or local health department, but some diseases that can cause meningitis, such as chickenpox, mumps, and measles, are reportable.
- Report the infection to the staff member designated by the child care program or school for decision-making and action related to care of ill children. That person will work with public health to alert possibly exposed family and staff members to watch for symptoms.

Control of Spread

- Encourage frequent and thorough hand washing.
- Encourage covering of mouth and nose when coughing or sneezing.
- Promptly disinfect contaminated surfaces (like eating/drinking utensils) and other commonly touched surfaces (like toys) and doorknobs soiled by secretions. See page 19.
- Please consult with local or state public health about control measures.

Treatment

Children and staff with symptoms of viral meningitis should be referred to their health care provider for treatment and to distinguish between viral and bacterial meningitis, which is important in determining if close contacts need additional management.

Exclusion

Exclusion is usually not necessary for viral meningitis. However, meningitis caused by certain viruses, such as chickenpox, mumps, or measles do require exclusion. See the sections of the guidance related to those viruses for more information.

Role of Teachers, Caregivers and Family

- In communication with health professionals and parents/guardians, distinguish between viral and bacterial meningitis.
- Teach children/students to cover their noses and mouths when sneezing or coughing with a disposable facial tissue or an upper arm sleeve or elbow.
- Practice and encourage good hand hygiene techniques, especially after coughing or sneezing.

Infectious Disease In Child Care and School Settings
Summary Chart

Disease Agent	Incubation Period	Transmission	Contagious Period	Report To Public Health*	Exclusion
Animal Bites/Rabies Rabies virus	Rabies: 8 days-6 years or more (usually 3-8 weeks)	Saliva of an infected animal	As long as symptoms are present	YES (24 hours for animal bites)	None for animal bites
Campylobacter *Campylobacter* bacteria	1-10 days (usually 2-5 days)	Fecal-oral spread, contaminated food/water animals	While diarrhea is present; can spread for a few days after symptoms are gone	YES (4 days)	YES until 24 hours after diarrhea resolves
Chickenpox (Varicella) Varicella-zoster virus	10-21 days (usually 14-16 days)	Droplet/infectious discharges, skin contact	1-2 days before the rash appears until all the blisters have crusted over (usually days after onset)	YES (4 days)	YES until all blisters have formed scabs and crusted over If immunized with mild symptoms, exclude until 24 hours since last bump/blister
Chlamydia *Chlamydia trachomatis* bacteria	1-3 weeks	Sexual transmission	Until treated	YES (4 days)	None
C. diff *Clostridioides dificil* bacteria	variable	Fecal-oral spread, contaminated surfaces	As long as bacteria are present	Single cases are not reportable. Outbreaks must be reported immediately.	YES until 48 hours after diarrhea resolves
CMV Cytomegalovirus	3-12 weeks	Body secretions (primarily saliva and urine)	As long as the virus is present in body secretions (months or years)	Single cases are not reportable. Outbreaks must be reported immediately.	None
Common Cold A variety of viruses	1-4 days (usually 48 hours)	Droplet/infectious discharges	1 day before symptom onset and while symptoms are present	None	None unless symptoms are severe
Croup	2-7 days	Droplet/infectious discharges	1 week before symptom onset to 1-3 weeks after symptoms	Single cases are not reportable. Outbreaks must be reported immediately.	None unless symptoms severe
Cryptosporidiosis *Cryptosporidium parvum* parasite	2-10 days (usually 7 days)	Fecal-oral spread, contaminated food/water animals	While diarrhea is present; can spread for several weeks after symptoms are gone	YES (4 days)	YES until 24 hours after diarrhea resolves; avoid swimming for 2 weeks after diarrhea
E. coli **O157:H7 and other Shiga Toxin- Producing** *E. coli* **(STEC)** *Escherichia coli* bacteria	1-10 days (usually 3-4 days)	Fecal-oral spread, contaminated food/water, animal	While diarrhea is present; can spread for 1-4 weeks after symptoms are gone	YES (4 days)	YES until diarrhea resolves (negative stool testing may be required prior to return)
Fifth Disease Human parvovirus B19	4-21 days	Droplet/infectious discharges	1 week before rash appears	Single cases are not reportable. Outbreaks must be reported immediately.	None
Genital Herpes Herpes simplex virus	2-12 days	Sexual transmission	Potentially lifelong	None	None
Genital Warts Human papillomavirus	Variable	Sexual transmission	Potentially lifelong	None	None

Disease Agent	Incubation Period	Transmission	Contagious Period	Report To Public Health*	Exclusion
Giardia *Giardia lamblia* parasite	1-3 weeks (usually 7-10 days)	Fecal-oral spread, contaminated food/water	While diarrhea is present; can spread for months after symptoms are gone	YES (4 days)	YES until 24 hours after diarrhea resolves
Gonorrhea *Neisseria gonorrhea* bacteria	1-14 days	Sexual transmission	Until treated	YES (4 days)	None
Hand, Food, and Mouth Disease Strains of enteroviruses	3-6 days	Droplet/infectious discharges, fecal-oral spread	1-3 weeks for respiratory droplets; virus can be present in stool for several months	Single cases are not reportable. Outbreaks must be reported immediately.	None-unless the child has mouth sores and is drooling uncontrollably
Head Lice (Pediculosis) *Pediculus humanus,* the head louse	Nits hatch in 10-14 days, adults live 3-4 weeks	Direct contact with a person or object with infestation	As long as live lice are present	None	From end of school day until after first treatment
Hepatitis A Hepatitis A virus	2-6 weeks (usually 4 weeks)	Fecal-oral spread, contaminated food/water	Most contagious 2 weeks before symptom onset to 1 week after jaundice onset	YES (1 working day)	YES until 1 week after jaundice or 2 weeks after other symptom onset
Hepatitis B Hepatitis B virus	45-160 days (usually 90 days)	Infective blood or body fluids, sexual transmission	Several weeks before symptom onset and throughout the illness, some people carry virus for life	YES (4 days)	None
Hepatitis C Hepatitis C virus	14-180 days (usually 45 days)	Infective blood	1 or more weeks before symptom onset and as long as the virus is present in the blood which can be lifelong	YES (4 days)	None
Herpes (Cold Sores, Fever Blisters) Herpes simplex virus	2-12 days	Direct contact	As long as the sores are present	None	None unless the child has open sores and is drooling uncontrollably
HIV and AIDS Human immunodeficiency virus	Variable	Infective blood & some body fluids	Lifelong	YES (4 days)	None
Impetigo Streptococcal or staphylococcal bacteria	7-10 days for Streptococcal; Variable for Staphylococcal	Direct contact	Until treatment with antibiotics for at least 24 hours or lesions are no longer present	Single cases are not reportable. Outbreaks must be reported immediately.	Yes-until 24 hours after antibiotic treatment
Influenza Influenza virus	1-4 days (usually 2 days)	Droplet/infectious discharges	From slightly before symptom onset to about day 5-7 of illness	YES (hospitalized cases or deaths in children <18 years –7 days)	Yes-until at least 24 hours after they no longer have fever or signs of a fever
Measles (Rubeola) Measles virus	8-12 days	Airborne/droplet/ Infectious discharges	4 days before rash onset to 4 days after	YES (Immediately)	Yes-until 4 days after rash onset
Meningitis (Bacterial) Bacteria such as *Neisseria meningitides* (meningococcal) *Haemophilus influenzae* (H. flu), *Streptococcus pneumoniae* (pneumococcal)	Depends on the agent (usually 1-10 days)	Droplet/infectious discharges	Until completing 24 hours of antibiotic treatment	YES (Immediately for meningococca, 1 working day for H. flu and 4 days for pneumococcal)	Yes- until 24 hours after treatment
Meningitis (Viral) Several different viruses	Depends on agents	Droplet/infectious discharges, fecal-oral spread	Depends on agent	Single cases are not reportable. Outbreaks must be reported immediately.	None

Disease Agent	Incubation Period	Transmission	Contagious Period	Report To Public Health*	Exclusion
Molluscum	2-7 weeks to 6 months	Direct/indirect contact	As long as lesions are present	Single cases are not reportable. Outbreaks must be reported immediately.	None
Mononucleosis Epstein-Barr virus	4-6 weeks	Saliva	Weeks to months after the initial infection	Single cases are not reportable. Outbreaks must be reported immediately.	None
MRSA Methicillin-resistant Staphylococcus aureus	Variable	Skin contact or contaminated items	As long as bacteria are present	Single cases are not reportable. Outbreaks must be reported immediately.	None unless required by healthcare provider. Athlete exclusions may be necessary.
Mumps Mumps virus	12-25 days (usually 16-18 days)	Droplet/infectious discharges, saliva	2 days before swelling onset to 5 days after	YES (4 days)	Yes-until 5 days after swelling onset
Norovirus & Viral Gastroenteritis Various viruses, such as norovirus	Varies by virus (usually 1-3 days)	Fecal-oral spread, contaminated food/water	While diarrhea or vomiting is present and several days after symptoms are gone	Single cases are not reportable. Outbreaks must be reported immediately.	Yes-until 48 hours after diarrhea and/or vomiting resolves.
Pink Eye (Conjunctivitis) Various bacteria and viruses, allergies, chemical irritation	Bacterial: 24-72 hours Viral: 1-12 days Allergies: variable Chemicals: variable	Bacterial and viral: infectious discharges Allergies and chemicals: not contagious	Bacterial: as long as symptoms are present or until treatment has been started Viral: as long as symptoms are present	Single cases are not reportable. Outbreaks must be reported immediately.	No, unless the child meets other exclusion criteria such as fever or behavioral change.
Pinworm	1-2 months or longer	Fecal-oral, indirect contact	As long as eggs are present	Single cases are not reportable. Outbreaks must be reported immediately.	None, unless proper control measures cannot be followed
Pubic Lice (Crabs) *Phthirus pubis*, the pubic louse	Average life cycle is 15 days. Infestation begins with transfer of louse.	Sexual transmission	As long as lice are present	None	None
Ringworm (Tinea) Several fungi species	4-14 days	Skin contact/direct contact	As long as rash is present on skin	Single cases are not reportable. Outbreaks must be reported immediately.	Yes-from end of school day until after first treatment
Roseola (Sixth Disease)	5-15 days (usually 9-10 days)	Droplet/infectious discharges	As long as virus is present in nose/threat secretions	None	None, other exclusion criteria apply
Rotavirus	1-3 days	Fecal-oral spread	As long as virus is in feces; from before symptom onset to 21 days after	None	Yes until 48 hours after diarrhea has resolved
RSV Respiratory Syncytial Virus	2-8 days (usually 4-6 days)	Droplet/infectious discharges	3-8 days after symptom onset. For infants and people with weakened immune systems can be over 4 weeks.	Hospitalized cases in the Denver metro area are reportable. Outbreaks must be reported immediately.	None-unless symptoms are severe
Rubella (German Measles) Rubella virus	14-21 days (usually 16-18days)	Droplet/infectious discharges	7 days before rash onset to 5-7 days after	YES (1 working day)	Yes-until 7 days after rash onset

Disease Agent	Incubation Period	Transmission	Contagious Period	Report To Public Health*	Exclusion
Salmonellosis *Salmonella* bacteria	6-72 hours, but up to 7 days (usually 12-36 hours)	Fecal-oral spread, contaminated food/water, animals	While diarrhea is present; can spread for a variable (weeks - months) period of time after symptoms are gone	YES (4 days)	Yes-until 24 hours after diarrhea has resolved
Scabies *Sarcoptes scabei*, a mite	2-6 weeks if never infected, 1-4 days if infected before	Skin contact/direct contact	Until the mites and eggs are destroyed with medical treatment	Single cases are not reportable. Outbreaks must be reported immediately.	Yes-from end of school day until after first treatment
Shigellosis *Shigella* bacteria	1-7 days (usually 1-3 days)	Fecal-oral spread, contaminated food/water	While diarrhea is present; can spread for weeks after symptoms are gone	YES (4 days)	Yes-until 24 hours after diarrhea resolves (negative stool testing may be required prior to return)
Shingles (Herpes Zoster) Varicella –zoster virus	10-21 days (usually 14-16 days)	Skin contact	Until all the blisters have crusted over	None	None-as long as the blisters are covered
Staph Infection	Variable	Skin contact or contaminated items	As long as the bacteria are present	Single cases are not reportable. Outbreaks must be reported immediately.	None unless required by healthcare provider. Athlete exclusions may be necessary.
Strep Throat *Streptococcus pyogenes* bacteria	2-5 days	Droplet/infectious discharges	Until treated with antibiotics for 24 hours, or 10-21 days for untreated cases	Single cases are not reportable. Outbreaks must be reported immediately.	Yes-until 12 hours after antibiotic treatment
Syphilis *Treponema pallidum* Bacteria	10 days-3 months (usually 3 weeks)	Sexual transmission	Until treated	YES (1 working day)	None
Tetanus *Clostridium tetani* bacteria	2 days-several months (usually 8-14 days)	Through breaks in the skin	Not spread person to person	YES (4 days)	None
Tick-borne diseases	varies	Bites from infected tick	Not spread person to person	YES (4 days)	None
Tuberculosis *Mycobacterium tuberculosis* mycobacterium	2-10 weeks	Airborne	As long as symptoms are present or until on treatment	YES (1 working day)	Yes- (active cases) until on treatment and cleared by a health care provider
Tularemia	Up to 14 days (usually 3-5 days)	varies	Not spread person to person	Yes (1 working day)	None
Whooping Cough (Pertussis) *Bordetella pertussis* bacteria	5-21 days (usually 7-10 days)	Droplet/infectious discharges	Until after the third week of coughing, or until after 5 days of treatment	YES (1 working day)	Yes-until 5 days after treatment or until 3 weeks after cough onset.

*Outbreaks of any disease are reportable to public health immediately.