Communicable Diseases Summary

A Guide for School Health Services Personnel, Child Care Providers and Youth Camps

Revised: August 2011

If you have questions about anything in this Summary, or other questions about communicable diseases:

Please call your local health department or the Maryland Department of Health and Mental Hygiene, Office of Infectious Disease Epidemiology and Outbreak Response (IDEOR) at 410-767-6700,

OR

Please check the DHMH website at <http://ideha.dhmh.maryland.gov/SIPOR/> for additional information.

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Communicable Diseases Summary: Guide for Schools, Child Care, and Youth Camps

Use of this document:

The intent of this document is to provide general guidance to school health services personnel, child care providers, youth camp owners/operators about common communicable diseases. It is not intended for use as a diagnostic guide. Please consult a health care provider for any situations which require medical attention. This guidance is to be used in conjunction with School Health Services (SHS) guidance and local health department (LHD) policies and procedures, and applies to individual or sporadic cases of the communicable diseases described below. Outbreaks or unusual situations may require additional control measures to be instituted/implemented in consultation with your local health department. The procedures in this document represent measures specific to school, child care or youth camp settings. References to SHS Guidelines are intended for use by schools in programs serving school-aged children.

If a child's health care provider (HCP) provides exclusion recommendations which conflict with these guidelines, please consult with your local health department. If parents have additional questions, they should contact their HCP or local health department.

This document is intended to guide the development of specific local policy and procedures regarding management of communicable diseases in schools, child care, and youth camps. These policies and procedures should be implemented in collaboration and in consultation with local health departments, school health services programs, local child care authorities and youth camp regulatory authorities.

Definitions:

Outbreak: In general, an outbreak is defined as an increase in the number of infections that occur close in time and location, in a facility, such as a school, child care center, or youth camp, over the baseline rate usually found in that facility. Many facilities may not have baseline rate information, if you have questions, please contact your local health department about whether a particular situation should be considered an outbreak. In some cases, the health department may require longer exclusions than stated in this guide in response to an outbreak.

Reportable disease/condition: Maryland statute, Maryland Code Annotated, Health-General ("Health-General") §18-201 and §18-202, and Maryland regulation, Code of Maryland Regulations ("COMAR") 10.06.01.04 "Communicable Diseases" and 10.16.06.25 "Certification for Youth Camps", require that health care providers, school and child care personnel, masters of vessels or aircraft, medical laboratory personnel, owners/operators of food establishments, and owners/operators of youth camps, submit a report in writing or notification by telephone of diagnosed or suspected cases of specified diseases to the Commissioner of Health in Baltimore City or the health officer in the county where the provider cares for that person. A list of reportable diseases and conditions can be found at http://ideha.dhmh.maryland.gov/reportable-diseases.aspx

Infection control measures: Includes the use of one or of combinations of the following practices. The level of use will always depend on the nature of the anticipated contact:

- Handwashing, the most important infection control method
- Use of protective gloves, latex-free gloves are recommended*
- Masks, eye protection and/or face shield
- Gowns
- Proper handling of soiled equipment and linen
- Proper environmental cleaning
- Proper disposal of sharp equipment (e.g., needles)
- Isolation in a separate area for those who cannot maintain appropriate cleanliness or contain body fluids

***** Latex allergy is recognized as an issue for some children, especially those with multiple past surgeries. Latex-free gloves are preferred.

Fever: For the purposes of this guidance, fever is defined as a temperature >100.0° F orally; an oral temperature of 100° F is approximately equivalent to 101° F rectally or temporally (Temporal Artery Forehead scan), or 99.5° F axillary (armpit).

Diarrhea: Loose or watery stools of increased frequency that is not associated with change in diet.

Vomiting: Two or more episodes of vomiting in a 24 hour period.

General Considerations:

Exclusion: Children may be excluded for medical reasons related to communicable diseases or due to program or staffing requirements. In general, children should be excluded when they are not able to fully participate with the program, or in the case of child care settings, when their level of care needed during an illness is not able to be met without jeopardizing the health and safety of the other children, or when there is a risk or spread to other children that can not be avoided with appropriate environmental or individual management. For exclusion, all applicable COMAR regulations should be followed; for youth camps, specifically COMAR 10.16.06.31 "Exclusion for Acute Illness and Communicable Disease".

Fever: A child may have a fever for many reasons. If a child has a fever, all applicable COMAR regulations should be followed. In addition, any child with a fever and behavior changes or other symptoms or signs of an acute illness should be excluded and parents notified. Once diagnosed, exclusion due to fever should be based on disease-specific guidelines or other clinical guidance from the child's health care provider. Also, it is important to be sure the appropriate method for measuring temperature are used based on the age or developmental level of the child.

An unexplained fever in any child younger than 3 months requires medical evaluation. Fever in an infant the day following an immunization known to cause fever, should be admitted after being cleared by a health care provider documenting the immunizations given, along with instructions for administering any antipyretics and the appropriate medication forms signed by the parent and the health care provider.

OR

An unexplained fever in any child younger than 3 months requires medical evaluation. Fever in an infant the day following an immunization known to cause ever, may be admitted along with health care provider recommendations for fever management and indications for contacting the health care provider. Instructions from the health care provider should include: the immunizations given, instructions for administering any fever reducing medication, and medication authorizations signed by the parent and the health care provider."

Diarrhea: Diarrhea may result in stools that are not able to be contained by a diaper or be controlled/contained by usual toileting practices. An infectious cause of diarrhea may not be known by the school, child care facility, or camp at the time of exclusion or return. Documentation of the cause of diarrhea should be sought.

A child with diarrhea should be excluded if:

- Stool is not able to be contained in a diaper or in the toilet
- Stool contains blood
- Child is ill or has any signs of acute illness
- Diarrhea is accompanied by fever
- Child shows evidence of dehydration (such as reduced urine or dry mouth)

With appropriate documentation, a child with diarrhea may be readmitted to care, school, or camp when:

- An infectious cause of diarrhea (see chart) has been treated and the child is cleared by a health care provider, in conjunction with the local health department, if necessary
- The diarrhea has been determined by the local health department to not be an infectious risk to others.
- The child has been determined to be an asymptomatic carrier of certain organisms as determined by the local health department

Vomiting: An infectious cause of vomiting may not be known by the school, child care facility, or camp at the time of exclusion or return. Documentation of the cause of vomiting should be sought. Child should be excluded until vomiting resolves or until a health care provider clears for return (is not contagious).

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BITES, ANIMAL	N/A	Redness, pain, swelling, drainage around area bitten. May develop fever, lymph node enlargement.	Direct contact.	N/A	No, exclusion is not routinely recommended as long as student/child does not meet any other exclusion criteria. It is strongly recommended that there be medical follow-up. For school age children, see *SHS "Guide for Emergency Care in Maryland Schools, 2005"*. For preschool age children, contact the child's health care provider.	After immediate needs of bitten victim(s) are taken care of, notify local health department and appropriate local authority (police, sheriff, animal control) immediately by telephone. *[Also, see section for "Rabies".]*
BITES, HUMAN	N/A	Redness, pain, swelling, drainage around area bitten. May develop fever, lymph node enlargement.	Direct contact.	N/A	No, exclusion is not routinely recommended as long as student/child does not meet any other exclusion criteria. It is strongly recommended that there be medical follow-up. For school age children, see *SHS "Guide for Emergency Care in Maryland Schools, 2005"*. For preschool age children, contact the child's health care provider.	After immediate needs of bitten victim(s) are taken care of, notify Responsible authority and parent/guardian. Assess immunization status of children involved, including tetanus and Hepatitis B vaccination. *[Also, see SHS "Bloodborne Pathogens Control And Handling Body Fluids in the School Setting, 2007".]*

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CHLAMYDIA (*Chlamydia trachomatis*)	Usually 7-14 days; up to 30 days.	May be asymptomatic; genital infection can include: purulent discharge, painful urination, lower abdominal pain. Symptoms of conjunctival infection include painful, swollen eyelids.	Sexual contact: genital, oral, anal. Conjunctivitis: from infected mother to infant.	Variable, but can be a long time, if not treated.	No, exclusion is not routinely recommended.	A case or outbreak must be reported to the local health department. All cases should be referred to a health care provider for assessment (including potential for gonorrheal co-infection) and possible treatment. This infection in a young child may possibly be an indicator of sexual abuse. COMAR 10.16.06.35 requires camp operator to report child abuse. *[Also, see SHS "Guide for Emergency Care in Maryland Schools, 2005" section for "Child Abuse and Neglect".]*
CMV (Cytomegalovirus, *Human herpesvirus 5*)	Variable, can be within 3-12 weeks.	Non-specific febrile illness; asymptomatic infections common. In adolescents and adults, may see fever, sore throat, fatigue, swollen glands, and mild hepatitis. In immunocompromised, may see pneumonia, colitis, retinitis.	Through mucosal contact with infected secretions or excretions (such as urine, saliva, feces, blood and blood products, breast milk, semen, cervical secretions).	Variable, may be many months or episodic for several years.	No, exclusion is not routinely recommended. Control measures: Emphasize washing hands often, especially after toileting and after diapering and handling any children less than 2 years old.	A pregnant woman or a woman who is considering pregnancy should talk to her doctor if she cares for infants or young children, or handles urine or saliva in any home or occupational setting. Pregnant women do not necessarily need to be excluded from such situations

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COMMON COLD	12 hours to 5 days; usually 2 days.	Runny nose, watery eyes, sneezing, chills, sore throat, cough, and general body discomfort lasting 2-7 days. May also have a low-grade fever.	Direct contact with an ill person or respiratory droplets; also by contact with hands or articles contaminated with nose or throat secretions.	Variable, depending on cause; average 24 hrs before to 5 days after symptoms have started.	No, unless child meets other exclusion criteria. Do not exclude solely on the presence of runny nose regardless of the color or consistency of the nasal discharge, or presence of cough. Control measures: Emphasize covering nose and mouth when coughing/sneezing; using facial tissue to dispose of nose or throat secretions; washing hands often and not sharing eating utensils.	Many different viruses can cause the common cold.
CONJUNCTIVITIS, INFECTIOUS (Infectious Pink Eye)	Caused by bacterial or viral agents.	White or yellow discharge, accompanied by pink or red conjunctivae, redness and swelling of the lids, and matted, sticky lids.	Direct contact or through contaminated hands followed by contact with eyes; contaminated swimming pools are rarely a source of infectious pink eye.	Variable, depending on cause, from several days to weeks.	Yes, until cleared for return with documentation from a health care provider, after taking antibiotics for 24 hours, or until symptoms have resolved. Control measures: Emphasize hand hygiene.	Refer any newborn with conjunctivitis to a health care provider. NOTE: Exclusion not necessary for allergic conjunctivitis (watery eye discharge, without fever, pain, red lids, and with or without pink eye or injected conjunctivae) if evaluated and documented by a health care provider.

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DIARRHEAL ILLNESS: UNKNOWN CAUSE	Varies according to causative agent.	Varies according to causative agent. Symptoms may include nausea, vomiting, diarrhea, stomach cramps, headache, blood and/or mucus in stool, fever.	Usually spread from person-to-person by fecal-oral route; from ingesting contaminated food or water.	Duration of clinical symptoms or until causative agent is no longer present in stool.	Exclude until diarrhea has resolved and child is diarrhea-free for at least 24 hours; or until cleared by medical provider. Control measures: Emphasize hand hygiene; observe exclusion period especially for those in activities at high risk for transmission: child care attendees, food service workers, those who care for the very young or elderly, health care workers, etc.	Report individual cases according to state health department "List of Reportable Diseases and Conditions". An outbreak must be reported to the local health department.
DIARRHEAL ILLNESS: *CAMPYLOBACTER*	Usually 2-5 days; range 1-10 days.	Diarrhea with or without blood, abdominal pain, fever, cramps, malaise, nausea and/or vomiting.	Spread from person-to-person by fecal contact, contact with infected pets, or from ingesting contaminated foods such as raw or undercooked meats, unpasteurized milk, or untreated water.	Usually 2-3 weeks in untreated cases, up to 7 weeks.	Yes, if symptomatic until cleared by local health department after further testing. Contact local health department for guidance.	A case or outbreak must be reported to the local health department.
DIARRHEAL ILLNESS: *E. COLI* O157:H7 and other STEC (Shiga Toxin-producing *E. coli*)	Usually 3-4 days; range 1-10 days.	Severe abdominal pain, diarrhea with or without blood and vomiting.	Spread from person-to-person by fecal-oral route or ingesting under-cooked beef, un-pasteurized milk or juices, raw fruits or vegetables, or contaminated water.	Usually 1-3 weeks.	Yes, if symptomatic until cleared by local health department. Contact local health department for guidance.	A case or outbreak must be reported to the local health department.

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DIARRHEAL ILLNESS: *GIARDIA*	Usually 7-10 days; range 3 days to 4 weeks.	Acute watery diarrhea with abdominal pain, bloating, frequent loose and pale greasy stools, fatigue and weight loss.	Spread from person-to-person by fecal-oral route or ingestion of contaminated recreational/ drinking water.	Entire period of infection, often months.	Yes, until treated. If not treated, contact local health department for guidance about exclusion criteria. Control measures: Hand hygiene by staff and children should be emphasized, especially after toilet use or handling of soiled diapers; dispose of feces in a closed container; disinfection of feces-soiled articles.	A case or outbreak must be reported to the local health department.
DIARRHEAL ILLNESS: NOROVIRUS	Usually 24-48 hours; range 12-72 hours.	Nausea, vomiting, abdominal cramps, diarrhea, fever, headache.	Spread from person-to-person by fecal contact or from ingesting contaminated foods. Commonly from contaminated surfaces, objects. Possible transmission via aerosolized particles.	At least 48 hours after symptoms resolve. Sometimes longer.	Yes, until 48 hours after resolution of symptoms. Control measures: Emphasize handwashing after use of bathroom or changing diapers and thorough environmental cleaning.	An outbreak must be reported to the local health department.
DIARRHEAL ILLNESS: ROTAVIRUS	Range approx. 1-3 days.	Vomiting, fever and watery diarrhea.	Spread from person-to-person by fecal-oral route. Possible airborne transmission.	At least 48 hours after symptoms resolve. Sometimes longer in persons with weakened immune systems.	Yes, until 48 hours after resolution of symptoms. Control measures: Vaccine-preventable. Emphasize handwashing after use of bathroom or changing diapers and thorough environmental cleaning.	An outbreak must be reported to the local health department. NOTE: Vaccine available as of 2007.

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DIARRHEAL ILLNESS: *SALMONELLA*	Usually 12-36 hours; range 6-72 hours.	Diarrhea, fever, abdominal cramps, nausea, vomiting, headache.	Ingestion of contaminated foods, including poultry, beef, fish, eggs, dairy products or water; also contact with infected reptiles.	Throughout the course of infection; extremely variable, usually several days to several weeks.	Yes, for children in child care if not toilet trained, whether symptomatic or not. Asymptomatic school age children generally do not need to be excluded. Contact local health department for guidance.	A case or outbreak must be reported to the local health department.
DIARRHEAL ILLNESS: *SHIGELLA*	Usually 1-3 days; range 1-7 days.	Abdominal cramps, fever, diarrhea with blood and mucous; also watery diarrhea. Sometimes nausea or vomiting.	Direct or indirect fecal-oral transmission from a symptomatic patient or asymptomatic carrier; ingestion of contaminated water or food.	During acute infection and up to 4 weeks after illness.	Yes, for those who are symptomatic until cleared by local health department after further testing. Contact local health department for guidance.	A case or outbreak must be reported to the local health department.
DIPHTHERIA (*Corynebacterium diphtheriae*)	Usually 2-5 days; range 1-10 days.	Patches of grayish membrane with surrounding redness of throat, tonsils, nose, and/or mucous membranes. May include nasal discharge, sore throat, low grade fever, hoarseness, barking cough. Less common sites of infection: skin, eyes, ears, and vagina.	Spread from person-to-person by contact with respiratory secretions or skin lesions. Rarely, transmission may occur from articles soiled with discharges from lesions of infected persons.	Variable; usually 2-4 weeks or until 5 days after antibiotic therapy has been started.	Yes, until cleared by local health department. Contact the local health department for further guidance. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	A case or outbreak must be reported immediately to the local health department by telephone. Rarely seen in Maryland.

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FIFTH DISEASE (Erythema infectiosum, Parvovirus B19)	Variable, 4-20 days.	Red, patchy facial rash ("slapped cheek") that may spread to rest of body in lace-like pattern. Cold-like symptoms may precede rash. May be asymptomatic.	Spread from person-to person by respiratory secretions; by contaminated blood or blood products; from mother to fetus.	Most infectious before the onset of rash in most cases.	No, exclusion is usually not necessary. Contact health care provider and/or local health department about special recommendations for infected persons with chronic anemia at risk for hemolytic complications (such as sickle cell disease), weakened immune systems, or for pregnant women. Control measures: Encourage hand washing and disinfection of surfaces, high-contact items, such as doorknobs, and items shared among children.	An outbreak must be reported to the local health department. Pregnant women exposed to a case of Fifth disease should consult with their health care provider.

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GONORRHEA (*Neisseria gonorrhoeae*, *Gonococcus*)	1-14 days, sometimes longer.	Males: Cloudy or creamy discharge from penis, pain with urination. Females: usually no symptoms, but may have vaginal discharge, urinary frequency, abdominal pain. Both genders: throat and anorectal infections (although uncommon) may produce discharge, localized pain. (Gonococcal infection can infrequently cause achy, swollen joints; a skin rash; fever; and other symptoms.	Spread from person-to-person by genital, oral or anal sexual contact.	Variable, but can be a long time, if not treated.	No, exclusion is not routinely recommended. Cases should contact a health care provider, and referred to the local health department for follow-up.	A case or outbreak must be reported to the local health department. All cases should be referred to a health care provider for assessment (including potential for chlamydial co-infection) and possible treatment. This infection in a young child may possibly be an indicator of sexual abuse. COMAR 10.16.06.35 requires camp operator to report child abuse. *[Also, see SHS "Guide for Emergency Care in Maryland Schools, 2005" section for "Child Abuse and Neglect".]*
***HAEMOPHILUS INFLUENZAE* type B (HIB) DISEASE**	Unknown; may be 2-4 days.	Various, depending on site of infection: ear, eye, skin, lungs, joints, or spinal fluid spaces.	Airborne droplets produced by coughing or sneezing or contact with nose or throat discharges of an ill person or carrier; or by direct person-to-person contact.	Non-communicable 24-48 hours after the start of appropriate antibiotic treatment. Contact local health department for guidance.	Yes, exclude for 24 hours after the initiation of antibiotic therapy. Control measures: Vaccine-preventable. Vaccination is the key preventive measure. Contact local health department for recommendations about the need to exclude those who are unvaccinated, or administer prophylaxis to contacts.	A case or outbreak must be reported to the local health department immediately by telephone.

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HAND, FOOT AND MOUTH DISEASE (various Coxsackie-viruses)	Usually 3-5 days. Lesions may persist from 7-10 days	Fever, cold symptoms, rash on palms, fingers and soles, sores in mouth. Occasionally appear on the buttocks.	Spread through direct person to person contact with nose, and throat discharges, and feces of an infected person.	Highly contagious during the acute phase. Shedding in stool may continue for several weeks.	No, unless meets other exclusion criteria, "hand to mouth" behavior uncontrollable, not able to contain secretions, or draining sores cannot be covered. Control measures: Avoid person-to-person contact with ill person. Emphasize washing hands often and not sharing eating utensils, also for caretaker of ill infants and diapered children. Wash or discard items of clothing contaminated with nose or throat discharges or with fecal material.	An outbreak must be reported to the local health department.
HEPATITIS A	Usually 28 days after exposure; range 15-50 days.	Early symptoms: fatigue, loss of appetite, stomach pain, diarrhea, nausea, vomiting, fever, dark urine. Later symptom: jaundice (yellow skin and eyes). Some cases are mild. Children may be asymptomatic.	Spread from person-to-person by fecal contact; or from ingesting food or water containing the virus.	Usually a 3-week period: from 1 week before onset of early symptoms to 1 week after onset of jaundice. Prolonged viral excretion (up to 6 months) has been documented in infants and children.	Yes, for at least 2 weeks after the onset of early symptoms or 1 week after onset of jaundice. Control measures: Vaccine-preventable. Emphasis on hand-washing after use of bathroom or changing diapers and (if necessary) improved disinfection. Food handlers or servers should refrain from preparing or serving food for 2 weeks after onset of early symptoms.	A case or outbreak must be reported to the local health department.

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HEPATITIS B	Usually 60-90 days; range 45-180 days.	Dark urine, fatigue, loss of appetite, nausea, vomiting, often followed by jaundice. Joint pain may be present. Some cases are mild. Children may be asymptomatic.	Spread by exposure to infected blood; injection drug use; from mother to infant during pregnancy or birth; sexual contact; and through other body fluids.	Several weeks before onset of symptoms and during course of acute disease. Persons with a positive hepatitis B surface antigen (HBsAg) test are considered communicable, even years after initial infection.	No, exclusion is not routinely recommended unless the individual is not able to resume activities. However, exclusion could be considered in cases in which a child's medical condition (oozing sores or rash, bleeding) or behavior (scratching, biting) increases likelihood of exposing others. Contact local health department for further guidance. Control measures: Vaccine-preventable. Vaccination is the key preventive measure	A case or outbreak must be reported to the local health department. Pregnant women who are HBsAg positive should be referred to their health care provider.
HEPATITIS C	Ranges from 2 weeks to 6 months; commonly 6-9 weeks.	Loss of appetite (weight loss), nausea, vomiting, jaundice, dark urine, fatigue, & vague abdominal discomfort may occur. However, may be asymptomatic.	Exposure to infected blood: primarily parenterally (through injection drug use, accidental contaminated sharps exposure). Sexual and perinatal transmission appear rare. Rarely through other body fluids.	One or more weeks before the onset of symptoms; some persons become carriers and remain infected indefinitely.	No, exclusion is not routinely recommended unless the individual is not able to resume activities. However, exclusion could be considered in cases in which a child's medical condition (oozing sores or rash, bleeding) or behavior (scratching, biting) increases likelihood of exposing others. Contact local health department for further guidance.	A case or outbreak must be reported to the local health department.

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HERPES SIMPLEX VIRUS (Cold Sores, Fever Blisters, genital herpes sores, skin lesions)	Usually 2-12 days	Oral herpes: sores or blisters on the lips or mouth. Genital herpes: painful sores or blisters in the genital area. Herpes gladiatorum: Sores on exposed areas of skin.	Spread from person-to-person by direct contact with saliva, sores, or blisters, such as touching, kissing, or having sex; perinatally.	Virus can be recovered from lesions 2-7 weeks after primary infections and up to 5 days in reactivation lesions	Oral herpes: No, unless child with oral herpes is drooling and can not contain secretions or meets other exclusion criteria. Genital herpes: No, unless meets other exclusion criteria. Herpes gladiatorum: Yes, exclusion from contact sport participation that requires skin-skin contact. Control measures: Handwashing and avoid touching lesions. Cover lesions if possible. Disinfection of sporting equipment after use. Avoid sharing sports equipment that comes in contact with skin.	Pregnant women with herpes should consult a health care provider. Stress handwashing and not touching lesions. An outbreak must be reported to the local health department.
HIV (Human Immunodeficiency Virus) infection, includes AIDS	Variable; 1-3 months from infection to detection of antibodies. Median incubation in infected infants is shorter than adults	May be asymptomatic for many years. Symptoms in later stages of HIV infection are variable.	Spread from person-to-person through sexual contact; exposure to HIV-infected blood or body fluids (e.g., dirty needles); from mother to infant during pregnancy, or birth.	Soon after onset of infection and persists throughout life. Infectivity is high during first months; increases with viral load; worsening of clinical status; and presence of other sexually transmitted infections. Treatment may reduce communicability.	No, unless meets other exclusion criteria, has weeping and oozing sores that can not be covered, bleeding condition where blood can not be contained; if so, consult local health department. Control measures: Responsible sexual behavior (abstinence or condom use). Avoidance of blood and sharps exposures.	Staff who routinely provide acute care should wear gloves and use good handwashing technique. Standard precautions should be followed by all health care personnel. *[Also, see SHS "Bloodborne Pathogens Control And Handling Body Fluids in the School Setting, 2007".]*

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INFLUENZA (Seasonal)	Usually 1-3 days.	Cough, fever, headache, muscle aches, runny nose, sore throat. Less frequently, GI symptoms.	Person to person by droplets or direct contact with infected articles.	24 hours before the onset of symptoms and up to 7 days in young children.	Yes, until without fever for 24 hours, or if meets other exclusion criteria. Follow local health department recommendations. Control measures: Vaccine-preventable. Emphasize respiratory etiquette ("cover your cough") and frequent handwashing.	An outbreak must be reported to the local health department. Do not use salicylates (such as aspirin) during illness.
IMPETIGO ("SKIN INFECTIONS", Staphylococcal or Streptococcal skin infections)	Variable. Usually 4-10 days.	Blister-like skin lesions, which later develop into crusted sores with an irregular outline.	Direct contact with draining sores or by touching articles contaminated with blister fluid.	Usually not contagious after 24 hours of treatment.	Yes, exclude until 24 hours of antibiotic therapy has been completed, or otherwise cleared by health care provider (in some cases, antibiotic use may not be indicated for treatment). Control measures: Avoid touching lesions. Emphasize frequent handwashing. Conduct routine environmental cleaning.	Cases with lesions should avoid contact with newborns. *[See also sections for "Staphylococcal Infection" and "Streptococcal Infection."]*

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LICE, BODY (*Pediculus corporis*)	6-10 days from laying of eggs to hatching of nymphs.	Intense itching, worse at night. Lice live in seams of clothing and may or may not be visible.	Direct contact with an infested person or contact with objects used by an infested person, especially clothing.	As long as lice are alive on infested person or object. Eggs viable on clothing 1 month. Adult lice viable away from host up to 10 days.	Yes, at the end of the program/activity/school day. Skin may need treatment with pediculicide -- if one is used, exclude for 24 hours after first treatment is completed. Control measures: Bathe with soap and water. Wash clothing and bedding in hot water and dry on high heat or dust clothing with a pediculicide.	An outbreak must be reported to the local health department. Body lice may transmit serious infections.
MEASLES (Rubeola)	Usually 8-12 days from exposure to onset of symptoms. Average interval between appearance of rash after exposure is 14 days; range 7-18 days.	Sudden onset of chills followed by sneezing, runny nose, conjunctivitis, photophobia, fever, cough. Rash usually appears first behind the ears or on forehead/ face; blotchy, unusually dusky red rash over face, trunk, and limbs. Small white spots (Koplik's spots) inside mouth.	Direct contact with infectious droplets or, less commonly, by airborne spread. Highly contagious among unvaccinated children in school, child care or camp settings.	1-2 days before onset of symptoms (3-5 days before rash) to 4 days after appearance of the rash. Immuno-compromised children can be contagious for the duration of the illness.	Yes, until 4 days after the onset of rash in otherwise healthy children and for the duration of illness in immunocompromised children. Contact local health department for further guidance on management of cases and contacts. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department immediately by telephone. Pregnant women exposed to a case should see a health care provider for evaluation.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
MENINGITIS, VIRAL or ASEPTIC (including Enterovirus, Measles, Herpes, Adenovirus)	Varies depending on specific viral agent. Usually within 3-10 days later.	Fever, severe headache, stiff neck, bright lights hurting the eyes, drowsiness or confusion, and nausea and vomiting may occur. Meningitis symptoms are an emergency that should be assessed immediately be a health care provider.	Varies depending on specific viral agent. Most common cause: Enteroviruses, most often spread through direct contact with respiratory secretions.	Depends on the viral agent causing illness, but usually (Enteroviruses) 3 days after infected until about 10 days after developing symptoms.	Yes, until cleared for return by health care provider or local health department. Contact local health department for guidance. Contacts of cases generally do not need to be seen by a health care provider or given preventive medications. Control measures: Emphasize handwashing after use of bathroom, changing diapers, and before handling or eating food or drink.	A case or outbreak must be reported to the local health department. Most viral infections do not require treatment; however, some may require specific antiviral therapy.
MENINGITIS, BACTERIAL (*Haemophilus influenzae*, *Neisseria meningitidis*, *Streptococcus pneumoniae*, *Listeria*)	Varies depending on specific bacterial agent, but usually 2-10 days, commonly 3-4 days.	Fever, stiff neck, headache, vomiting, and rash may occur. Meningitis symptoms are an emergency that should be assessed immediately be a health care provider.	Direct contact, including respiratory droplets from nose and throat of infected people, but it varies depending on the bacterial agent causing illness.	Depends on the bacterial agent causing illness.	Yes, until cleared by health care provider in conjunction with local health department. Contact local health department for guidance. Some agents may require antimicrobial therapy. Some contacts of cases may need preventive antibiotics. Control measures: Vaccine-preventable for some types of bacteria that can cause meningitis (*Haemophilus influenzae*, *Neisseria meningitidis*, *Streptococcus pneumoniae*). Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
MENINGOCOCCAL DISEASE (*Neisseria meningitidis*)	Usually 3-4 days; range 1-10 days.	Sudden onset with fever, vomiting, intense headache, and stiffness of the neck. A rash may appear on the body. Other symptoms sometimes seen with non-meningitis forms of the disease.	Spread by close contact with droplets and discharge from nose, throat or saliva of an infected person. Illness highly contagious in child care settings.	Usually 24 hours after the initiation of appropriate therapy	Yes. Refer case to health care provider. Control measures: Follow local health department recommendations for prophylaxis and surveillance for close contacts, including household, child care contacts, others with saliva contact with case. A vaccine is available for certain types of meningococcal disease, and is required by law for certain risk groups. Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department immediately by telephone.
MONONUCLEOSIS, INFECTIOUS (Epstein-Barr virus)	Usually 30-50 days.	Fever, sore throat, swollen lymph nodes, sometimes rash. Neurologic complications include: meningitis, encephalitis, myelitis.	Spread by close personal contact via saliva; also may be transmitted by blood transfusion.	Prolonged; may be up to a year or more. Some may be long-term carriers.	General exclusion: No, exclusion not routinely recommended. Contact sports: Yes, until acute illness is resolved and cleared by a health care provider. Control measures: Use general hygienic measures, including handwashing to prevent salivary contamination from infected individuals; minimize contact with saliva (such as, avoiding drinking beverages from a common container).	An outbreak must be reported to the local health department. Regarding contact sports, health care provider must clear athletes to reduce risk of splenic rupture.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
MUMPS	Usually 16 to 18 days; range 12 to 25 days.	Fever, swelling, tenderness of the salivary gland; may be asymptomatic. Parotid glands most frequently affected. Meningitis may occur. In males after puberty, testicular involvement may occur.	Spread by droplet contact and direct contact from nose and throat discharge of an infected person. Highly contagious among unvaccinated children in school, child care, or camp settings.	From 3 days before salivary gland enlargement to 5 days after.	Yes. Exclude case for 5 days after onset of parotid gland swelling. Refer case to health care provider and contact local health department for guidance managing contacts of cases. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department.
PERTUSSIS (*Bordetella pertussis,* Whooping Cough)	Usually 7-10 days; range 5- 21 days.	Acute onset of cough becomes repeated and violent within 1-2 weeks, can persist for several months. Characteristic thick mucus and vomiting after coughing. May not have the typical inspiratory "whoop". Fever may be low-grade or absent.	Spread by close contact with infected persons via aerosolized droplets.	Beginning from just before onset of symptoms to up until 3 weeks after start of symptoms.	Yes, consult with local health department. Confirmed cases should be excluded until completion of 5 days of recommended antibiotics. Untreated cases should be excluded 21 days from the date cough began. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department immediately by telephone. Highly contagious among unvaccinated children in school, child care, or camp settings. Infants, elderly and immunocompromised individuals at increased risk for complications.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
PINWORMS (*Enterobius vermicularis*)	The life cycle of the worm is 2-6 weeks.	Perianal itching (usually worse at night), irritability, disturbed sleep, secondary infection of the scratched skin.	Transfer of *Enterobius* eggs from fingers of infected person to mouth of uninfested person.	Eggs are communicable in the environment at room temperature about 2-3 weeks.	No, exclusion is generally not recommended. Control measures: Encourage frequent hand-washing. Keep nails short; discourage nail biting and perianal scratching. Daily for several days after treatment: change to clean underwear and bed sheets after bathing, wash linens in hot (131°F) water, clean and vacuum living and sleeping areas.	This should be handled and on a case-by-case basis by the appropriate school or regulatory authority.
PNEUMOCOCCAL DISEASE (*Streptococcus pneumoniae*)	Varies depending on type of infection. May be as short as 1-3 days.	Various symptoms, depending on location of infection: ear, eye, sinus, lungs, blood, joints, or spinal fluid spaces. May cause meningitis.	Person-to-person transmission through contact with respiratory droplets.	No longer communicable 24-48 hours after initiation of appropriate antibiotics.	No, exclusion is not routinely recommended. Contact local health department for further guidance. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	Outbreaks or cases of invasive disease must be reported to the local health department.
POLIO	3-6 days for mild (nonparaly-tic) cases; 7-21 days for paralytic cases.	Infection may be asymptomatic, cause mild illness (fever, malaise, headache, vomiting), or severe illness (meningitis, muscle paralysis, death).	Spread by contact with nose or throat discharge, or by fecal-oral contamination.	Shortly before onset of clinical illness to several weeks after. Children are contagious as long as virus is excreted in feces, usually for several weeks.	Yes, exclude case until health department approves readmission. Contact local health department for guidance of acute cases and contacts. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department immediately by telephone.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
RABIES (and RABIES EXPOSURE)	Varies: days to years	Human: Apprehension, fever, difficulty swallowing, hypersalivation, muscle weakness, hydrophobia, sensory changes (e.g. tingling) or paralysis, delirium, convulsions, death due to respiratory paralysis. Animal: Unusual behavior changes (stupor or aggression), increased salivation, paralysis. Death in 2-7 days from onset of illness.	Primarily via bite from a rabid animal. Non-bite exposures include scratches, abrasions, and saliva contamination of open wounds or mucous membranes, or organ transplantation.	Human-to-human bite transmission does not generally occur. In dog and cats, approximately 3-7 days before clinical signs appear and throughout course of disease.	No, exclusion is not recommended for rabies exposure alone. Control measures: Do not let children play with strange, unknown animals or have contact with wild animals, especially bats. If a person is exposed to a possibly rabid animal, immediately wash wound thoroughly with soap and water for several minutes. Seek emergency medical attention immediately, if child was bitten. For school age children, see *SHS "Guide for Emergency Care in Maryland Schools, 2005"*. For preschool age children, contact the child's health care provider. Contact local health department to assess need for post-exposure prophylaxis.	Any case or suspected exposure must be reported immediately by telephone to local law enforcement and local health department. Confine biting animal (if it is safe to do so) or as advised by local law enforcement, and local health department or animal control, for possible testing or quarantine. *[Also, see section for "Bites, Animal".]*

Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
RINGWORM OF SCALP (*Tinea capitis*)	Usually 10-14 days.	Patchy areas of dandruff-like scaling and hair loss; many separate blisters, with pus in them with little hair loss; or a soft, red, swollen area of scalp.	Contact with the skin of an infected person or animal, or by contact with contaminated surfaces or objects such as combs, furniture, clothing, and hats. People may be asymptomatically infected yet able to transmit disease.	May persist on contaminated materials for a long time if untreated.	Yes, until oral treatment has been initiated. Yes, exclude from contact sports involving skin-skin contact. Control measures: Cover lesions if necessary to prevent direct contact. Disinfect sports equipment that comes in contact with skin. Avoid sharing sports equipment that comes in contact with skin. Examine household, child care, school, camp, and animal contacts; treat if infected. Do not share combs, brushes, hair ornaments, hats, or linens while being treated. Haircuts or shaving the head is not needed. Selenium-containing shampoo twice a week limits shedding of fungus. Head lesions may not be able to be covered. This should be handled on a case-by-case basis.	Recommended treatment for ringworm of the scalp is oral medications because topical medications are not effective against ringworm of the scalp. Topical medications are considered effective for non-scalp ringworm.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
RINGWORM OF SKIN OR BODY (*Tinea corporis*)	Usually 4-10 days.	Lesions are usually circular or ring-like, slightly red with a raised edge, and appear on the face, trunk, or extremities. May itch.	Contact with lesions or with contaminated surfaces such as floors, showers, or benches.	While lesions are visible. Fungus may persist for long periods on contaminated surfaces.	No, as long as lesions can be covered, and oral or topical treatment has been initiated. Routine exclusion is not recommended. Yes, exclude from contact sports involving skin-skin contact. Control measures: Cover lesions to prevent direct contact. Disinfect sports equipment that comes in contact with skin. Launder towels, linens and clothes in hot water. Refer school, child care, or camp contacts to their health care provider. Examine skin for resolution of lesions.	Topical medications are considered effective for non-scalp ringworm.
ROSEOLA (Human herpesvirus 6, Exanthem subitum, Sixth Disease)	Usually 10 days; range 5-15 days.	Fever, rash (small flat pink spots or patches) usually on the chest, back, abdomen, neck and arms, not usually itchy.	Direct contact with salivary secretions.	Unknown.	No, unless meets other exclusion criteria. No specific control or preventive measures indicated.	An outbreak must be reported to the local health department.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
RSV (Respiratory Syncytial Virus)	Usually 4-6 days; range 2-8 days.	Acute respiratory tract illness.	Direct or close contact with contaminated secretions (via droplets or objects).	Period of viral shedding usually 3-8 days, but may last longer in young infants and those who are immunosuppressed .	No, unless meets other exclusion criteria. Follow local health department recommendations. Control measures: Cohort those with respiratory illness, emphasize handwashing hygiene, contact precautions where indicated.	An outbreak must be reported to the local health department.
RUBELLA (German measles)	Usually 16-18 days; range 14-23 days.	Mild illness with low fever, mild rash, usually associated with enlargement of nodes on the back of the neck. Rash usually follows 5-10 days later; may resemble measles, scarlet fever, or fifth disease.	Spread by droplet contact and direct contact from nose and throat discharge of an infected person, and possibly from blood and urine; from mother to infant during pregnancy.	Maximal communicability is from a few days before to 7 days after onset of rash. Those children with congenital rubella syndrome may be infectious for up to 1 year. Highly communicable.	Yes, exclude for 7 days after rash onset. With outbreaks, exclude unimmunized individuals until they are immunized. Contact local health department for guidance. Control measures: Vaccine-preventable. Vaccination is the key preventive measure.	A case or outbreak must be reported to the local health department immediately by telephone. Infection during pregnancy may have serious consequences for the fetus. For recommendations for children with congenital rubella syndrome, contact local health department. Caregivers of these infants should be aware of the potential hazard of the infants to susceptible pregnant contacts.

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
SCABIES	2-6 weeks before onset of itching; 1-4 days for those reinfested.	Rapid onset of red papular rash, with or without white scaling, involving the fingers, wrists, elbows, knees, abdomen and other skin surfaces. Intense itching, especially at night. A classic burrow, mite, or egg seen on skin scraping is diagnostic.	Person-to-person through direct skin-to-skin contact such as holding hands or sexual contact or through direct contact with contaminated clothes, bedding, and personal articles.	Until mites or eggs are destroyed, usually after 24 hours of effective therapy. Mites usually die if away from host for more than 2-3 days.	Yes, until after treatment is administered, usually the overnight. Treat case with scabicide and follow medical advice from health care provider. Treat household and close contacts at same time as case. Clothing, bedding and other personal articles used in the 3 days before treatment should be laundered using hot cycles of washer and dryer, or dry-cleaned.	An outbreak must be reported to the local health department. Mites do not transmit any other communicable disease. Itching may persist for weeks following effective treatment due to allergic reaction; bacterial infections of skin can result from scratching.
STAPHYLOCOC-CAL INFECTION ("Staph", Impetigo), including MRSA, (Methicillin-resistant *Staphylococcus aureus*)	Variable and indefinite	Skin and soft tissue infections, such as impetigo, boils, or skin abscesses, occasional invasive disease (ex: wound infections, bloodstream infections, pneumonia)	Direct person to person contact, usually on hands. Possible transmission via air, contaminated surfaces, objects. Non-intact skin increases risk.	As long as purulent lesions continue to drain but sporadic cases occur due to asymptomatic carrier state.	No, unless skin lesion cannot be covered; exclude until lesions healed. Colonization alone with Staph, including MRSA, is not a reason for exclusion. Contact local health department for guidance. Control measures: Avoid touching lesions. Emphasize frequent handwashing. Conduct routine environmental cleaning. Follow medical advice from health care provider.	An outbreak must be reported to the local health department. Antibiotic treatment may not be indicated for every case of Staph infection, including MRSA. *[Also, see section for Impetigo ("Skin Infections").]*

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
STREPTOCOCCAL INFECTION (Strep Throat, Scarlet Fever, Impetigo)	1-3 days, can be up to 5 days; variable for skin infections	Fever and sore throat/tonsillitis with tender, enlarged lymph nodes. Scarlet fever -- sore throat, fever, plus a red rash that feels like sandpaper and lasts 2-5 days. Tongue may appear strawberry-like. When rash fades, skin peels from tips of fingers and toes.	Spread from person to-person by respiratory droplets, by direct contact and rarely by contact with objects contaminated with nose or throat secretions. Carriers capable of spreading illness. May be foodborne via contaminated milk or eggs.	10-21 days if untreated. Until 24 hours after start of antibiotic treatment.	Yes, exclude case until 24 hours after start of antibiotic treatment. Control measures: Emphasize respiratory etiquette ("cover your cough") and frequent handwashing.	An outbreak must be reported to the local health department. Early recognition and treatment can prevent serious complications. *[Also, see section for Impetigo ("Skin Infections").]*
SYPHILIS	Usually about 3 weeks; range 10 days to 3 months.	May be asymptomatic; painless ulcer on genitals, anus, or mouth. Rash on palms and soles, generalized rash, or generalized lymph node swelling appear in secondary stage.	Spread by genital, oral or anal sexual contact with an infected person; from mother to infant during pregnancy or at delivery.	Up to one year if untreated but recurrences of lesions may persist.	No, exclusion not routinely recommended, however, should be managed by a health care provider. Case should be treated with antibiotics, and sexual contacts examined and treated with preventive antibiotics.	A case or outbreak must be reported to the local health department. Untreated, syphilis (even with no initial symptoms) can cause serious damage to heart, brain and other organs. This infection in a young child may possibly be an indicator of sexual abuse. COMAR 10.16.06.35 requires camp operator to report child abuse. *[Also, see SHS "Guide for Emergency Care in Maryland Schools, 2005" section for "Child Abuse and Neglect".]*

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
TICKBORNE ILLNESSES: (*Anaplasmosis, Ehrlichiosis, Lyme Disease, Rocky Mountain Spotted Fever*, etc.)	Usually 7-10 days; range 3-32 days after tick bite.	Fever, headache, lack of appetite, nausea, vomiting, muscle aches, chills. Possible rash, conjunctivitis, or meningo-encephalitis.	Tick bite; rarely through blood transfusion	No documented person-to-person transmission.	No, exclusion is not necessary. Control measures: Avoid exposure to ticks; wear protective light-colored, long sleeve shirts and pants; use insect repellents; conduct tick checks. Remove embedded ticks promptly with tweezers. Consult a health care provider if symptoms occur.	A case must be reported to the local health department. Tick-borne diseases carry the risk of more severe and/or chronic illness for immunocompromised persons. Pregnant women bitten by a tick should consult with their health care provider.
TUBERCULOSIS (TB, *Mycobacterium tuberculosis*)	Generally 2-10 weeks after exposure to someone with **active** TB who is infectious.	Fever, weight loss, malaise, cough and night sweats are common, but some individuals have no symptoms at all. Children younger than 5 years are more likely to present with weight loss, malaise, and failure to thrive.	Airborne: via activities such as coughing, speaking and singing.	A person diagnosed with **active** TB on appropriate antibiotics will become non-infectious in a few weeks on average; however, a person's response to treatment will vary depending on their general health and the severity of their TB disease when diagnosed. In contrast, a person with **latent** TB infection cannot infect others and treatment is not mandatory.	Yes, until treatment is started and cleared by local health department. The local TB Control Program will determine when a person with **active** TB disease may return; and will determine control measures in the school, child care, or camp setting. Children diagnosed with **latent** TB infection cannot infect others and should not be excluded. Children who have received BCG vaccine may still become infected with TB, and should not be excluded from any testing that the local health department does as part of an investigation of possible TB contacts.	A person with or suspected to have **active** TB disease must be reported immediately by telephone to the local health department. Facility must cooperate fully with the local health department in testing any other children, faculty, staff, and child care providers to determine if TB transmission has occurred. Requirements for TB testing of new students may vary from one jurisdiction to another. Consult local health department for further details.

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TYPHOID FEVER (*Salmonella typhi*)	Depends on infectious dose and on host factors, but usually 7-14 days: range 3 days to over 60 days.	Fever, headache, red ('rose') spots on the body; lack of heart rate elevation with fever; constipation more often than diarrhea.	Spread from direct person-to-person contact, or by contaminated food or water.	For as long as infected person carries in feces or urine, if untreated can be months, if carriers can be years.	Yes, for those who are symptomatic, until cleared by local health department after further testing. Contact local health department for guidance. Control measures: Vaccine-preventable. Encourage hand hygiene after toilet use, after diapering children, and before preparing or eating food.	A case or outbreak must be reported immediately by telephone to the local health department immediately by telephone.
VARICELLA ZOSTER VIRUS: CHICKENPOX (Primary varicella zoster virus infection)	Usually 14-16 days from exposure to rash, but may range from 10-21 days.	Slight to moderate fever and skin rash consisting of fluid-filled bumps (vesicles). In "ordinary" infections, "new" vesicles can continue to appear for 4-7 days. Rash is itchy; scratching can produce skin abrasions and lead to secondary infection.	Person-to-person, by respiratory or airborne droplet spread (produced by talking, coughing, or sneezing) or by direct contact with vesicle fluid or respiratory sections, or with mucous membranes of infected persons. Highly contagious. However, a susceptible person may acquire chickenpox infection if exposed to the vesicle fluid of someone with shingles.	Usually, in a "normal" case of varicella in an otherwise healthy child, period of communicability is from 1-2 days before rash appears, to when all lesions are completely crusted over (approximately 5 days). Persons who are susceptible to varicella should be considered to be infectious from 8-21 days after exposure. Persons with weakened immune systems may be communicable for longer periods.	Yes, until all lesions are completely dried or crusted over, usually 5 days after the onset of the rash. Lesions that can be fully covered are of little risk to susceptible persons. Control measures: Vaccine-preventable. Vaccination is the key preventive measure. Contact local health department for more specific recommendations, such as vaccination of unvaccinated or incompletely vaccinated individuals. Disinfect articles handled by, or contaminated with respiratory secretions or vesicular fluid from infected persons.	Reports outbreaks to local health department. Advise student's parent or guardian, or staff member, to contact health care provider after varicella exposure of neonate, during pregnancy, or of a person with a weakened immune system. *[Also, see section for "Varicella zoster virus: Shingles".]* *[Also, see SHS "Guide for Emergency Care in Maryland Schools, 2005" section for "Rashes".]*

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Disease	Incubation Period	Symptoms	Mode of Transmission	Period of Communicability	Exclusion (Yes or No) and Control Measures	Other Information
VARICELLA ZOSTER VIRUS: SHINGLES (also known as zoster; reactivation of prior infection with varicella zoster virus)	Reactivation of latent herpes zoster virus infection may occur years after primary infection (chickenpox) and may occur after vaccination with live virus varicella vaccine.	Vesicles with a red base appearing in the distribution of a peripheral sensory nerve ("dermatome"). Vesicles associated with either itching or severe pain. Scarring, loss of function may occur.	May also be associated with prior varicella vaccination. Zoster occurs due to reactivation of latent varicella/ zoster virus. NOTE: Fluid within zoster vesicles is infective, and indirect transmission of virus particles from vesicle fluid on contaminated clothing or other articles may occur.	From appearance of shingles vesicles until all vesicles are dried or crusted over -- about five days to a week.	Yes, until all lesions are completely dried and crusted over, or fully covered. Contact local health department for specific recommendations for contacts. Control measures: Varicella vaccine (see above) not shingles vaccine may be used in some circumstances to prevent cases of primary chickenpox in people exposed to shingles. Contact local health department for more specific recommendations. Disinfect articles handled by, or contaminated with vesicular fluid from infected persons.	Report outbreaks to local health department. Persons on cancer chemotherapy or who are HIV-infected may be at higher risk. *[Also, see section for "Varicella zoster virus: Chickenpox".]* *[Also, see SHS "Guide for Emergency Care in Maryland Schools, 2005" section for "Rashes".]*

ADDITIONAL INFORMATION: INFESTATIONS COMMONLY SEEN IN SCHOOLS, CHILD CARE, AND YOUTH CAMPS

Parasite	Symptoms	How do infestations occur?	Exclusion (Yes or No) and Control Measures	Additional information
BED BUGS (*Cimex lectularius*)	Itchy, skin welts occur a day after the bite. The medical concern is usually limited to itching and inflammation of the welts. Infestations may cause anxiety and loss of sleep. If badly affected, seek medical care promptly.	Bed bugs are usually carried into the home unknowingly. People carry them on luggage, clothing, beds, and furniture, especially used beds and sofas. Once inside the home, they spread from room to room. Can live for months without food or water.	If bed bugs are found on a child, the child should not be sent home early or excluded immediately. Control measures: Clothing may be placed in disposable plastic bags and then taken directly into the washer and/or dryer. For infestations of facilities, it is recommended to enlist the services of a professional pest control firm.	For additional information, refer to: <http://ideha.dhmh.maryland.gov/pdf/bed_bugs_fact_sheet_maryland_dhmh.pdf>
LICE, HEAD (*Pediculus capitis*)	Often none. Itching possible. Nits (eggs) are tightly attached to hair shaft near the scalp, often near nape of neck and behind the ears. Crawling lice rarely seen.	Direct contact with infested person's hair or occasionally their clothing, combs, brushes, carpets, or linens. Lice do not jump from person to person. Adult lice viable away from host up to 2 days.	Yes, at the end of the program/activity/school day, until after first treatment is completed. Children should not be sent home early or excluded immediately. For nits, routine exclusion not recommended. "No-nit" policies not recommended. Control measures: Notify parent/guardian to treat child with a pediculicide. Follow manufacturer's recommendation for treatment and remove nits. Do not share combs, brushes, hair ornaments, hats, or linen. Examine close contacts for lice and treat. Wash clothing, bedding, and towels in hot water and dry on high heat or dry clean or place in tightly closed plastic bag for 14 days. Vacuum furniture and rugs.	Exclusion or readmission can be determined by local policy, or on a case- by-case basis. Lice do not transmit any communicable diseases, but bacterial infections of skin can result from scratching. This should be handled and on a case-by-case basis by the local school system or regulatory authority.

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EXCLUSIONS

Diarrhea 4
Fever 4
General 4
Vomiting 5

INFESTATIONS

Bed Bugs 32
Cimex lectularis ..... *See* Bed Bugs
Lice, Head 32
Pediculus capitis ..... *See* Lice, Head

NOTES:

- *Periods of exclusion are intended for cases in school, child care, and youth camp settings*
- *Check with local health department for recommended control measures and prevention steps*
- *Additional information on these and other diseases can be found on the Internet at* <www.cdc.gov> *or* <http://ideha.dhmh.maryland.gov/SIPOR/>
- *A Directory of Local Health departments may be found at* <http://ideha.dhmh.maryland.gov/local-health-departments.aspx>