Chapter 4

Communicable Diseases and Infection Control

Communicable Diseases and Infection Control

School nurses can assist schools and school districts with infectious disease prevention policies, programs and training. Infectious disease prevention and surveillance is an important part of the school nurse's job because of the increasing incidence of drug-resistant strains of bacteria and emergence of new organisms, the fact that children's immune systems are still developing and the close physical contact which occurs in schools.

The school nurse's goals in this area should include:

- Disease prevention through immunization promotion and tracking of immunization requirements
- Education of students and staff about standard precautions and avoiding exposure to pathogens
- Prevention of disease transmission at school through encouragement of hand hygiene, disease surveillance and reporting, and education of students and school personnel
- Provision of nursing care and health counseling for students and staff
- Protection of the confidentiality of persons with infectious diseases who attend the school.

This Chapter includes information on infection control and hand hygiene, as well as individual sections on some of the most common infectious (communicable) diseases. In addition, the Childhood Infectious Illnesses Chart and the Notifiable Disease / Condition Reporting Form is also included.

Per Selekman*, school policies on communicable disease management should be based on guidelines developed by health authorities. These authorities should be clearly identified in school policies on communicable diseases. Both the "Red Book: 2018 Report of the Committee on Infectious Diseases from the American Academy of Pediatrics" and the "Control of Communicable Diseases Manual, American Public Health Association, 20th edition (December 2014)" provide clear evidence-based guidelines on which to base decisions regarding school exclusion and disease management. Written policies should reference these authorities within the text as this action provides strong support for the actions taken when a student is identified with a communicable disease or infestation.

*Selekman, Janice, DNSc, RN, Ed., *School Nursing: A Comprehensive Text*, 2nd ed. Philadelphia: F.A. Davis Company, 2012.

Resources

Aronson, Susan S. and Shope, Timothy R. *Managing Infectious Diseases in Child Care and Schools: Quick Reference Guide*, 4th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2017.
ebooks.aappublications.org/content/managing-infectious-diseases-in-child-care-and-schools-4th-edition.tab-info

Body and Mind – Immune Platoon, Disease Database
cdc.gov/bam/diseases/immune/index.html
cdc.gov/bam/diseases/immune/disease_database.html

Diseases and Conditions – CDC
cdc.gov/DiseasesConditions

Notifiable Disease Reporting – Georgia Department of Public Health
dph.georgia.gov/disease-reporting

Parents of Kids with Infectious Diseases (PKID)

"PKIDs' Infectious Disease Workshop (IDW) is an educational tool for people of all ages and with all levels of understanding about infectious diseases. In this workshop, you will learn about bacteria and viruses, how to prevent infections, how to prepare for a bioterrorist attack or other disaster, how to keep athletes healthy, how to eliminate the social stigma that too often accompanies diseases such as HIV or hepatitis C, and so much more."
pkids.org/ip_idw.php

School Health Policy and Procedure, 7th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2016.
pediatrics.aappublications.org/content/121/5/1052.full.pdf

Summary of Georgia Immunization Requirements for Child Care & School Attendance
dph.georgia.gov/sites/dph.georgia.gov/files/Immunizations/Summarychart3231REQ%20rev%2001232014_2.pdf

Travel Health Notices
wwwnc.cdc.gov/travel/notices

Infection Control in the School Setting

Schools, by their very nature, can be considered incubators for many viral and bacterial infections. Young school-age children still have developing immune systems and are more vulnerable to common infections. Children's natural affinity for each other and school activities that promote the values of sharing, cooperation and collaboration also add to the potential spread of infections.

Cleaning for Healthier Schools, Infection Control Handbook, 2010 – Connecticut Department of Public Health
ct.gov/dph/lib/dph/environmental_health/eoha/pdf/cleaning_for_healthier_schools_final_2.4.11.pdf

Hand Hygiene

Hand hygiene is the single most important activity to decrease the spread of infections of all kinds. Contact with body secretions can expose school employees to bacteria and viruses that are potentially infectious to themselves and others. An effective hand hygiene program has been proven to decrease illness and absences for both students and staff. The three necessary requirements for an effective program are:

- An accessible hand hygiene facility for all staff and students with warm water, soap and paper towels. Waterless alcohol-based hand sanitizers are also effective if there is no visible soiling on hands or under nails.
- Students and staff taking and being allowed to take the time to perform hand hygiene several times during the day (especially before lunch and snacks, after outside activities and after bathroom breaks).
- Annual instruction for staff and class discussions of proper methods for hand hygiene–using friction, washing all hand surfaces and nails, rinsing and drying well. The hand hygiene lesson plan that can be used for a staff in-service can be found in Chapter 9, Health Education.

Important hand hygiene tips for the school nurse and staff

- Take every opportunity possible to teach the importance of hand hygiene.
- Model appropriate hand hygiene for students and staff in the clinic and the classroom.
- Ask students to perform hand hygiene when they come to the clinic. This gives the nurse an opportunity to monitor their practice and teach when necessary.
- Eliminate barriers to effective hand hygiene in the school setting by addressing the need for warm water, soap and paper towels in restrooms and waterless alcohol-based hand sanitizers in classrooms.

Hand hygiene is necessary before and after situations where hands are likely to become contaminated, even before and after wearing gloves. When in doubt, perform hand hygiene. Posting signs in appropriate places helps everyone remember what they should do. Adults and children should be taught when, where and how to perform hand hygiene. These situations include:

- **Before** – preparing or eating food, treating a cut or wound, taking care of someone who is sick or injured, inserting or removing contact lenses.
- **After** – using the bathroom; helping a child use the bathroom; contact with blood or body fluids or objects soiled with them; removing protective equipment such as gloves; handling raw meats, poultry or eggs; touching pets, especially reptiles; sneezing or blowing your nose (or a child's nose); handling garbage; caring for someone who is sick or injured.

Correct hand hygiene methods should include the following:

- Remove jewelry first, and store it in a safe place.
- Use warm water and liquid soap.
- Apply a dime-sized amount of soap to wet hands.
- Rub hands together vigorously for 20 seconds. Scrub between fingers, under fingernails, palms, tops of hands and wrists.
- Students can be taught to sing "Yankee Doodle" or another short song while handwashing to ensure that enough time is spent on the activity.
- Rinse in a flowing stream of water. Leave the water running while drying hands thoroughly with a paper towel.
- Turn off the faucet with the same paper towel before disposing of it.

Liquid soap is recommended in hand hygiene areas. Antibacterial soap is not necessary. Alcohol-based sanitizers can be used when there is no visible soiling of hands.

A hand hygiene program that becomes a habit for everyone in the school has been proven to positively affect student and employee attendance, which will improve educational outcomes.

Communication

Communication with parents is very important. When outbreaks of illnesses in classes or groups occur, letters may be sent home. Parents should be notified when a child becomes ill at school and assisted with referrals if healthcare is not readily available to the family. School nurses and teachers also should be alert to patterns of illness that may emerge. Clinic personnel can help by giving reminders in staff meetings, doing bulletin boards to teach children, and being a good role model for children and other staff.

Education

One of the goals of student health services is to assist the child in maintaining a level of health that enables him to learn. Attention to infection prevention and control by all school employees will help all students to reach that goal. Health education programs and "train the trainer" classes can be offered by the school nurse to make sure all school personnel understand the importance and correct procedures for controlling infections. See Chapter 9, Health Education for other resources that may be used.

Infection Prevention and Control Procedures

Whenever it is necessary to handle or clean up anything contaminated with blood or other body fluids, the following simple and effective procedures should be observed. These measures can be adopted as standard procedure for every spill or wound involving blood or other body fluids to avoid potential transmission of any communicable disease.

Standard Precautions for Handling of Blood and Other Body Fluids

- Many different infections may be spread from person to person through contact with blood and other body fluids.
- Both students and staff members can transmit infections, even when there is no knowledge of or appearance of illness. Standard precautions are based on the premise that anyone may potentially transmit an infection.
- Anticipating potential contact with infectious materials in routine and emergency situations is the first step in preventing exposure to and transmission of infections.

- Essential techniques used to control infections are:
  - effective hand hygiene
  - using gloves and other barriers as needed
  - disposing of waste appropriately
  - cleaning spills promptly and carefully.
- Standard precautions should be observed by anyone involved in handling blood or other body fluids such as vomit, fecal matter or urine; or cleaning facilities or equipment that may have been contaminated. Standard precautions are for the protection of everyone.

Observance of these guidelines will make the school a safer environment for students and staff:

- When applying pressure to stop a bleeding wound, disposable gloves should always be worn.
- If at all possible, the injured person should hold the pressure on the wound himself, but many students will not be able to do this effectively.
- Personnel cleaning up spills should avoid any exposure of their open skin lesions or mucous membranes such as the eyes, nose and mouth.
- Disposable gloves should never be reused.
- Surfaces soiled with the above substances should be promptly disinfected, using a 10 percent bleach solution (one part bleach to nine parts water) or school district-approved disinfectant for colorfast surfaces, and other EPA (Environmental Protection Agency)-approved disinfectant or germicide for surfaces that will fade. The bleach solution should be made freshly each day (1/3 cup bleach to one quart water).
- Whenever possible, disposable towels, tissues or similar materials should be used in the cleanup process. These disposables, including the gloves, should be sealed in one plastic bag, double-bagged in a second bag and then discarded.
- Non-disposable cleaning equipment and materials, such as mop heads, should also be disinfected with bleach or other EPA-approved disinfectant or germicide.
- Linens should be stored in a plastic bag until laundered. Linens that are not disposable, such as towels, may be cleaned in a normal hot water laundry cycle.
- Thoroughly wash hands afterwards, using soap and water.
- All sharp or blood-contaminated objects, such as lancets, needles, glass ampules, razor blades and strips used for blood or urine testing, should be disposed of in a puncture-proof and leak proof container. All needles should be disposed of without being bent or recapped. Schools should identify students whose medical condition requires use of these sharps and ensure that they are instructed in the proper disposal of such items. See below for additional information.
- If exposure to blood or other body fluids occurs, a report to the school office will dictate what possible further medical attention is needed by district policy. Contact your local public health department for guidance.

Disposal of Infectious Waste

- **Contaminated Supplies**
  Used or contaminated supplies like gloves, barriers, sanitary napkins and band-aids should be placed into a plastic bag and sealed. This bag then can be thrown into the garbage so it is out of reach of children or animals.
- **Used Needles, Syringes and Other Sharp Objects**
  As of the printing of this manual, Georgia does not provide guidance for the safe disposal of community sharps. Listed below are some general guidelines:
  - Needles should not be recapped, bent or removed from the syringe before disposal.

- If a purchased red biohazard sharps container is not used, these objects should immediately be placed in a metal, or other rigid, strong plastic puncture-proof and leak-proof container with a screw-on or tightly secured cap, such as a laundry detergent bottle.
- Be sure the container is opaque so needles cannot be seen from the outside of the container.
- Once the container is three-fourths full, it should be sealed with heavy duty tape, bagged and kept out of the reach of children until it can be disposed of properly. Reinforce the cap with heavy duty tape. Mark clearly and noticeably on the outside of the container "Do Not Recycle."
- Arrangements can be made to dispose of used needles, syringes and other sharp objects contained in an approved red biohazard sharps container at a local medical facility, fire department or health department.
- If a biohazard sharps container is not available, parents should be asked to pick up the container so they can dispose it in their personal household trash. Parents should check with their local waste collection service or their local health department for proper needle (sharps) disposal procedures in their county.

The Coalition for Safe Community Needle Disposal is recommending safer alternative needle (sharps) disposal methods. For more information, visit these websites:

- CDC Safe Community Needle Disposal in Georgia
  cdc.gov/niosh/topics/bbp/disposal.html
- Coalition for Safe Community Needle Disposal
  safeneedledisposal.org
- Environmental Protection Agency Brochure: Medical Waste
  epa.gov/epawaste/nonhaz/industrial/medical/med-home.pdf
- EPA guidelines: New information about Disposing of Medical Sharps
  epa.gov/hwgenerators/links-hazardous-waste-programs-and-us-state-environmental-agencies

Outbreaks of Illness

Clusters of illnesses such as vomiting, diarrhea, fever, flu-like complaints and an unexplained rise in absenteeism should be reported to the local health department.

The Notifiable Disease/Condition Reporting Requirements and How to Report
dph.georgia.gov/disease-reporting

Resources

Handwashing: Clean Hands Save Lives

cdc.gov/handwashing

Healthy Schools, Healthy People, It's a SNAP!

itsasnap.org

COMMON INFECTIOUS ILLNESSES

From birth to age 18

	Disease, illness or organism	Incubation period *(How long after contact does illness develop?)*	How is it spread?	When is a child most contagious?	When can a child return to the childcare center or school?	Report to county health department*	How to prevent spreading infection *(management of conditions)***
Eye, ear, nose, throat and chest	**To prevent the spread of organisms associated with common infections, practice frequent hand hygiene, cover mouth and nose when coughing and sneezing, and stay up to date with immunizations.**						
	Bronchiolitis, bronchitis, common cold, croup, ear infection, pneumonia, sinus infection and most **sore throats** (respiratory diseases caused by many different viruses and occasionally bacteria)	Variable	Contact with droplets from nose, eyes or mouth of infected person; some viruses can live on surfaces (toys, tissues, doorknobs) for several hours	Variable, often from the day before symptoms begin to 5 days after onset	No restriction unless child has fever, or is too uncomfortable, fatigued or ill to participate in activities (center unable to accommodate child's increased need for comfort and rest)	NO	
	Cold sore (Herpes simplex virus)	2 days to 2 weeks	Direct contact with infected lesions or oral secretions (drooling, kissing, thumb sucking)	While lesions are present	When active lesions are no longer present in children who do not have control of oral secretions (drooling); no exclusions for other children	NO	Avoid kissing and sharing drinks or utensils.
	Conjunctivitis (Pink eye)	Variable, usually 24 to 72 hours	Highly contagious; contact with secretions from eyes of an infected person or contaminated surfaces	During course of active infection	Once treatment begins	NO	
	Diphtheria (Corynebacterium diphtheriae bacteria)	1 to 10 days (usually 2 to 5 days)	Contact with droplets and discharge from eyes, nose, throat or skin of infected person; rarely, transmission may occur from skin lesions or articles soiled with discharges from lesions of infected person	Without antibiotic therapy, usually less than 2 weeks, but occasionally as long as 6 months. A child is no longer infectious after treatment with appropriate antibiotics	After 2 negative cultures are taken at least 24 hours apart	YES	Timely immunization beginning at 2 months old; booster dose of Tdap is recommended at 11 years old; all adults should receive a booster of Tdap. Close contacts, regardless of immunization status, should be monitored for 7 days for evidence of disease and started on antimicrobial prophylaxis; immunizations should be brought up to date, if necessary.
	Influenza (the flu) (influenza virus)	1 to 4 days	Highly contagious; contact with droplets from nose, eyes or mouth of infected person; virus can live on surfaces (toys, tissues, doorknobs) for several hours	Variable; from 24 hours before onset of symptoms to 7 days after onset; can be prolonged in young children	No fever for 24 hours without the use of fever-reducing medicines	NO for individual cases; YES for influenza-associated deaths or novel influenza A virus infections	Annual influenza vaccine recommended for everyone 6 months and older (with rare exception).
	Mononucleosis (Mono) (Epstein-Barr virus)	30 to 50 days	Contact with the infected person's saliva	Indeterminate	No restriction unless child has fever or is too uncomfortable, fatigued or ill to participate in activities (center unable to accommodate child's increased need for comfort and rest)	NO	Avoid kissing and sharing drinks or utensils.
	Mumps (mumps virus)	12 to 25 days (usually 16 to 18 days)	Contact with saliva or mucus from the mouth, nose or throat of an infected person	1 to 2 days before symptoms appear through 5 days after onset	5 days after onset of parotid gland (neck) swelling	YES	Avoid sharing beverage containers, eating utensils and kissing. Timely immunization beginning at 12 months old. Vaccination of contacts may be recommended.
	Respiratory syncytial virus (RSV)	2 to 8 days (4 to 6 days is most common)	Highly contagious; contact with droplets from nose, eyes or mouth of infected person; virus can live on surfaces (toys, tissues, doorknobs) for several hours	Variable; from the day before onset of symptoms until 3 to 8 days after or longer; may last up to 3 to 4 weeks	No fever for 24 hours without the use of fever-reducing medicines	NO	Practice meticulous hand hygiene and avoid contact with respiratory secretions.
	Strep throat (Group A Streptococcus bacteria)	2 to 5 days	Contact with droplets from nose and mouth; close, crowded contact	Highest during acute infection; no longer contagious within 24 hours after antibiotics	After 24 hours of antibiotic treatment	NO	Avoid close contact with symptomatic persons until completion of 24 hours of antimicrobial therapy.
	Tuberculosis (TB) (mycobacterium tuberculosis)	2 to 10 weeks (risk of developing disease is highest 6 months to 2 years after infection)	Airborne inhalation of droplets from nose and mouth of diseased person (children usually contract TB from close contact with a diseased adult)	Usually only a few days to a week after effective drug therapy. Children' younger than 10 years are rarely contagious	For active disease, once determined to be non-infectious, therapy started, symptoms diminished and adherence documented; no exclusion for latent infection	YES	Risk-based screening of children may be indicated. Consult with local health department. Adults should undergo annual symptom and exposure screening with testing based on local risk factors.
	Whooping cough (pertussis) (bordetella pertussis bacteria)	4 to 21 days (usually 7 to 10 days)	Contact with droplets from nose, eyes or mouth of infected person	1 to 2 weeks before cough onset to completion of 5 days of appropriate antibiotic. If untreated, infectious for 3 weeks after cough onset	After 5 days of appropriate antibiotic treatment; if untreated, 3 weeks after onset of cough	YES	Timely immunization beginning at 2 months old; booster dose of Tdap is recommended at 11 years old. All adults should receive a booster dose of Tdap. Close contacts that are unimmunized should have pertussis immunization initiated. Chemoprophylaxis is recommended for all close contacts.
Gastrointestinal	**To prevent spreading infection for all GI diseases, avoid potentially contaminated beverages, food and water, and divide food preparation and diapering responsibilities among staff.**						
	Gastroenteritis–bacterial (vomiting and/or diarrhea) **Campylobacter, C. difficile** (Clostridium difficile), **Shiga toxin-producing E. coli** (Escherichia coli) or **E. coli O157**, **Salmonella, Shigella**	Varies with pathogen (from 10 hours to 7 days)	Contact with stool from infected individual (or occasionally pets); contaminated food, beverages or water (especially raw eggs and improperly cooked meats)	When diarrhea is present; pathogenic E. coli and Shigella are highly infectious in small doses even after diarrhea resolves	Shiga toxin-producing E. coli, E. coli O157 and Shigella require 2 negative stool cultures; Salmonella serotypes Typhi and Paratyphi require 3 negative stool cultures; all others: no fever, diarrhea or vomiting for 24 hours	YES for E. coli, Salmonella, Campylobacter and Shigella; NO for others	Frequent, good handwashing, particularly by infected child and any caregivers assisting with toileting. Alcohol-based hand hygiene products do not inactivate C. difficile spores; soap and water must be used. Frequent cleaning of common-touch surfaces with appropriate cleaning agents (bleach is effective against C. difficile). Proper cooking and handling of meats and raw eggs. Reptiles and live poultry (e.g., chickens) should not be permitted in childcare centers.
	Gastroenteritis–viral (vomiting and/or diarrhea), **Norovirus, Sapovirus, Adenovirus**	Varies with pathogen (from 12 hours to 10 days)	Contact with stool, saliva or vomit from infected individual directly or from infected surfaces, especially toys; contaminated food or water; norovirus is highly contagious and is a frequent cause of outbreaks	Variable; most contagious from 2 days before illness until vomiting and diarrhea improve; can be contagious for up to 21 days after symptoms	No fever, vomiting or diarrhea for 24 hours	NO for a single illness; YES for multiple illnesses or outbreak	Frequent, good hand-washing, particularly by infected child and any caregivers assisting with toileting. Alcohol-based hand hygiene products do not inactivate Norovirus; soap and water must be used. Frequent cleaning of common-touch surfaces with appropriate cleaning agents (bleach is effective against Norovirus at certain concentrations). Exclude ill children and staff until vomiting, diarrhea and fever-free for at least 24 hours.
	Giardia (parasite)	1 to 3 weeks	Contact with infected stool; animals, including dogs or cats; swallowing water from lakes, rivers or streams; or food	When diarrhea is present	No fever, vomiting or diarrhea for 24 hours	YES	Good hand hygiene, especially after playing outside, gardening or picking up pet feces. Avoid swallowing untreated water. Clean with bleach solution or quaternary ammonium compound products.
	Hepatitis A (virus)	15 to 50 days (average 28 days)	Eating contaminated food or water; close contact with infected individuals; contact with infected stool	From 1 to 2 weeks before illness until 1 week after onset of illness or after jaundice appears; can be longer in newborn infants	After 1 week from onset of illness or appearance of jaundice	YES	Timely immunization at 12 months old; consider hepatitis A vaccine for caregivers; infected caregivers should not prepare meals for others. If at least one case is confirmed, hepatitis A vaccine or immunoglobulin should be administered within 14 days of exposure to unimmunized contacts.
	Pinworms (enterobius vermicularis)	1 to 2 months or longer	Pinworms lay microscopic eggs near rectum, causing itching; infection spreads through ingestion of pinworm eggs after contamination of hands by scratching	Eggs may survive up to 2 weeks after appropriate therapy and resolution of rectal itching; reinfection is common	No restriction, but treatment should be given to reduce spread	NO	Frequent, good hand-washing, particularly by infected child and any caregivers assisting with toileting; keep fingernails clean and short; prevent fingers in mouth; bed linen and underclothing of infected children should be handled carefully, not shaken and laundered promptly.
	Rotavirus	1 to 3 days	Contact with stool from infected individual; ingestion of contaminated water or food and contact with contaminated surfaces or objects	Virus is present in stools of infected children several days before the onset of diarrhea to several days after onset of diarrhea	No diarrhea present	NO	Timely immunization beginning at 2 months old.
Meningitis	**To prevent spreading infection for all meningitis diseases, practice frequent hand hygiene, properly dispose of soiled tissues, cover coughs and sneezes, and avoid sharing drinks and utensils.**						
	Haemophilus influenzae Type B (hib bacteria)	Unknown (usually 1 to 10 days)	Contact with droplets from nose, eyes or mouth of infected person	Until at least 24 hours of antibiotic treatment, including antibiotics to eliminate carrier state	After at least 24 hours of antibiotic treatment, including antibiotics to eliminate carrier state; child well enough to participate	YES	Timely immunization beginning at 2 months old; consult public health regarding vaccination and/or treatment of close contacts.
	Neisseria meningitidis (meningococcal bacteria)	1 to 10 days (usually less than 4 days)	Contact with droplets from nose, eyes or mouth of infected person	Until at least 24 hours of antibiotic treatment, including antibiotics to eliminate carrier state	After at least 24 hours of antibiotic treatment, including antibiotics to eliminate carrier state; child well enough to participate	YES	Timely immunization at 11 to 12 years old; booster dose of MCV4 is recommended at 16 years old; antibiotic prophylaxis of household and saliva contacts of a patient with invasive N. meningitidis.
	Streptococcus pneumoniae (pneumococcal bacteria)	Variable (usually less than 4 days)	Contact with droplets from nose, eyes or mouth of infected person	Until at least 24 hours of antibiotic treatment	After at least 24 hours of antibiotic treatment; child well enough to participate	YES	Timely immunization beginning at 2 months old; treatment of contacts not necessary and not beneficial.
	Viral meningitis (usually enterovirus)	3 to 6 days	Contact with droplets from nose, eyes or mouth or fecal material, often from healthy people	From the day before illness until up to 2 weeks after onset	After 24 hours without fever; child well enough to participate	YES	Proper disinfection of surfaces such as changing tables with soap, water and bleach-containing solution; treatment of contacts not necessary, no specific treatment.

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COMMON INFECTIOUS ILLNESSES

From birth to age 18

	Disease, illness or organism	Incubation period *(How long after contact does illness develop?)*	How is it spread?	When is a child most contagious?	When can a child return to the childcare center or school?	Report to county health department*	How to prevent spreading infection *(management of conditions)***
Skin or rash	**To prevent spreading infection for all skin or rash diseases, practice frequent hand hygiene and properly dispose of soiled tissues.**						
	Chickenpox** (varicella zoster virus)	10 to 21 days (usually 14 to 16 days)	Airborne or direct contact with droplets from nose, mouth or skin lesions (varicella and herpes zoster) of infected individuals or freshly contaminated objects	From 2 days before skin lesions develop until all lesions are crusted or, in the absence of crusting, no new lesions appear after 24 hours	When all lesions have crusted or, in the absence of crusting, no new lesions appear after 24 hours	YES	Timely immunization beginning at 12 months old; contacts who are at high-risk for chickenpox-related complications, including those who are unvaccinated, pregnant and/or immunocompromised, should be referred to their healthcare provider as soon as possible after exposure to a chickenpox case.
	Fifth disease** (human parovirus B19)	4 to 21 days (usually 4 to 14 days)	Contact with droplets from nose, eyes or mouth of infected person; percutaneous exposure to blood	Only during the week before the rash develops	No need to restrict once rash has appeared	NO	
	German measles** (Rubella virus)	12 to 23 days (usually 14 days)	Airborne or direct contact with droplets from nose, eyes or mouth of infected person; may be transmitted to fetus across the placenta	When the rash first appears, but virus may be shed from 7 days before to 5 to 7 days or more after rash onset	7 days after the rash appears	YES	Timely immunization beginning at 12 months old.
	Hand, foot and mouth disease (Coxsackievirus)	3 to 6 days	Contact with fecal, oral or respiratory secretions	During the first week of illness; can be contagious 1-3 weeks after symptoms go away	After 24 hours without fever and child well enough to participate	NO	Proper disinfection of changing tables, surfaces and toys.
	Head lice (parasite)	Eggs (nits) hatch in 7 to 12 days	Direct contact with infested individuals' hair and sharing combs, brushes, hats or bedding	When there are live insects on the head	No restrictions necessary	NO	Should be watched closely for 2 weeks for new head lice. Close contacts need to be examined and treated for crawling lice. At home: Wash bedding and clothes in hot water or dry-clean or seal in plastic bag for 10 days. Avoid sharing beds, combs and brushes. At school: Avoid sharing headgear; hang coats separately; use individual pillow and sleep mat.
	Impetigo (Staphylococcus or Streptococcus baceteria)	7 to 10 days	Direct skin contact (especially through contaminated hands), nasal discharge or contaminated surfaces	Until active lesions are gone or after 24 hours on antibiotics	After at least 24 hours of antibiotics	NO	Keep fingernails clean and short.
	Measles (Rubeola virus)	7 to 21 days (usually 14 days); the incubation period of measles, from exposure to prodrome (the first symptoms), is 10 to 12 days	Airborne or direct contact with droplets from nose, eyes or mouth of infected person	From 4 days before the rash appears to 4 days after it appears	At least 5 days after start of rash	YES	Timely immunization beginning at 12 months old; contacts without documented immunity (2 doses of measles-containing vaccine) should receive post-exposure prophylaxis if indicated.
	MRSA (Methicillin-resistant Staphylococcus Aureus) (bacterial cause of skin boils and abscesses)	Variable; at times initially mistaken as spider bite	Direct skin contact with infected person, wound drainage or contaminated surfaces; increase risk in crowded conditions; occasional transmission by droplets over short distances	Draining wounds are very contagious and should be covered at all times	If wound drainage can be contained under a dressing	NO	Cover skin lesions; avoid contact with wound drainage; proper disposal of dressings; do not share personal items (towels, personal care items); clean and disinfect athletic equipment between use; wash and dry laundry on hot setting.
	Molluscum (Molluscum contagiosum virus)	2 to 7 weeks (as long as 6 months)	Direct skin contact with wound or contaminated surfaces	When lesions are present	No restriction, keep lesions covered with clothing or bandages	NO	Avoid contact sports; during outbreaks, further restrict person-to-person contact.
	Ringworm on body and **ringworm on scalp** (fungus)	Typically 4 to 14 days after exposure	Direct skin contact with infected person or animal, or to surfaces or objects contaminated with fungus	From onset of lesions until treatment begins	Once treatment begins; ringworm on scalp requires oral medication	NO	Avoid direct contact with infected individuals; avoid sharing of combs, brushes, hats; proper disinfection of surfaces and toys.
	Roseola (virus)	9 to 10 days	Secretions, often from healthy people	During fever	No restriction unless child has fever or is too ill to participate	NO	Proper disinfection of surfaces and toys.
	Scabies (parasite)	4 to 6 weeks (1 to 4 days after reexposure)	Skin contact with infested individual; contact with bedding or clothes of infested person	From up to 8 weeks before skin rash appears until it has been treated with a scabicidal cream	After treatment has been completed	NO; if two or more documented cases in one center, treatment of center contacts may be necessary	All household members and caregivers with prolonged direct contact should be treated simultaneously to prevent reinfestation; bedding and clothing worn next to skin during the 4 days before the start of treatment should be washed in hot water; clothing that cannot be laundered should be removed and stored for several days to a week.

To report an illness, call your local or district public health office or 1-866-PUB-HLTH (1-866-782-4585). Exceptions to the exclusion/return to school guidelines listed on this chart may be made by local health department personnel and/or primary care physician on a case-by-case basis.

To reduce the spread of diseases in the classroom or childcare center, all clusters and outbreaks of illnesses, which may not be listed above, should be reported to public health.

***These diseases may be of concern to staff members who are pregnant or trying to become pregnant. Follow-up with obstetric healthcare provider is recommended after known or suspected contact.*

****Consult local, district or state public health for specific public health recommendations.*

References: American Academy of Pediatrics. Red Book: 2015. Report of the Committee on Infectious Diseases. 30th ed.

Visit choa.org/schoolhealth for more information.

Children's Healthcare of Atlanta | DPH Georgia Department of Public Health

NOTIFIABLE **DISEASE / CONDITION** REPORTING

All Georgia physicians, laboratories, and other health care providers are required by law to report patients with the following conditions.

Both lab-confirmed and clinical diagnoses are reportable within the time interval specified below.For the latest information from the Department of Public Health (DPH), visit our website at: **dph.georgia.gov**

REPORT IMMEDIATELY

To Report Immediately | **Call:** District Health Office or **1-866-PUB-HLTH (1-866-782-4584)**

- any cluster of illnesses
- animal bites
- ▶ anthrax
- all acute arboviral infections:
  - – Eastern Equine Encephalitis (EEE)
  - – LaCrosse Encephalitis (LAC)
  - – St. Louis Encephalitis (SLE)
  - – West Nile Virus (WNV)
- ▶ botulism
- ▶ brucellosis
- cholera
- diphtheria
- *E. coli O157*
- *Haemophilus influenzae (invasive)*+
- hantavirus pulmonary syndrome
- hemolytic uremic syndrome (HUS)
- hepatitis A (acute)
- measles (rubeola)
- meningitis (specify agent)
- meningococcal disease
- novel influenza A virus infections
- pertussis
- plague
- ▶ poliomyelitis
- Q fever
- ▶ rabies (human & animal)
- severe acute respiratory syndrome (SARS)
- shiga toxin positive tests
- *S. aureus with vancomycin MIC ≥ 4µg/ml*
- ▶ smallpox
- syphilis (adult)
- syphilis during pregnancy
- tuberculosis
- latent TB infection in children<5 years old
- ▶ tularemia
- ▶ viral hemorrhagic fevers

▶ *Potential agent of bioterrorism.*
+ *Invasive = isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid.*

REPORT WITHIN 1 MONTH

Birth Defects, including fetal deaths of at least 20 weeks gestational age and children under age 6. Information for reporting birth defects is available at **dph.georgia.gov/birth-defects-reporting**.
Healthcare-associated Infections (HAIs) For facilities required to report HAI data to CMS via NHSN. Report in accordance with the NHSN protocol. Reporting requirements and information available at **dph.georgia.gov/notifiable-hai-reporting**
Neonatal Abstinence Syndrome (NAS) Information for reporting NAS is available at **dph.georgia.gov/nas**.

REPORT WITHIN 6 MONTHS

benign brain and central nervous system tumors
cancer
Report forms and reporting information for tumors and cancer is available at **dph.georgia.gov/georgia-comprehensive-cancer-registry**.

REPORT WITHIN 7 DAYS

- AIDS#
- all acute arboviral infections*
- acute flaccid myelitis
- aseptic meningitis
- babesiosis
- blood lead level (all)
- campylobacteriosis
- carbapenem-resistant enterobacteriaceae (CRE): enterobacter species, escherichia coli, and klebsiella species (isolates within 7 days)
- chancroid
- Chlamydia trachomatis (genital infection)
- Creutzfeldt-Jakob Disease (CJD), suspected cases, under age 55
- cryptosporidiosis
- cyclosporiasis
- ehrlichiosis
- giardiasis
- gonorrhea
- HIV infection and Perinatal HIV exposure##
- hearing impairment (permanent under age 5)##
- hepatitis B
  - – acute hepatitis B
  - – chronic HBsAg(+) or HBV DNA detected infections
  - – HBsAg(+) pregnant women
  - – HBsAg(+) children ages <3 years
- hepatitis C (past or present)
  - – acute hepatitis C
  - – chronic hepatitis C
  - – anti-HCV(+) or HCV RNA detected pregnant women
  - – anti-HCV(+) or HCV RNA detected children ages <3 years
- hepatitis D (Delta virus present with HBsAg); acute and chronic
- hepatitis E (acute)
- influenza-associated death (all ages)
- legionellosis
- leptospirosis
- listeriosis***
- leprosy or Hansen's disease (Mycobacterium leprae)
- Lyme disease
- lymphogranuloma venereum
- malaria
- maternal deaths (during pregnancy or within 1 year of end of pregnancy)##
- melioidosis
- mumps
- psittacosis
- Rocky Mountain spotted fever
- rubella (including congenital)
- salmonellosis
- shigellosis
- streptococcal disease, Group A or B (invasive)**
- Streptococcus pneumoniae (invasive)**
  - – report with antibiotic-resistance information
- tetanus
- toxic shock syndrome
- typhoid
- Varicella (Chickenpox)
- Vibrio infections
- yersiniosis

REPORT CASES ELECTRONICALLY THROUGH THE STATE ELECTRONIC NOTIFIABLE DISEASE SURVEILLANCE SYSTEM AT http://sendss.state.ga.us

* California serogroup virus diseases (including: California encephalitis, Jamestown Canyon, Keystone, La Crosse, Snowshoe hare, Trivittatus virus), Chikungunya Virus Disease, Eastern equine encephalitis virus disease, Powassan virus disease, St. Louis encephalitis virus disease, West Nile virus disease, Western equine encephalitis virus disease, Zika Virus Disease

** Invasive = isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid.

*** L. monocytogenes isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid, or other normally sterile site; or from placenta or products of conception in conjunction with fetal death or illness. Infant mortality is reportable to Vital Records.

REPORTING FOR OTHER CONDITIONS:

\# Report forms and reporting information for HIV/AIDS available by phone (**1-800-827-9769**) OR online (**dph.georgia.gov/georgias-hivaids-epidemiology-surveillance-section**). For mailing HIV/AIDS reports, please use double envelopes marked "confidential", addressed to Georgia Department of Public Health Epidemiology Section, P.O. Box 2107, Atlanta, GA 30301

\## Report forms and reporting information for maternal deaths and hearing impairment (permanent, under age 5) available at **dph.georgia.gov/documents/forms-surveys-and-documents**.

Please visit dph.ga.gov/disease-reporting or call 1-866-782-4584

DPH
Georgia Department of Public Health

SUBMISSION REQUIREMENTS FOR CLINICAL MATERIALS

The table below details notifiable diseases for which clinical materials are to be submitted to the Georgia Public Health Laboratory

DISEASES AND CONDITIONS	SUBMIT CLINICAL MATERIALS[1]
anthrax (Bacillus anthracis)	All reported cases
botulism (Clostridium botulinum)	All reported cases
brucellosis (Brucella spp.)	All reported cases
campylobacteriosis (Campylobacter spp.)	All reported cases
Carbapenem-resistant Enterobacteriaceae: Enterobacter species, Escherichia coli, Klebsiella species	All reported cases
cholera (Vibrio cholerae)	All reported cases
cyclosporiasis (Cyclospora spp.)	All reported cases
dengue	All reported cases
diphtheria (Corynebacterium diphtheriae)	All reported cases
E. coli O157	All reported cases
gonorrhea (Neisseria gonorrhoeae infections)	Send invasive[2] specimens
Haemophilus influenzae (all invasive disease)	All reported cases
influenza (unusual case incidence, critical illness or death, suspect Novel	All reported cases
Influenza A (unable to subytpe)	All reported cases
listeriosis (Listeria monocytogenes)	All reported cases
malaria (Plasmodium spp.)	All reported cases
measles (rubeola)	All reported cases
meningococcal disease (Neisseria meningitidis) (all invasive disease)	All reported cases
novel influenza A virus infections	All reported cases
plague (Yersinia pestis)	All reported cases
poliomyelitis	All reported cases
Q fever (Coxiella burnetii)	All reported cases
rubella (including congenital)	All reported cases
salmonellosis, including typhoid (Salmonella spp.)	All reported cases
severe acute respiratory syndrome (SARS)	All reported cases
shiga toxin positive tests	All reported cases
shigellosis (Shigella spp.)	All reported cases
smallpox	All reported cases
tuberculosis (Mycobacterium tuberculosis complex); pulmonary or extrapulmonary sites of disease	All reported cases
tularemia (Francisella tularensis)	All reported cases
Typhoid	All reported cases
Vibrio spp	All reported cases
Viral hemorrhagic fevers	All reported cases
yersiniosis, enteric (Yersinia spp.)	All reported cases
DISEASES AND CONDITIONS	**SUBMIT CLINICAL MATERIALS UPON REQUEST**
cryptosporidiosis (Cryptosporidium spp.)	Hold 7 days and submit if DPH requests
hemolytic uremic syndrome	Hold 7 days and submit if DPH requests
mumps	Hold 7 days and submit if DPH requests
legionellosis (Legionella spp.)	Hold 7 days and submit if DPH requests
pertussis (Bordetella pertussis)	Hold 7 days and submit if DPH requests
S. aureus with vancomycin MIC ≥ 4µg/ml	Hold 7 days and submit if DPH requests
Streptococcal infections, Group A or B (all invasive disease)	Hold 7 days and submit if DPH requests
Streptococcus pneumoniae (all invasive disease)	Hold 7 days and submit if DPH requests
varicella-zoster virus (chickenpox or shingles)	Hold 7 days and submit if DPH requests
DISEASES AND CONDITIONS	**SUBMIT CLINICAL MATERIALS WITH PRIOR APPROVAL**
all acute arborviral infections	DPH does not routinely test but submission may occur upon DPH approval
hantavirus pulmonary syndrome	DPH does not routinely test but submission may occur upon DPH approval
rabies (animal and human cases and suspected cases)	DPH does not routinely test but submission may occur upon DPH approval

[1] **"Clinical materials" is defined as: A.** *a clinical isolate containing the infectious agent for which submission of material is required; or* **B.** *if an isolate is not available, material containing the infectious agent for which submission of material is required, in the following order of preference:* ***(1)*** *a patient specimen;* ***(2)*** *nucleic acid; or* ***(3)*** *other laboratory material.*

[2] **"Invasive disease" is defined as:** isolated from blood, bone, CSF, joint, pericardial, peritoneal, or pleural fluid.

Summary of Georgia Immunization Requirements for Child Care & School Attendance

These charts are based on the ACIP Recommendations and Georgia Requirements; for more detailed information including dose schedules and minimum time intervals; please refer to Georgia Form 3231REQ and Table 1 of the ACIP General Recommendations, *MMWR*, January 28, 2011.

Required Number of Doses for Children Who Started Immunizations before Age 7 Years

Required Vaccines	2 mo	4 mo	6 mo	12 mo	15 mo	18 mo	24 mo	4-6 years	5-6 yrs of age Total Doses Required for School Entry
DTP, DT, DTaP	1	2	3	4				5	4 or 5 (if #4 dose given on or after 4th birthday, #5 not needed)
Hep B	1	2	3						3
Hib (ActhiB) or * Hib (PedvaxHIB or Comvax)	1	2	3	4					Required for Child Care and Pre-K only
	1	2		3					
**Polio	1	2	3					4	3or 4 (4th dose of polio on or after 4th birthday required for children born on or after 1-1-06)
***MMR				1				2	2
Varicella				1				2	2
PCV	1	2	3	4					Required for Child Care & Pre-K only
Hep A				1			2		2 Required for children born on or after 1-1-06

*If PedvaxHIB or Comax is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

**The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose. If 4 doses are administered prior to age 4 years a fifth dose should be administered at age 4 through 6 years. (MMWR 2009; 58(30) :829-30)

***State requirement is for 2 doses each of measles and mumps, and 1 dose of rubella vaccine. Second dose may be given before age 4 years, provided at least 4 weeks have **elapsed since first dose.**

Required Number of Doses for Children Who Started Immunizations after Age 7 Years

Required Vaccines	First Visit	1 Mo After 1st Dose	1 Mo After 2nd Dose	1 Mo After 3rd Dose	4 Mo After 1st Dose	6 Mo After Previous Dose	Total Doses Required
*Hep B	1	2			3*		3
**Polio	1	2	3			3 or 4	3 or 4
***MMR	1	2					2
Varicella	1	2					2
****Tdap/Td	1(Tdap)	2(Td)				3(Td)	3
*****MCV4	1						1

*If child received 2 doses of adult Recombivax-HB 10 mcg between the ages of 11-15 yrs and the doses are separated by at least 4 months, dose 3 is not needed.

** The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose. A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.

*** State requirement is for 2 doses each of measles and mumps, and 1 dose of rubella vaccine.

****State requirement is for 1 dose of Tdap booster for 7th grade; Td is recommended for remaining additional doses to complete series

***** State requirement is for 1 dose of MCV4 for 7th grade

(Rev. 01/2014)

Community-Acquired Methicillin Resistant Staphylococcus Aureus (CA-MRSA)

Methicillin Resistant Staphylococcus Aureus, more commonly referred to as MRSA, is a bacterial skin infection. Staphylococcus is a common bacterial pathogen found on the skin and in mucous membranes. However, MRSA is a type of staphylococcus that has become resistant to many antibiotics, making it difficult to treat.

The infection is often misdiagnosed as a spider bite due to its appearance. The infection will usually present as a painful, red, swollen and pus-filled vesicle (pustule or boil). It most often will develop at a site of visible skin trauma, such as a cut or abrasion, or in an area of the body covered with hair. Most MRSA infections can be treated with pus drainage and sometimes with or without antibiotics. However, if left untreated, MRSA may progress to serious lung, bone or blood stream infections.

MRSA is spread through direct skin-to-skin contact with an open MRSA-infected vesicle. It can also be spread through shared use of objects in contact with MRSA pus, such as gym towels, sports equipment and bandages. MRSA infections usually occur in crowded environments, environments with altered skin integrity and environments with contaminated equipment. Schools, especially sports teams, are prime targets for MRSA.

If teachers or staff observe children with open draining wounds or infections, they should refer them to the school nurse. **School health personnel should notify parents/guardians when possible skin infections are detected.**

Staff should enforce hand hygiene with soap and water or alcohol-based hand sanitizers (if available) before eating and after using the bathroom. Use standard precautions (e.g., hand hygiene before and after contact, wearing gloves) when caring for non-intact skin or potential infections. School health personnel should use barriers such as gowns, masks and eye protection if splashing of body fluids is anticipated.

If a student presents with a draining wound, he should be directed to a physician for diagnosis and treatment. A student positive for an MRSA infection must keep the wound covered with a bandage, preventing any pus from leaking outside of the bandage. The student should be instructed to wash hands with soap and water frequently and not share personal items. Unless directed by a physician, students with MRSA infections should not be excluded from attending school unless they cannot cover their wound to prevent pus drainage from spreading. Exclusion from school and sports activities should be reserved for those with wound drainage ("pus") that cannot be covered and contained with a clean, dry bandage and for those who cannot maintain good personal hygiene.

In most situations, schools do not need to be closed for a MRSA infection. School surfaces should be cleaned with an EPA cleaner effective against killing MRSA. The school nurses, principal and department of public health should work together in determining if the community and parents should be notified of an MRSA infection. Schools also may have policies that direct community notification of this issue.

Resources

Methicillin-Resistant Staphylococcus Aureus (MRSA) – CDC
cdc.gov/mrsa

MRSA – Skinsight
skinsight.com/diseaseGroups/mrsa.htm

MRSA Toolkit for Middle and High Schools – Georgia Department of Public Health
dph.georgia.gov/mrsa

Multi-drug resistant organism (MDRO or MRO)
careforceconnection/patientcare/TeachingSheetsMain/MDRO.pdf

Information and Advice about MRSA for School and Daycare Officials CDC Recommendations
cdc.gov/mrsa/community/schools/index.html

Chicken Pox & Shingles

Chickenpox (Varicella)

Chickenpox, also referred to as varicella, may present differently depending on the vaccination status of the child. In the unvaccinated child, chickenpox will result in an itchy, vesicular, blister-like rash, tiredness and fever. The child will develop greater than 200 maculopapular to vesicular lesions which start on the trunk and face and can spread to the entire body. In contrast, the vaccinated child most likely will experience few if any symptoms when exposed to chickenpox. If the vaccinated child does experience symptoms, he may have a low grade fever, less than 50 blisters which appear more macular than vesicular, and a shorter duration of illness. The vaccinated child presenting with these symptoms greater than 42 days post vaccination may be experiencing "breakthrough" disease.

Vaccination

In 2006, the Advisory Committee on Immunization Practice recommended children receive two doses of the varicella vaccine. The first dose should be given at 12 months of age. The second dose should be given at four years of age. If the child is catching up on both doses of the vaccine and is older than four years of age, the second dose should be given three months or more after the first dose. For additional information, visit "Chickenpox Vaccine Information You Need" at cdc.gov/vaccines/vpd-vac/varicella/default-basic.htm or at vaccineinformation.org/varicel/qandavax.asp.

Prior to 2006, children were not routinely given two doses of varicella vaccine. According to the Centers for Disease Control (CDC), the one dose of varicella vaccine does protect against disease; however, 15 to 20 percent of vaccinated children will report symptoms of chickenpox, and 25 to 30 percent of those reporting symptoms will report symptoms similar to those of unvaccinated children. The CDC references a clinical trial in which children who received two doses of the varicella vaccine showed 100 percent protection against severe disease and a 98 percent overall efficacy rate.

Chickenpox is highly contagious and treatment consists mainly of symptom management. It is spread through direct person to person contact or airborne transmission through an infected person's coughing, sneezing or breathing. An infected child is contagious one to two days before the rash appears and until all sores are crusted over. In the absence of crusting, a child is not contagious when no new lesions appear in 24 hours. In the unvaccinated child, this process may take up to 10 days.

The vaccinated person experiencing "breakthrough" disease (less than 50 lesions) is one-third as infectious as an unvaccinated person. However, if someone presents with more than 50 lesions, he is considered just as contagious as the unvaccinated person with chickenpox. Regardless of vaccination status, anyone with chickenpox lesions is considered infectious until all lesions have scabbed over.

Report cases electronically through the state electronic notifiable diseases surveillance system.
dph.georgia.gov/disease-reporting.

Lesions can be treated with:

- Oatmeal or baking soda baths
- Calamine lotion and Benadryl for itching
- Acetaminophen for a fever
- Plenty of fluids to prevent dehydration.

Additionally:

- Avoid hydrocortisone creams, ibuprofen and aspirin as these can lead to complications.
- Discourage the child from scratching as this can lead to secondary skin infections and scarring.

Shingles

Shingles develops from the same virus, varicella zoster virus (VZV), which causes chickenpox. Shingles is also called herpes zoster or zoster. Shingles can develop any time after someone has recovered from chickenpox because the virus stays in your body.

Shingles can occur in children, but most people who develop the disease are 50 years of age and older. Shingles presents first as an itching and tingling at the site where the rash will develop followed by fever, headache and chills. The rash can appear as a blister on one side of the face or body. It takes three to five days for the blister to scab, and the outbreak can last two to four weeks.

A serious complication of zoster is postherpetic neuralgia (PHN), which can last months or years and cause tremendous pain as well as significantly impact the person's day-to-day activities. For those who develop zoster, 10 to 18 percent will develop PHN, and 10 to 25 percent will develop eye involvement which can result in prolonged or permanent pain, facial scarring and loss of vision. Persons who have experienced either of these complications overwhelmingly report the zoster vaccine is well worth it and that they wish they had known about the zoster vaccine.

Shingles is spread only through direct person-to-person contact with an open lesion. The person is not contagious through coughing or sneezing. Someone who has not received the varicella vaccine or been exposed to chickenpox in the past may develop chickenpox from a shingles exposure; however they will not develop shingles. A person is not contagious until the blisters develop. A person with shingles should keep the blisters covered until they have scabbed over. Oral treatments for shingles are available, and the patient should consult a doctor about taking these medications.

Vaccination

A single dose of zoster vaccine is recommended for everyone over 60 years of age who has no contraindications. For additional information about the shingles vaccine, visit cdc.gov/vaccines/vpd-vac/shingles/default.htm or at vaccineinformation.org/zoster/qandavax.asp.

Resources

Centers for Disease Control and Prevention. Use of Combination Measles, Mumps, Rubella, and Varicella Vaccine Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2010; 59 (No. RR-3).
cdc.gov/mmwr/pdf/rr/rr5903.pdf

Chickenpox (Varicella)
cdc.gov/chickenpox/index.html

Supplemental and Archived Zoster (Shingles) ACIP Recommendations, *MMWR*, August 22, 2014, Vol 63, #33
cdc.gov/mmwr/preview/mmwrhtml/mm6333a3.htm

Vaccine Information Statement – Shingles
cdc.gov/vaccines/hcp/vis/vis-statements/shingles.html
immunize.org/vis/shingles.pdf

Vaccine Information Statement – Varicella
immunize.org/vis/varic07.pdf

Varicella – The Pink Book: Course Textbook – 13th Edition Second Printing April 2015
cdc.gov/vaccines/pubs/pinkbook/downloads/varicella.pdf

Diphtheria

Diphtheria is a respiratory disease caused by bacteria.

A confirmed case has not been reported in the U.S. since 2003. Approximately 0.001 cases per 100,000 population occurred in the U.S. since 1980; before the introduction of vaccine in the 1920s, incidence was 100-200 cases per 100,000 population. Diphtheria remains endemic in developing countries with low vaccination coverage. During the 1990s, the countries of the former Soviet Union reported >150,000 cases in a large epidemic.

Symptoms

Respiratory diphtheria presents as a sore throat with low-grade fever, chills and an adherent pseudomembrane of the tonsils, pharynx, or nose. Neck swelling is usually present in severe disease. Cutaneous diphtheria presents as infected skin lesions which lack a characteristic appearance.

For photos of what diphtheria looks like, please visit cdc.gov/diptheria/about/photos.html.

Complications

Airway obstruction, coma and death if not treated. Myocarditis, polyneuritis and airway obstruction are common complications of respiratory diphtheria; death occurs in 5-10 percent of respiratory cases. Complications and deaths occur less frequently from cutaneous diphtheria.

Transmission

Contact with droplets and discharge from eyes, nose, throat or skin of infected person. Rarely, transmission may occur from skin lesions or articles soiled with discharges from lesions of an infected person.

Vaccination

There are four combination vaccines used to prevent diphtheria, tetanus and pertussis: DTaP, Tdap, DT, and Td. Two of these (DTaP and DT) are given to children younger than 7 years of age, and two (Tdap and Td) are given to older children and adults.

Children should receive a primary series of four doses at 2, 4, 6 and 15-19 months of age. If the fourth dose is administered before the fourth birthday, a booster (fifth) dose is recommended at 4 through 6 years of age. The fifth dose is not required if the fourth dose was given on or after fourth birthday.

Td is a tetanus-diphtheria vaccine given to adolescents and adults as a booster shot every 10 years, or after an exposure to tetanus under some circumstances. Tdap is similar to Td but also containing protection against pertussis. Adolescents 11-18 years of age (preferably at age 11-12 years) and adults 19 through 64 years of age should receive a single dose of Tdap. For adults 65 and older who have close contact with an infant and have not previously received Tdap, one dose should be received. Tdap should also be given to 7-10 year olds who are not fully immunized against pertussis. Tdap can be given no matter when Td was last received.

(Upper-case letters in these abbreviations denote full-strength doses of diphtheria (D) and tetanus (T) toxoids and pertussis (P) vaccine. Lower-case "d" and "p" denote reduced doses of diphtheria and pertussis used in the adolescent/adult-formulations. The "a" in DTaP and Tdap stands for "acellular," meaning that the pertussis component contains only a part of the pertussis organism.) For additional information about preventing diphtheria with vaccination, please visit

vaccineinformation.org/diphtheria.

Resources

Diphtheria – CDC
cdc.gov/vaccines/vpd-vac/diphtheria/default.htm

Diphtheria – CDC BAM! Body and Mind Disease Database
cdc.gov/bam/diseases/immune/db/diptheria.html

Diphtheria – KidsHealth
kidshealth.org/parent/infections/lung/diphtheria.html

Diphtheria – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/dip.html

Gastrointestinal Diseases

Some of the most common communicable illnesses that occur in school-age children and their younger siblings are viral and bacterial gastrointestinal diseases. Some of the most common diseases caused by specific organisms are listed here. These illnesses can be seen as single cases, clusters or larger outbreaks. Symptoms of these illnesses are often most severe in the elderly, infants and young children and the immunocompromised. Effective handwashing is the most effective means of controlling the spread of these illnesses and the absenteeism that results.

Noroviruses (also called Norwalk-like viruses or calciviruses)

Symptoms of norovirus gastroenteritis usually include nausea, vomiting, diarrhea and some stomach cramping. Low-grade fever, chills, headache, muscle aches and fatigue may also be seen. The illness usually has a rapid onset and may last only one to two days. Children may experience more vomiting than adults. Dehydration may be a complication. Noroviruses are very contagious through contact with someone infected and showing symptoms, touching contaminated surfaces or objects and placing their hands in their mouths, or ingesting food or liquids contaminated with norovirus. Norovirus comes in many different strains, so it is difficult to develop long-lasting immunity. Treatment is symptomatic.

Shigellosis

Symptoms of shigellosis, a bacterial infection of the gastrointestinal tract, include mild to severe diarrhea, fever and stomach cramping. The bacteria are spread by direct contact with an infected person or by consuming contaminated food or water. Symptoms usually occur one to four days after exposure and often last five to seven days. Infected people can pass Shigella in their stool for one to two weeks. Most people will recover without treatment, but may need fluid replacement for dehydration. Antibiotics are occasionally used to treat severe cases or to shorten the carrier state. Children who cannot control their bowel habits should generally be restricted from school or day care until culture negative.

Salmonellosis

A bacterial gastroenteritis, salmonellosis, is spread by eating foods or drinking water contaminated by feces or through contact with infected people or animals (most commonly reptiles and birds). The symptoms include mild to severe diarrhea, abdominal pain, nausea, vomiting, fever and headache. The infection can also spread to the bloodstream and cause more severe illness. The salmonella organism often contaminates raw meats, eggs and unpasteurized milk and cheese products. Most people with salmonella will recover without treatment or require only fluids to prevent dehydration. Antibiotics are not usually recommended for typical cases. Most infected people can return to school or work when their stools become formed, provided they carefully wash their hands after toileting.

Escherichia coli O157:H7

A bacterial gastroenteritis caused by a specific strain of E. coli, Escherichia coli O157:H7 produces a toxin that can cause severe illness. Most strains of E. coli are harmless and live normally in the intestinal tracts of healthy humans and animals. Outbreaks have been traced to eating under cooked ground beef, unpasteurized milk or fruit juice and some raw vegetables, as well as drinking contaminated water. Person-to-person transmission can occur if infected persons do not wash their hands after toileting. Symptoms include diarrhea and abdominal cramps, and blood is often seen in the stools. Most people recover without antibiotics in five to 10 days. Hemolytic Uremic Syndrome is a rare, life-threatening complication, in which red blood cells are destroyed and the kidneys fail. Children who cannot control their bowel habits generally should be restricted from school or day care until culture negative.

Giardiasis

The parasite, Giardia, causes giardiasis, an intestinal illness. The parasite is passed through the feces of an infected person or animal and may contaminate food or water. Person-to-person transmission can occur when handwashing practices are poor. Infected persons may be asymptomatic, or symptoms can include mild or severe diarrhea, bloating, abdominal cramping or foul-smelling stool. Antibiotics are often used to treat giardiasis, but may not always be needed.

Resources

Gastrointestinal Infections and Diarrhea – Kids Health
kidshealth.org/teen/infections/intestinal/diarrhea.html#

Guidelines for the Management of Acute Diarrhea
cdc.gov/disasters/disease/diarrheaguidelines.html

Head Lice

The head louse is a parasitic insect that is found on the scalp, preferring the nape of the neck and the area behind the ears. The insect is 1-2 mm long (about the size of a sesame seed) and varies in color. Lice are usually translucent when hatched, and then develop a reddish-brown color after feeding. They do not have wings and cannot fly or jump, but they can crawl very quickly. They receive nourishment by sucking blood from the scalp. They do not thrive on pets and need human blood to survive. Little information exists on the natural lifespan of the louse. In laboratory conditions, they can live for about a month; however, lice cannot survive for more than 24 hours off of the human host.

The female louse will deposit around three to four eggs, called nits, per day. Nits are very small, gray or yellow-white ovals and are firmly attached to the hair shaft close to the scalp. Eggs hatch in about a week and mature in eight to nine days. Nits must be laid by live lice, but nits alone are not contagious. Itching, the main symptom of lice infestation, is caused by the lice sucking blood. Secondary infections can occur with scratching. Head lice can be acquired by close contact with an infested person, using infested objects such as coats and brushes, by lying on infested carpets or beds, or by resting the head against upholstered furniture used by an infested person. Fallen hairs with nits attached may also contaminate the environment. One person will usually only have 10 to 20 head lice. Head lice are not a sign of poor hygiene and can affect people of any social or economic class.

Diagnosis

The dignity and privacy of students should be preserved when screening for head lice. Diagnosis of head lice infestation (pediculosis) is made by direct inspection of the hair and scalp for the presence of crawling lice and nits. Most commonly, they will be found at the nape of the neck and behind the ears. Good lighting and a hand magnifier may be helpful. When only a few live lice are present, they may be hard to observe, but a diagnosis can be made by finding recently laid nits, which are usually firmly attached within an inch from the scalp. Nit cases, which are translucent and generally found farther out on the hair shaft, indicate empty egg cases (meaning nits have already hatched or been treated). Dandruff, droplets of hair spray and other scalp debris can sometimes be mistaken for nits. None of these substances, however, are typically attached to the hair shaft as firmly as nits. Therefore an experienced examiner is needed to confirm a diagnosis.

Examiners should be careful to prevent transmission to themselves or to others being examined. Disposable gloves may be worn, and wooden applicator sticks may be used to separate the hair. However both should be disposed of after each examination.

Treatment

Adequate control of head lice depends on:

- Education for school personnel and families
- Careful inspection of students
- Exclusion of affected students from school until treated (only if live lice are present)
- Measures to prevent transmission from one child to another

Effective treatment can be difficult and takes perseverance on the part of the parent/guardian and excellent communication and screening on the part of the school. Families should receive education about head lice, methods of treatment, referral to healthcare provider, information on how to identify head lice among family members, and instructions on how to clean bedding, personal articles, clothing and the home. Keep in mind that the family's understanding and ability to comply will be affected by factors such as emotional state, literacy level, culture, language/communication skills, previous experience, poor vision of the caregiver and condition of housing.

Control of head lice infestation is a community problem that requires the involvement of schools, healthcare providers (including pharmacists), families and local public health authorities. When an active case of head lice is found, the student does not need to be sent home early from school. The student can go home at the end of the day, be treated and return to class after appropriate treatment has begun. Nits may persist after treatment, but successful treatment should kill crawling lice. The American Academy of Pediatrics and National Association of School Nurses believe a child should not miss or be excluded from school because of head lice. Then classmates, friends and siblings should be examined as soon as possible. If a substantial number of cases are found, screening the entire school population should be considered. Routine screenings may be done at the beginning of the school year and after extended holidays such as winter and spring breaks. Notification of families prior to screenings provides an opportunity for health education.

Treatment of head lice must include simultaneous attention to the student and surrounding environment. All persons in the household and other close contacts of the student should be examined. Contacts should be treated only if evidence of lice or nits is found.

Manual Lice and Nit Removal is a necessary part of treatment, whether chemical or "natural" remedies are used separately or in combination. Some experts now believe that lice can be eradicated with very careful lice and nit removal and environmental measures, such as the following:

- Wear disposable gloves.
- Use a very bright light or sunlight to inspect the hair. The process takes a while, so having the child and the examiner seated is best.
- If the examiner is farsighted or has poor vision, a magnifying glass may be necessary.
- Remove tangles from the hair with a comb or brush.
- Divide the hair into sections, examining each section individually and then fastening it away from the rest of the hair.
- Take a one-inch section of hair and use a lice comb to comb each hair section carefully. Not all lice combs work equally well; a comb with stainless steel teeth 2-3 inches long and placed very close together works best. (Licemeister® is one brand.)
- The comb should be dipped into water after each section is combed. A toothbrush or dental floss may be used to clean the comb as well.
- Continue combing each section of hair until all is thoroughly combed and checked. Comb can be soaked in hot water after use.
- The parent should then continue to check each day, as long as re-infestation is possible (generally three weeks).

Chemical/Pesticide Shampoos and Cream Rinses can also be used with some cautions:

- Refer the child and family to their healthcare provider for instructions for treatment. If the student has no healthcare provider, he may be referred to the local health department for treatment. Several medicated shampoo and cream rinse preparations are available without a prescription. All of these products are toxic medications that need to be used with care, and only when necessary. Lice treatment should be performed by an adult, not by the child. Educate families to seek the advice and counsel of the healthcare provider or pharmacist and read all insert materials before using these products. People with chrysanthemum or ragweed allergies may be sensitive to some of these products.
- Before using the treatment, shampoo the hair vigorously with regular shampoo to soften and loosen the nits in the hair. Follow this by thoroughly combing the hair with a special fine-tooth comb. These activities can weaken and damage the nit capsules and help the medicated shampoo work. Use the shampoo or rinse as directed by healthcare provider or pharmacist, or as outlined on the product information (Nix® Crème Rinse should be put on towel-dried hair).
  - Do not get any medicated shampoo into the eyes—cover the child's eyes with a towel and instruct child to keep eyes tightly closed. Any product that does get into the eyes should be rinsed immediately with large amounts of tap water.
  - Keep these products out of reach of young children.
  - Use the products over the sink, not in the tub or shower to avoid exposure of the skin to chemicals. All topical pediculicides should be rinsed from the hair over a sink, using cool water, to minimize product absorption due to vasodilation.
  - Medicated shampoos and cream rinses should not be left on the head longer than directed on the product label (usually 10 minutes). The medicated shampoos and rinses are not preventive and should never be used unless live lice or nits are present.
  - Wash hands well after using these products.

- Using a vinegar rinse (1:1 solution of water and white vinegar) after shampooing (except with Nix Crème Rinse) may make it easier to remove nits. No known preparation kills all of the nits so some must be manually removed.
- After using the product as directed and rinsing, nits must be removed by combing the hair with a special fine-tooth comb made for this purpose. This process is easier with a very bright light, and sometimes a magnifying glass is helpful.
- Have the child put on clean clothing immediately after the treatment.
- A student should not miss more than one to two days from school because of head lice. On days two to six after initial treatment, wash the hair with regular shampoo and remove any nits that are still present.
- Re-treatment after nine days may be necessary to eradicate any lice that may have hatched from nits that were not killed or removed. Do not retreat before seven days. Follow the healthcare provider's recommendations.
- Some people have had success using oil, such as mineral or olive oil, to cover the hair, wrapping the head with a towel (not a shower cap), and leaving it on overnight. The oil is then washed out with regular shampoo. Manual removal of lice and/or nits is still necessary after this treatment. Vaseline applied to the eyebrows/eyelashes for 24 hours can treat lice in this area.
- The entire household should be checked and all infected individuals treated. If the first treatment in a family fails, then all members should be treated.
- In resistant cases, since lice can only live independent of a human host for approximately 24 hours and some objects in the environment cannot be easily cleaned, families may want to consider moving the child from his environment for 24-36 hours (i.e., stay at another relative's house for one to two days).

Environmental Measures

- Machine-washing in hot water and/or drying on the hot cycle of the dryer can disinfect many personal articles, such as bed linens, clothing and headgear. Eggs can be killed in 10-15 minutes at 130° F, and live lice at slightly lower temperatures. Allow time between loads of laundry for the water to regain its maximum water temperature. If only the dryer is available, dry articles for at least 20 minutes at the high heat setting.
- Articles that are not washable may be effectively disinfected in the dryer if the heat will not harm them.
- Dry cleaning or storing items in a tightly sealed plastic bag for 10-14 days is also effective.
- Vacuum mattresses, pillows, upholstered furniture, car seats and carpeting. Discard contents of vacuum bag immediately in plastic trash bags.
- Combs and brushes should be soaked in hot water for one hour.
- To control the spread of head lice, infested persons should not share items that come into contact with the head, neck or shoulders (e.g., combs, brushes, hats, scarves, coats, towels, stuffed animals child sleeps with).
- Handwashing and cleaning under fingernails is also important since nits could get under the nails when scratching and easily be spread to others.
- Animals in the home do not carry lice.
- Do not use dog shampoo, kerosene or other unapproved products. They do not kill lice and can be dangerous.
- Treatment should focus on the infested person and his/her personal articles. The U.S. Public Health Service does not recommend fumigation or use of insecticides in the home, school or on school buses.

Cautions from the National Pediculosis Association:

- Don't use shower caps during treatment and never leave the product on longer than directed.
- Don't use a prescription product containing the pesticide LINDANE.
- Don't use a chemical treatment on or near the eyes.
- Don't use a chemical head lice treatment on a baby.
- Don't use lice sprays.
- Don't treat individuals who are not infested.
- Don't use chemical treatments to prevent head lice.

No Nit Policies

Students diagnosed with live head lice do not need to be sent home early from school; they can go home at the end of the day, be treated, and return to class after appropriate treatment has begun. Nits may persist after treatment, but successful treatment should kill crawling lice.

Students who return to school after treatment should be examined (by clinic personnel, principal or designee) before returning to class and weekly for three weeks. Evidence of re-infestation should be a time to review with the parents the measures to be taken at home, including environmental measures. Many schools have put "no-nit" policies in place and send children home again if all nits have not been removed with the treatment. The American Academy of Pediatrics and National Association of School Nurses discourage such policies and believe a child should not miss or be excluded from school because of head lice. Rechecks are appropriate, and school nurses should guide families through efforts to treat and get rid of nits.

Resources

Dealing with Head Lice: A Practical Approach for Schools, Parents and Communities – Kansas Department of Health and Environment
eckan.org/wp-content/uploads/2017/10/Dealing_With_Head_Lice_For_Schools_Parents_and_Communities-1.pdf

Head Lice – AAP Clinical Report
pediatrics.aappublications.org/content/126/2/392.short

Head Lice – CDC
cdc.gov/parasites/lice/head/index.html

Head Lice – KidsHealth
kidshealth.org/parent/infections/common/head_lice.html

Infestations of Public Health Importance – Georgia Department of Public Health
dph.georgia.gov/infestations

National Pediculosis Association
headlice.org

Parent's Guide to Head Lice - American Academy of Pediatrics, 2016

Refer to Chapter 11, For Families, for Patient and Family Education Sheets about Head Lice.

Head Lice Management in the School Setting

Position Statement

National Association of School Nurses

SUMMARY

It is the position of the National Association of School Nurses (NASN) that the management of head lice (Pediculus humanus capitis) in the school setting should not disrupt the educational process. Leadership provided by the registered professional school nurse (hereinafter referred to as the school nurse) can impact reduction of the stigma associated with head lice by providing accurate health education including anticipatory guidance to the school community and implementing evidence-based strategies for the management of head lice in schools. Evidence-based strategies include abandoning "no-nit" school policies, allowing children to remain in class and participate in school-sponsored activities when live lice or nits (the eggs of head lice) are found on their heads, notifying parents/caregivers at the end of the school day when findings indicate the presence of a head lice infestation, and educating parents/caregivers about evidence-based treatment options.

BACKGROUND

In the United States, head lice infestations are most common among preschool and elementary school-age children and their household members regardless of socioeconomic status and hygienic living conditions (Centers for Disease Control and Prevention [CDC], 2013a). According to research head lice infestations predominantly affect the age group of 3-11 years (Frankoswski & Bocchini, 2010), with an estimated 6 million to 12 million cases annually (CDC, 2013a). A 2004 study estimated annual direct and indirect costs associated with head lice infestations and recent treatment costs at $1 billion (Hansen & O'Hayer, 2004). "No-nit" policies that require a child to be free of nits before he or she can return to school lack evidence of being effective, result in unnecessary absenteeism, and may violate affected children's civil liberties (Pontius, 2014; CDC, 2013a). Unnecessary absenteeism leads to missed learning opportunities for the student and potentially lost family wages due to loss of parent/guardian workdays (Pontius, 2014).

Head lice are not known to cause disease; however, secondary bacterial infection of the skin resulting from contaminated scratching and related lesions can occur. Research has shown that the survival of head lice when not on the head is usually less than one day, and the eggs can only hatch when incubated by body heat found near the scalp (Devore et al., 2015; CDC, 2013c). Transmission occurs primarily through head-to-head contact and infrequently through indirect contact with shared personal belongings.

Even with this knowledge, the presence of head lice can negatively affect families and schools. For the student and family there can be significant social stigma and caregiver strain (Gordon, 2007). For the school, when evidence-based policies and intervention strategies are not in place, head lice can significantly disrupt the education process (CDC, 2013c; Pontius, 2014).

In the past, many schools with "no nit" policies expended innumerable hours and resources in attempts to eradicate head lice infestations. Studies have shown that control measures such as, mass screenings for nits ,have not been shown to have a significant effect on the incidence of head lice in a school community, nor have they shown to be cost-effective (Devore et al., 2015; Meinking & Taplin, 2011; CDC, 2013a). Communication between school personnel and parents/caregivers highlighting cases of head lice (e.g., "head lice outbreak letters") has been shown to increase community anxiety, increase social stigma causing embarrassment of affected infested students, and puts students' rights to confidentiality at risk (Gordon, 2007; Pontius, 2014).

Head lice treatment success is variable, adding to confusion and frustration among students, families, and members of the school community. Some children develop persistent head lice, which requires concentrated efforts to address treatment as well as the stress experienced by the child and family (Gordon, 2007). Head lice in some communities have developed resistance to common over-the-counter treatments, resulting in the need for a more individualized approach to management by a healthcare provider (Yoon et al., 2014; Meinking et al., 2002;

Devore et al., 2015). Treatment failures can also result from initial misdiagnosis, non-adherence to a treatment protocol, a new infestation acquired after treatment, or the lack of use of an ovicidal product (Devore et al., 2015; Pontius; 2014; Pollack, Kiszewski, & Spielman, 2000; CDC, 2013b).

RATIONALE

Evidence-based strategies for the management of head lice in the school setting can reduce the incidence of infestations, the social stigma and caregiver strain experienced by students and families, and the negative impact on students' education. The school nurse can provide leadership within the school community to effectively manage head lice by:

- Attaining knowledge and competency that reflect current evidence-based school nursing practice related to the management of head lice (American Nurses Association & National Association of School Nurses [ANA & NASN], 2011).
- Providing accurate health education to the school community focused on dispelling common myths about head lice (e.g., incidence, life cycle of the head louse, mode of transmission, importance of regular surveillance at home, recommended evidence-based treatment options, care of the environment) (ANA & NASN, 2011 Pontius, 2014).
- Advocating and providing rationale for the elimination of mass school screenings for head lice (Devore et al., 2015; CDC, 2013a).
- Educating families about how to assess their children for suspected head lice (Devore et al., 2015).
- Providing privacy when conducting student health assessment for suspected or reported cases of head lice (ANA & NASN, 2011).
- Returning affected students to class or other school sponsored activities with instruction to avoid head-to-head contact (Pontius, 2014). If live lice or nits are found,
    - Eliminating classroom-wide or school-wide family head lice notification.
    - Notifying parents/caregivers at the end of the school day to teach about evidence-based treatment options and steps to follow.
- Advocating for and providing rationale for the abandonment of "no-nit" school policies that require a child to be free of nits before he or she can return to school (Devore et al., 2015; Pontius, 2014).
- Educating parents/caregivers about the chosen evidence-based treatment option, the importance of adherence with the treatment protocol, and the importance of reassessment for recurrence (Devore et al., 2015; Pontius, 2014).

CONCLUSION

The school nurse is the health professional who provides leadership for the school community to implement evidence-based strategies for the management of head lice in the school setting. The role of the school nurse includes the following (Pontius, 2014; Devore et al., 2015; CDC, 2013a):

- Provide accurate health education to the school community about the etiology, transmission, assessment, and treatment of head lice;
- Advocate for school policy that is more caring and less exclusionary (i.e., elimination of the "no-nit" school policies);
- Implement intervention strategies that are student-centered;
- Support the current treatment recommendation of the American Academy of Pediatrics and CDC; and
- Participate in research that evaluates the effectiveness of head lice policies and educational programs.

It is unlikely that all head lice infestations can be prevented. Parents/caregivers will benefit from receiving support from the school nurse about the importance of regular surveillance at home, choosing and adhering to the protocols of evidence-based treatment recommendations, and educating to dispel head lice myths. The education mission of schools will be supported by implementing evidence-based policies and strategies under the guidance of the school nurse. The burden of unnecessary absenteeism to the students, families, and communities far outweighs the perceived risks associated with head lice.

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Adopted: 1999
Revised: 2004, January 2011, January 2016

This document replaces the position statement titled *Pediculosis Management in the School Setting, 2011.*

Suggested citation: National Association of School Nurses. (2016).*Head lice management in the school setting* (Position Statement). Silver Spring, MD: Author.

All position statements from the National Association of School Nurses will automatically expire five years after publication unless reaffirmed, revised, or retired at or before that time.

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Head Lice Notification Letter to Parents

Date: _____

Dear Parent/Guardian,

We believe your child has head lice. This means either live adult lice or nits (eggs) were seen in your child's hair. Head lice are very common in school children, even when the hair is clean. They do not carry any disease. However, head lice can spread easily from child to child, and they should be treated at once so they do not spread.

We are also sending some information for families that you should read. The letter tells you about head lice and how they are treated. Talk to your child's healthcare provider, your pharmacist or the Health Department for the most up-to-date advice on treatment for your child.

Your child must be treated so lice does not spread to classmates. Your child should return to school as soon as appropriate treatment has begun. School clinic or office personnel will check your child when he or she returns to school to make sure lice and nits have been removed. If you have any other questions about head lice, please call your child's healthcare provider or the health department.

_____ _____

Signature of Principal/ School Nurse/Clinic Personnel Phone #

Note: Attach "Head Lice (Pediculosis)" teaching sheet found in Chapter 4.

Head Lice Notification to Parent/Guardian

SPANISH

Fecha (Date)_____

Estimados padres / apoderado o guardián legal (Dear Parent or Guardian),

Se cree que su niño tiene piojos en la cabeza. Cuando hay evidencia de piojos se pueden notar piojos adultos o huevos de piojos en la cabeza. Los episodios de piojos en la cabeza son muy comunes en los niños de edad escolar. Los piojos en la cabeza no contienen ninguna enfermedad y su presencia no indica la falta de higiene del niño. Sin embargo, los piojos se pueden pasar muy fácilmente de un niño a otro y necesitan ser tratados inmediatamente para evitar que se contagien a otros niños en la escuela.

Le adjuntamos una hoja de información para las familias la cual deben leer cuidadosamente. Esta carta describe los consejos para el tratamiento e información general sobre los piojos en la cabeza. También recomendamos que usted consulte con el proveedor de cuidados de salud de su niño, con su farmaceuta o con el Departamento de Salud para obtener información más corriente y recomendaciones para el tratamiento de su niño.

Su niño debe ser tratado para que los piojos no se propaguen a los compañeros de clase. Su niño debe regresar a la escuela tan pronto como el tratamiento apropiado haya comenzado. La clínica de la escuela o el personal de la escuela revisará a su niño cuando regrese a la escuela para asegurarse que los piojos y sus huevos hayan sido destruidos. Si tiene alguna pregunta, por favor llame a la escuela y hable con alguien de la oficina o clínica.

_____

Firma del Rector (Signature of Principal)/Enfemera/Personal de enfermería

_____

Teléfono #

Hepatitis A, B, and C

Viral hepatitis is a disease caused by viruses that damage the liver. This damage causes the liver to become inflamed, swollen and tender. Hepatitis A, Hepatitis B and Hepatitis C are the most common forms of viral hepatitis. Hepatitis A causes no long-term liver damage and is rarely fatal. Having the disease usually produces lifelong resistance to future infection. One third of all Americans are estimated to have been infected with Hepatitis A at some time in their lives. Hepatitis B and Hepatitis C are the most dangerous forms of viral hepatitis. They can last a lifetime and cause liver failure, liver cancer and even death. Liver damage due to Hepatitis C is the leading cause of liver transplants in the United States. Vaccines are available for Hepatitis A and Hepatitis B, but not for Hepatitis C.

Incidence in the United States

Hepatitis A

3,000 cases each year (estimated)

Hepatitis B

19,000 cases each year/ 1.2 million cases chronically infected

Hepatitis C

22,000 cases each year/ 3.2 million cases chronically infected

Transmission

Hepatitis A – fecal-oral, food/waterborne outbreaks, blood-borne (rare)

Hepatitis B – blood-borne, sexual/household contact (sharing razors, toothbrushes, etc.)

Hepatitis C – primarily blood-borne, also sexual contact, prenatal

Symptoms

A viral hepatitis infection can be hard to detect because often there are no visible signs or symptoms. When symptoms are present, the virus of Hepatitis A, B and C can cause flu-like symptoms, fatigue, loss of appetite, abdominal pain, intermittent nausea and jaundice. All forms of hepatitis, when symptomatic, cause similar symptoms, which may include anorexia, malaise, right upper quadrant abdominal discomfort, jaundice, nausea or vomiting. These symptoms cannot be distinguished clinically, and infected individuals may be asymptomatic.

Risk Groups

Hepatitis A

Household/sexual contacts of infected persons; persons, especially children, living in or traveling to geographic areas with increased rates of Hepatitis A; men who have sex with men; injecting and non-injecting drug users.

Hepatitis B

Persons with multiple sex partners or diagnosis of a sexually transmitted disease; men who have sex with men; sexual/household contacts of infected persons; IV drug users; infants born to infected mothers; infants/children of immigrants from areas with high rates of HBV (Hepatitis B virus) infection; hemodialysis patients; healthcare and public safety workers.

Hepatitis C

IV drug users; recipients of clotting factors made before 1987; recipients of transfusions or donated tissues before July 1992; hemodialysis patients; people with undiagnosed liver problems; infants born to infected mothers; healthcare and public safety workers; sexual contacts of infected persons; persons with multiple sex partners.

Diagnosis

Viral hepatitis can be diagnosed through routine blood tests.

Prevention

Hepatitis A

Good handwashing and hygiene, proper disposal of dirty diapers, proper disinfection of changing tables, avoiding potentially contaminated food or water. Vaccination with the full, two-dose series of Hepatitis A vaccine is the best way to prevent Hepatitus A infection. People traveling to countries where Hepatitis A is common should take the Hepatitis A vaccine four weeks before leaving for their trip.

Two doses of Hepatitis A (HepA) vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 to 18 months later. HepA vaccination may be given to any child 12 months and older to protect against Hepatitis A. If you are born on or after 1/1/06, a two-dose series is required. For more information on Hepatitis A and its vaccine, visit cdc.gov/hepatitis/HAV/index.htm or at immunize.org/catg.d/p4204.pdf.

Hepatitis B

Children and Adolescents – all children should get their first dose of Hepatitis B vaccine at birth and complete the three-dose vaccine series by 6-18 months of age. Three doses of the Hepatitis B vaccine is required for school entry. All children and adolescents younger than 19 years of age who have not yet gotten the vaccine should also be vaccinated. "Catch-up" vaccination is recommended for children and adolescents who were never vaccinated or who did not get the entire vaccine series.

Adults – any adult who is at risk for Hepatitis B virus infection or who wants to be vaccinated should talk to a health professional about getting the vaccine series.

If a pregnant woman has Hepatitis B, she can pass the infection to her baby during birth. This can be prevented through a series of Hepatitis B vaccinations starting at birth and the administration of a HBIG (Hepatitis B immune globulin) shot. The infant should receive the HBIG shot and the first dose of Hepatitis B vaccine within 12 hours of birth. Two or three additional shots of vaccine are needed over the next 1–15 months to help prevent Hepatitis B. Without vaccination, babies born to women with Hepatitis B virus infection can develop chronic infection, which can lead to serious health problems.

For more information on Hepatitis B and the vaccine series which is three to four shots given over a six-month period, visit cdc.gov/hepatitis/hbv/bfaq.htm.

Hepatitis C

Screening of blood/organ, tissues donors; counseling to reduce and or modify high risk practices; awareness that Hepatitis C can be passed through blood-to-blood contact such as non-sterile tattoos, syringes, cuts, etc. At this time, no Hepatitis C vaccine is available. For more information on Hepatitis C, visit cdc.gov/hepatitis/HCV/index.htm.

Treatment

Hepatitis A

No specific treatment for acute hepatitis exists other than symptomatic care. Once you have had Hepatitis A, the body builds a natural resistance to it. Once the disease runs its course, a person is unlikely to get Hepatitis A again.

Hepatitis B

Ordinarily, Hepatitis B is only treated if the infection is chronic and causing ongoing liver damage. Five drugs have been approved by the FDA for treatment of chronic Hepatitis B: Intron A® (interferon-alpha), lamivudine ,adefovir, entecavir and tenofovir.

Hepatitis C

Ordinarily Hepatitis C is only treated if the infection is chronic and causing ongoing liver damage. Presently, interferon-alpha with a combination of antiviral drugs is the treatment of choice. New drugs have recently been approved in adults, and clinical trials are ongoing.

Resources

American Liver Foundation – Hepatitis C
liverfoundation.org

Diseases and Vaccines Information – Immunization Action Coalition
immunize.org/vaccines

Georgia Hepatitis Immunization Requirements
dph.georgia.gov/sites/dph.georgia.gov/files/Immunizations/Summarychart3231REQ%20rev%2001232014_2.pdf

Pediatric Hepatitis Report – Parents of Kids with Infectious Diseases
pkids.org/diseases/hepatitis/pediatric_hepatitis_report.html

Viral Hepatitis – CDC
cdc.gov/hepatitis

Impetigo

Impetigo is a common skin infection caused by streptococcal or staphylococcal bacteria, which usually enter the body through an injured area of skin, such as a cut or scratched mosquito bite. Impetigo frequently appears on the face, especially around a child's nose and mouth. It can be spread easily by the individual's hands to other parts of the body. Impetigo starts as a red sore that quickly ruptures, oozes infected fluid for a few days and then forms a yellowish-brown crust that looks like honey or brown sugar. The disease is highly contagious, and scratching or touching the sores is likely to spread the infection to other parts of the body as well as to other people. It is contagious as long as lesions are oozing. The scabs are also infectious. This infection is seen most often in the warm months.

Impetigo is usually treated with soap and water, an antibiotic ointment and sometimes an oral antibiotic when the infection is spreading. Prevention involves careful cleaning of any skin injury and routine handwashing. Any contact with the lesions requires diligent handwashing to prevent the spread of the infection. Students suspected of having impetigo should wash the rash area with soap and water and, if possible, cover the area lightly. Parents should be notified, but the child does not need to be sent home in the middle of the day. Affected students and staff may return to school after treatment is initiated, and should keep the lesions covered until completely dry.

A parent should contact their child's doctor if:

- The sores have not started to heal after three days of treatment.
- Child develops a temperature over 100.3°F.
- You see signs of cellulitis (deeper skin infection) or an abscess such as:
  - Increasing redness or swelling
  - Red streaks
  - Tenderness
  - Affected area feels hot.
- A change in urine color is noted.

Influenza

Influenza (Seasonal Flu)

Influenza (flu) is a viral infection characterized by high fever, chills, congestion, coughing and muscle aches. It is most often seen from October through May, with peaks in January or February.

The flu is spread by respiratory droplets in the air and on surfaces which are touched. People are contagious from a few days before symptoms develop and for several days after the illness begins, so the virus is likely to spread before it is even recognized. Most people with the flu feel too sick to go to work or school during parts of the illness.

Healthcare providers usually recommend treatment with rest and lots of fluids, and antiviral medication may be used for anyone over the age of one, but must be taken within 24 hours of getting the flu in order to be effective. Antiviral medications shorten the length and severity of illness. When a person feels well enough to resume normal activities and has been without fever for 24 hours, he/she can return to work or school.

Vaccination

Recommendations for the flu season change each year. Children 6 months through 8 years of age receiving influenza vaccine for the first time should receive two doses administered at least 28 days apart. As a healthcare provider, it is important to educate yourself each year about which flu vaccines are recommended and which vaccines are contraindicated for certain groups. Vaccination during the flu season should begin in October and continue through May.

Each year, everyone 6 months of age and older should receive a flu vaccine. For additional information on preventing influenza with vaccination, please visit vaccineinformation.org/flu/qandavax.asp.

Seasonal Influenza Resources

FluView: A Weekly Influenza Surveillance Report
cdc.gov/flu/weekly

Prevention and Control of Influenza with Vaccines
cdc.gov/mmwr/preview/mmwrhtml/rr5908a1.htm

Recommendations for Prevention and Control of Influenza in Children, 2014–2015 – American Academy of Pediatrics
pediatrics.aappublications.org/content/134/5/e1503.full.pdf

Seasonal Flu – Information for Schools and Childcare Providers
cdc.gov/flu/school/index.htm

Seasonal Influenza – CDC
cdc.gov/flu

Seasonal Flu (Influenza) – GDPH
dph.georgia.gov/seasonal-flu-influenza

Vaccination and Vaccine Safety – Flu.gov
cdc.gov/flu/protect/vaccine/vaccinesafety.htm

Pandemic Flu

Pandemic flu is virulent human flu that causes a global outbreak, or pandemic, of serious illness. Currently, no pandemic flu exists. A flu pandemic occurs when a new influenza virus emerges for which people have little or no immunity and for which there is no vaccine. The disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in a very short time.

It is difficult to predict when the next influenza pandemic will occur or how severe it will be. Wherever and whenever a pandemic starts, everyone around the world is at risk. Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus but cannot stop it. Avian (or bird) flu (AI) is caused by influenza viruses that occur naturally among wild birds. Low pathogenic AI is common in birds and causes few problems. Highly pathogenic H5N1 is deadly to domestic fowl, can be transmitted from birds to humans, and is deadly to humans. Virtually no human immunity exists, and human vaccine availability is very limited.

Pandemic and Avian Flu Resources

About Pandemics
cdc.gov/flu/pandemic-resources/index.htm

Avian Flu – CDC
cdc.gov/flu/avianflu

Georgia Pandemic Influenza Preparedness Information
dph.georgia.gov/georgia-pandemic-influenza-preparedness-information

Pandemic Influenza Planning Checklist – School District (K-12)
pandemicflu.gov/planning-preparedness/school/schoolchecklist.html
flu.gov/planning-preparedness/school/schoolchecklist.pdf
flu.gov/planning-preparedness/school

World Health Organization (WHO)
who.int/csr/disease/avian_influenza/en

General Influenza Resources

Influenza
lung.org/lung-health-and-diseases/lung-disease-lookup/influenza

Families Fighting Flu
familiesfightingflu.org

Flu Alert: Prevention and Treatment Information
choa.org/medical-services/wellness-and-preventive-care/flu

Flu Information for Schools – Q & A
cdc.gov/flu/school/qa.htm

Guidelines for Vaccinating Pregnant Women
cdc.gov/vaccines/pregnancy/hcp/guidelines.html

Immunizing Healthcare Workers Against Influenza: Best Practices Report
nfid.org/infectious-diseases/influenza-and-healthcare-professionals

Influenza – The Pink Book: Course Textbook – 12th Edition Second Printing (May 2012)
cdc.gov/vaccines/pubs/pinkbook/flu.html

National Influenza Vaccine Summit
preventinfluenza.org

Prevent Childhood Influenza
preventchildhoodinfluenza.org

School Planning
flu.gov/planning-preparedness/school/index.html

Measles

Measles is a highly contagious respiratory disease caused by a virus. The disease of measles and the virus that causes it share the same name. The disease is also called rubeola. The measles virus normally grows in the cells that line the back of the throat and lungs. The virus can live on surfaces for two hours after an infected person has left the room.

Before the measles vaccine, nearly all children got measles by the time they were 15 years of age. Each year in the United States about 450-500 people died because of measles, 48,000 were hospitalized, and 4,000 suffered encephalitis (swelling of the brain).

Worldwide, there is a current epidemic of measles due to an upward trend to not vaccinate children, even in developed countries. The United States is currently experiencing a large, multi-state outbreak of measles, most of these cases are in un- or under-immunized persons.

The CDC urges healthcare professionals to consider measles when evaluating patients with febrile rash and ask about a patient's vaccine status, recent travel history and contact with individuals who have febrile rash illness.

In the first half of 2019, the United States has had more than 1,200 measles infections. This is the highest number of measles cases reported in the United States since 1992. The majority of the measles infections have occurred in people who have declined the MMR vaccine. The only way to reverse this trend is to restore population immunity by identifying age-eligible children, discussing the benefits of immunization, and administering a MMR vaccine.

Symptoms

The symptoms of measles generally begin about 7-14 days after a person is infected, and include:

- Blotchy rash
- Fever
- Cough
- Runny nose
- Red, watery eyes (conjunctivitis)
- Feeling run down, achy (malaise)
- Tiny white spots with bluish-white centers found inside the mouth (Koplik's spots).

A typical case of measles begins with mild to moderate fever, cough, runny nose, red eyes and sore throat. Two or three days after symptoms begin, tiny white spots (Koplik's spots) may appear inside the mouth. The incubation period ranges from seven to 21 days.

Three to five days after the start of symptoms, a red or reddish-brown rash appears. The rash usually begins on a person's face at the hairline and spreads downward to the neck, trunk, arms, legs, and feet. When the rash appears, a person's fever may spike to more than 104°F. After a few days, the fever subsides and the rash fades.

For photos of what the measles rash looks like, please visit cdc.gov/measles/about/photos.html.

Complications

About 30 percent of measles cases develop one or more complications, including:

- **Pneumonia**, which is the complication that is most often the cause of death in young children.
- **Ear infections** occur in about one in 10 measles cases and permanent loss of hearing can result.
- **Diarrhea** is reported in about 8 percent of cases.

These complications are more common among children under 5 years of age and adults over 20 years old.

Even in previously healthy children, measles can be a serious illness requiring hospitalization. As many as one out of every 20 children with measles gets pneumonia, and about one child in every 1,000 who get measles will develop encephalitis. (This is an inflammation of the brain that can cause permanent brain damage.) For every 1,000 children who get measles, one or two will die from it. Measles also can make a pregnant woman have a miscarriage, give birth prematurely, or have a low-birth-weight baby.

In developing countries, where malnutrition and vitamin A deficiency are common, measles has been known to kill as many as one out of four people. It is the leading cause of blindness among African children. Measles kills almost 1 million children in the world each year.

Transmission

Measles spreads through the air by breathing, coughing or sneezing. It is so contagious that nine out of 10 susceptible persons with close contact to an infected patient will develop the disease. Measles is highly contagious and can be spread to others from four days before to four days after the rash appears.

Measles has been passed on to others in busy settings such as childcare centers, schools, healthcare facilities and doctors' offices. Measles can stay active for a couple of hours. If active measles virus is put in a room with people who have not received their measles vaccine, most everyone in that room will get measles.[3]

The virus lives in the mucus in the nose and throat of the infected person. When that person sneezes or coughs, droplets spray into the air. The droplets can get into other people's noses or throats when they breathe or put their fingers in their mouth or nose after touching an infected surface. The virus can live on infected surfaces for up to two hours and spreads so easily that people who are not immune will probably get it when they come close to someone who is infected.

Measles is a disease of humans; measles virus is not spread by any other animal species.

Vaccination

Measles can be prevented by the combination MMR (measles, mumps, and rubella) vaccine. Widespread use of measles vaccine has led to a greater than 99 percent reduction in measles cases in the United States compared with the pre-vaccine era,. For additional information about vaccinating to prevent measles, please visit vaccineinformation.org/measles/qandavax.asp.

References

Overview of Measles Disease
cdc.gov/measles

Measles – United States, 2014-2015
cdc.gov/mmwr/preview/mmwrhtml/mm6322a4.htm

Measles Cases and Outbreaks 2019
cdc.gov/measles/cases-outbreaks.html

Resources

Measles – Immune Platoon Disease Database
cdc.gov/bam/diseases/immune/db/kreeps.html
cdc.gov/bam/diseases/immune/index.html

Measles – KidsHealth
kidshealth.org/parent/infections/bacterial_viral/measles.html

Measles – The Pink Book: Course Textbook - 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/meas.html

Meningitis

There are two major causes of meningitis: **viral and bacterial**. The treatment and follow-up for the different types vary. **When students present with suspected meningitis, it is important to act quickly.**

Report meningitis to Georgia Department of Public Health immediately at 1-866-PUB-HLTH (866-782-4584) or call your local health department. For more information about reporting requirements, please visit dph.georgia.gov/disease-reporting.

Viral Meningitis

Viral meningitis is a viral infection causing inflammation of the membranes surrounding the brain and spinal cord. It is more common than bacterial meningitis and is rarely serious, but it can make the child miserable. Viral meningitis can be caused by many different viruses. Seventy percent of infections occur in children under the age of 5. Symptoms are fever, headache, neck stiffness, nausea and vomiting, and possibly a generalized rash. Recovery is usually complete. Seasonal outbreaks, especially in winter months, are not unusual. Treatment of contacts is not necessary for this type of meningitis. The child can usually return to school as soon as the symptoms are gone. For information on viral meningitis, visit cdc.gov/meningitis/viral.html.

Bacterial Meningitis

Bacterial Meningitis is a serious infection of the membranes surrounding the brain and spinal cord and has a reported incidence of about 4,100 cases and 500 deaths per year in the United States. The bacteria are spread through the exchange of respiratory and throat secretions (i.e., by kissing.). It can be caused by several different bacteria:

- *Haemophilus influenzae* type b (Hib disease)
- *Neisseria meningitidis* (meningococcal disease)
- *Streptococcus pneumoniae* (pneumococcal meningitis)

***Neisseria meningitidis* and *Streptococcus pneumoniae* are the leading causes of bacterial meningitis, which can occur as isolated cases or epidemics.**

Additionally, in newborns, group B *streptococcus* and other bacteria, such as E. coli, can cause meningitis:

- Group B *streptococcus* – cdc.gov/groupbstrep/about/index.html
- *Escherichia coli* (abbreviated as *E. coli*) – cdc.gov/ecoli/general/index.html
- Listeria monocytogenes – cdc.gov/listeria/index.html

Haemophilus influenzae type b

Haemophilus influenzae type b (Hib disease) is caused by the organism Haemophilus influenzae (not to be confused with the disease influenza or "flu," a respiratory illness caused by a virus). Before the 1990s, Haemophilus influenzae type b was the leading cause of bacterial meningitis in children younger than 5 years of age. The widespread use of the Hib vaccine series has made this type of meningitis very rare among children. Child Care and Pre-K children should receive a primary series of Hib vaccine of two to three doses depending on type of vaccine used. This disease should be reported to the Public Health Department immediately. Identification of young children who are household or childcare contacts of patients with Hib invasive disease and assessment of their vaccination status may help identify persons who should receive antimicrobial prophylaxis or who need to be immunized. For the most current information on Hib disease and the Hib vaccine, visit cdc.gov/hi-disease/index.html.

Neisseria meningitidis (meningococcal disease)

Neisseria meningitidis (meningococcal disease) is an acute bacterial infection. The main clinical manifestations of the disease are meningitis (infection of the fluid and linings around the brain and spinal cord) and meningococcal sepsis (severe illness with presence of bacteria in the blood). Meningococcal disease rates rise during adolescence and peak between the ages of 16 to 21.

Early diagnosis of meningococcal disease is critical, as it is known for causing rapid overwhelming infections in otherwise healthy individuals in a matter of hours. **Immediate medical attention and treatment is necessary to prevent permanent damage**. Symptoms are usually the same as for viral meningitis which is characterized by high fever, headache and stiff neck. Early diagnosis can be tricky as symptoms can be mistaken for those of the flu. A pinpoint red or purple rash called petechiae rash is often present in cases that progress to meningococcemia. Sensitivity to light and changes of the child's mental status are also often seen.

Since it is impossible for the school nurse to diagnose meningitis in the school setting, a student with high fever and a combination of the above symptoms, should be seen at the emergency room immediately by calling an ambulance.

If a potential meningococcal disease case occurs, it can cause great concern in a school community. Laboratory confirmation is necessary for diagnosis to be made. Testing will be initiated in the emergency room. Suspected cases of meningitis should be reported to state or local health departments immediately to assure follow-up of close contacts and recognize outbreaks.

The Health Department will investigate all contacts and will decide if prophylactic medication is necessary and for whom. The Health Department will dictate whether or not letters will be sent out to the school. Its staff will usually write the letter(s) for distribution. You may be asked to help identify contacts to the student who is ill and gather contact information. Close contacts in this case are defined as persons sharing a household, sleeping quarters, eating utensils or secretions.

Meningococcal bacteria are spread during close contact by droplets of saliva from an infected patient or an asymptomatic carrier. Droplets may spread through kissing, sharing eating utensils or drinks, or possibly by cigarettes, toothbrushes, lip balm, etc. The bacteria are not as contagious as pathogens that cause the common cold or the flu, and therefore are not spread through casual contact (i.e., by simply being in the same room or breathing the same air). If the affected child is in day care, where control of secretions is difficult, the children in the classroom may need to receive prophylaxis. Close contacts, in the same household, day care center or classroom, should be watched for early signs of the disease. The student with meningitis may return to school when the physician has released the student from care.

For the most update and current information on meningococcal disease and the vaccines, please visit the following websites:

Meningococcal Disease – CDC

cdc.gov/meningococcal/index.html

Meningococcal Disease – The Pink Book: Course Textbook – 13th Edition (April 2015)

cdc.gov/vaccines/pubs/pinkbook/downloads/mening.pdf

National Meningitis Association

nmaus.org

Neisseria meningitides – Georgia Department of Public Health

dph.georgia.gov/neisseria-meningitidis

Streptococcus pneumoniae (pneumococcal disease)

Streptococcus pneumoniae (pneumococcal disease) is the leading cause of meningitis in the country, hitting children under one year of age the hardest.

Vaccination is the mainstay of prevention for pneumococcal meningitis.

"All infants beginning at two months of age should receive a four-dose series of vaccine; catch-up vaccination is recommended for children younger than age 5 years who did not receive vaccine on schedule. In addition, all healthy children younger than 5 years who have completed an age-appropriate schedule of vaccination with the former PCV7 vaccine are recommended to receive one additional dose of PCV13 as are children with specific medical conditions who haven't yet reached their 6th birthday." (Acquired from vaccineinformation.org/pneumchild/qandavax.asp on September 21, 2012. We thank the Immunization Action Coalition.)

According to the CDC, "There are medicines to treat pneumococcal bacteria, but these do not always prevent damage from the infection and some bacteria have become resistant to those medicines. That means the medicines can't kill the bacteria. Preventing pneumococcal infection is the best option."

For the most update and current information on pneumococcal disease and the vaccines, please visit the following websites:

Pneumococcal Disease – The Pink Book: Course Textbook – 13th Edition (April 2015)

cdc.gov/vaccines/pubs/pinkbook/pneumo.html

Pneumococcal Vaccination – CDC

cdc.gov/vaccines/vpd-vac/pneumo/default.htm

cdc.gov/vaccines/vpd/pneumo/public/indiex.html

Pneumoccocal Vaccination – Immunization Action Coalition

vaccineinformation.org/pneumchild/qandavax.asp

College Vaccine Requirements

College students coming from diverse immune backgrounds, carrying diverse bacterial flora, and living in close dormitory quarters are at increased risk for meningococcal disease. The A.C.I.P. (Advisory Committee on Immunization Practices) recommends that college students, particularly freshmen living in dormitories, be educated about meningococcal disease and the availability of a vaccine. Some colleges also now require the vaccine.

The state of Georgia passed a law (HB 521) which went into effect January 1, 2004. This law requires all post-secondary institutions in the state to provide information to new students living in campus housing about meningococcal disease, the risk and the availability of a vaccine. Students and/or parents are required to sign a document stating the meningococcal vaccine has been received or that the information has been reviewed and the student declines immunization. Students who wish to be vaccinated should be referred to local healthcare providers who give the vaccine.

For adolescents who receive their first dose of the meningococcal vaccine between ages 11 and 14, they are required to receive a second dose when they are 16 years old.

CDC Meningococcal Vaccine – cdc.gov/vaccines/who/teens/vaccines/mening.html

Resources

Meningitis Homepage – CDC

cdc.gov/meningitis/index.html

Mumps

Mumps is a contagious disease that is caused by the mumps virus. 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. Anyone who is not immune from either previous mumps infection or from vaccination can get mumps.

Before the routine vaccination program was introduced in the United States, mumps was a common illness in infants, children and young adults. Because most people have now been vaccinated, mumps has become a rare disease in the United States.

Currently, there is no specific treatment for mumps. Supportive care should be given as needed. If someone becomes very ill, he should seek medical attention. If someone seeks medical attention, the person or their parents, in the case of a child, should call their doctor in advance so that the patient doesn't have to sit in the waiting room and possibly infect other patients.

Symptoms

- Fever
- Headache
- Muscle aches
- Tiredness
- Loss of appetite
- Swollen and tender salivary glands under the ears or jaw on one or both sides of the face (parotitis)

For photos of what the mumps looks like, please visit cdc.gov/mumps/about/photos.html.

Complications

Most people with mumps recover fully. Complications may occur even if a person does not have swollen salivary glands (parotitis) and are more common in people who have reached puberty. Mumps is best known for the swelling of the cheeks and jaw that it causes, which is a result of swelling of the salivary glands. It is usually a mild disease, but can occasionally can cause serious complications.

Complications of mumps can include:

- Inflammation of the testicles (orchitis) in males who have reached puberty, which rarely leads to sterility
- Inflammation of the brain (encephalitis) and/or tissue covering the brain and spinal cord (meningitis)
- Inflammation of the ovaries (oophoritis) and/or breasts (mastitis) in females who have reached puberty
- Temporary or permanent deafness

Transmission

Mumps is spread by droplets of saliva or mucus from the mouth, nose, or throat of an infected person, usually when the person coughs, sneezes or talks. Items used by an infected person, such as cups or soft drink cans, can also be contaminated with the virus, which may spread to others if those items are shared. In addition, the virus may spread when someone with mumps touches items or surfaces without washing his hands and others then touch the same surface and rub their mouth or nose.

Most mumps transmission likely occurs before the salivary glands begin to swell and within the five days after the swelling begins. Therefore, CDC recommends isolating mumps patients for five days after their glands begin to swell.

The incubation time (how long it takes for symptoms to appear after a person is exposed to the virus) can range from 12-25 days.

Persons with mumps can do several things to help prevent spreading the virus to others:

- Minimize close contact with other people, especially babies and people with weakened immune systems who cannot be vaccinated.
- Stay home from work or school for five days after your glands begin to swell, and try not to have close contact with other people who live in your house.
- Cover your mouth and nose with a tissue when you cough or sneeze, and put your used tissue in the trash can. If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands.
- Wash hands well and often with soap, and teach children to wash their hands too.
- Don't share drinks or eating utensils.
- Regularly clean surfaces that are frequently touched (such as toys, doorknobs, tables, counters) with soap and water or with cleaning wipes.

Vaccination

The MMR (measles, mumps, and rubella) vaccine is the best way to prevent mumps. The MMR vaccine should be routinely given when children are 12-15 months old, and a second dose should be given when they are 4-6 years old. Two doses of the vaccine are more effective against mumps than one dose and prevent most, but not all, cases of mumps and mumps complications. For additional questions about preventing mumps with vaccination, please visit vaccineinformation.org/mumps.

Resources

Mumps – CDC
cdc.gov/mumps/index.html

Mumps – Immune Platoon Disease Database
cdc.gov/bam/diseases/immune/db/mumps.html

Mumps – KidsHealth
kidshealth.org/parent/general/sick/mumps.html

Mumps – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/mumps.html

Pertussis

Despite high coverage with pertussis-containing vaccines, the number of reported pertussis cases in the United States continues to increase. In 2012, more than 48,000 cases and 18 deaths were reported nationally, the largest number since 1955. Though the number of reported pertussis cases in the United States declined in 2013 and 2014, the number of pertussis cases in Georgia increased. In 2014, 408 cases of pertussis were reported in Georgia – the highest number in recent decades. Both nationally and in Georgia, infants < 1 year of age, who are at greatest risk for serious disease and death, continue to have the highest number of cases reported. Recently, school-aged children and adolescents, most of whom are up-to-date on pertussis vaccinations, have accounted for an increasing proportion of reported pertussis cases.

The bulk of cases that are being seen in the metro area (and nationwide as well, cdc.gov/pertussis/surv-reporting.html) have been in children less than one year of age. Other states are seeing as many cases as 5,163 (Wisconsin as of October 31, 2012, cdc.gov/pertussis/outbreaks/index.html).

Symptoms

For teens and adults, pertussis can look much like a common cold. It most often shows up as a cough that slowly gets worse and does not go away (longer than two weeks). The cough can be much worse at night. Persons with pertussis may not have a fever but have the other cold symptoms. By the time pertussis is identified as the cause of the illness, the germs may have been spread in any place where the person has been coughing. Pertussis can spread quickly and easily from face-to-face contact indoors and close settings such as school classrooms or in the home. It is spread through the air when an infected person coughs or sneezes.

Complications

While the illness may be mild for teens or adults, it can last a long time – the Chinese termed it the "100-day cough." Some people with pertussis can miss a lot of work or school or end up in the hospital with cracked ribs and medical bills. Infants under 6 months of age are at the most risk for severe problems from pertussis. Infants with pertussis can stop breathing, turn blue because of low oxygen levels or even have a seizure. Babies can get very sick quickly, often requiring hospitalization and can die. Between 2000 and 2006, 93 percent of the deaths from pertussis were in infants less than 12 months of age.[1]

Vaccination

Pertussis can be prevented with vaccination. During childhood, the series of vaccines (shots) called DTaP (diphtheria, tetanus and pertussis) is provided to protect against pertussis. The protection received from these shots does not last a lifetime though. Georgia must remain vigilant in educating and vaccinating to avoid a further increase in cases and undo harm to our littlest ones. For comprehensive information on recommendations related to pertussis vaccine, please visit vaccineinformation.org/pertuss/recommen.asp.

Additional prevention measures to remember:

- Set an example by getting the Tdap booster vaccine.
- Encourage others in the school to also get vaccinated.
- Education and awareness campaigns are important to alert students of the need for vaccination.
- Teens should be going to the doctor for a health check starting at age 11, at which time, they should ask about the vaccines/shots they may need.
- Educate pregnant women in the school that the current recommendation is to be vaccinated with Tdap during the third trimester(27-36 weeks) of each pregnancy, regardless of their previous Tdap history.

- It is equally important that those people around the pregnant woman get vaccinated with Tdap, if appropriate. For additional information, visit dph.georgia.gov/disease-reporting.
- Be sure infants begin and complete the recommended DTaP series of shots.
- Real stories of families who have been impacted by pertussis can be read at (Parents of Kids with Infectious Diseases) pkids.org/dis_pert_familystories.php.

When a case of pertussis is suspected:

- Seek medical care for a severe cough that lasts more than two weeks.
- Keep young children and pregnant women away from people who are coughing.
- **Report pertussis to the Georgia Department of Public Health immediately at 1-866-PUB-HLTH (866-782-4584) or call your local health department. For more information about reporting requirements, please visit** health.state.ga.us/epi/disease/report.asp, dph.georgia.gov/pertussis, and dph.georgia.gov/disease-reporting.
- When a case is identified, all household and close contacts should be given chemoprophylaxis, regardless of age and vaccination status.
- The child or adult with a diagnosis of pertussis should not return to school until after having received five days of appropriate antibiotics.
- If untreated, a person with pertussis is contagious for three weeks.
- While Public Health (PH) has the primary responsibility of prevention and control measures in pertussis cases, PH may ask for assistance with the implementation of the following measures, such as:
  - advising the patient to remain on a voluntary home quarantine.
  - developing a list of persons exposed to patient during their infectious period.

Testing for suspected pertussis cases

The diagnosis of pertussis is often made clinically after a history and physical exam have been performed. However, for public health purposes, confirmatory laboratory testing should be performed for all suspect or probable cases, especially in young infants, in atypical cases and in cases modified by vaccine.

1. "Prevention of Pertussis, Tetanus, and Diphtheria Among Pregnant and Postpartum Women and Their Infants." *Morbidity and Mortality Weekly Report 57* May 14, 2008 (Early Release): 1-47. cdc.gov/mmwr/preview/mmwrhtml/rr57e0514a1.htm?s_cid=rr57e0514a1_e.

Resources

Guidelines for Control of Pertussis Outbreaks
cdc.gov/pertussis/php.html

Help Silence the Sounds of Pertussis
soundsofpertussis.com

Pertussis: A Disease Affecting All Ages
aafp.org/afp/20060801/420.html

Pertussis – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/downloads/pert.pdf

Pertussis – Immune Platoon Disease Database
cdc.gov/vaccines/parents/diseases/pertussis.html

Pertussis (Whooping Cough) – CDC
cdc.gov/pertussis
cdc.gov/pertussis/outbreaks/index.html

Polio

Poliomyelitis (Polio) is a crippling and potentially deadly infectious disease caused by a virus that spreads from person to person invading the brain and spinal cord (nervous system) and causing paralysis.

Because polio has no cure, vaccination is the best way to protect yourself and the only way to stop the disease from spreading. The spread of polio has never stopped in Afghanistan, Nigeria and Pakistan. Poliovirus has been reintroduced and continues to spread in the Horn of Africa, Cameroon and Syria.

Symptoms

Approximately 95 percent of persons infected with polio will have no symptoms. About 4-8 percent of infected persons have minor symptoms, such as fever, fatigue, nausea, headache, flu-like symptoms, stiffness in the neck and back, and pain in the limbs, which often resolve completely. Fewer than 1 percent of polio cases result in permanent paralysis of the limbs (usually the legs). Of those paralyzed, 5-10 percent die when the paralysis strikes the respiratory muscles. The death rate increases with increasing age.

Complications

Polio can cause paralysis that can lead to permanent disability and death.

Vaccination

Children should be vaccinated with four doses of inactivated polio vaccine (IPV) at the following ages:

- A dose at 2 months
- A dose at 4 months
- A dose at 6-18 months
- A booster dose at 4-6 years

For additional information about preventing polio with vaccination, please visit vaccineinformation.org/polio.

Resources

Polio – CDC
cdc.gov/polio

Polio – KidsHealth
kidshealth.org/parent/infections/bacterial_viral/polio.html

Poliomyelitis – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/polio.html

Ringworm of the Skin and Scalp

Ringworm is a common childhood skin disease that is a fungus infection. This often can be spread to children by a pet or another child that is infected with ringworm. Ringworm gets its name from the ring-shaped rash that appears on the skin.

Ringworm of the Skin

Ringworm of the skin, also known as tinea corporis, is a fungus infection that can occur anywhere on the skin. Ringworm appears as a ring-shaped pink patch on the skin. The patch is usually .5 to 1 inch in size. The area is usually somewhat scaly with raised borders and a clear center. The area will slowly get larger in size and may itch. Other rashes can mimic tinea. It is contagious if direct skin-to-skin contact occurs before treatment is started. After 48 hours of treatment, the ringworm is usually considered no longer contagious. The rash may take up to four weeks to clear.

Ringworm of the Scalp

Ringworm of the scalp, also known as tinea capitis, is a fungus infection of the scalp, involving hair follicles. The scalp may have round patches of hair loss that will slowly increase in size. Scaling, mild itching and secondary infection may occur on the scalp. The fungus can be spread by combs, brushes, hats, barrettes, seat backs, pillows and bath towels.

Treatment

Ringworm of the skin is treated with an antifungal cream, as recommended by a child's primary healthcare provider. If there is no improvement or the condition worsens, the child should return to his or her healthcare provider.

Antifungal creams are not an effective treatment for ringworm of the scalp. The cream cannot get deep into the hair roots where the fungus is living. Ringworm of the scalp usually requires several weeks of an oral antifungal medication. Hair regrowth will occur, but may take up to six to 12 weeks after treatment. Follow your school policy or local health department for recommendations for returning to school. Generally once children with either type of ringworm are on antifungal medication for 24 hours, they are not contagious and can return to school.

If you suspect a student in your school has ringworm, here are a few helpful tips:

- Notify that student's parents and ask them to contact the child's primary healthcare provider for diagnosis and treatment.
- Encourage good handwashing techniques among all children and adults.
- Prohibit the sharing of personal items such as hair care articles, towels and clothing, including the "dress-up" corner for young children.

Resources

Dermatophytes – CDC

cdc.gov/fungal/diseases/ringworm/index.html

Rotavirus

Rotavirus disease is most common in infants and young children under age 5, but adults and older children can also become infected with rotavirus. Rotavirus spreads easily among young children. Children can spread the virus both before and after they become sick with diarrhea. They can also pass rotavirus to family members and other people with whom they have close contact.

Rotavirus is shed (passed from a person's body into the environment) in feces (stool) of infected persons. The virus spreads by the fecal-oral route; this means that the virus must be shed by an infected person and then enter a susceptible person's mouth to cause infection.

Rotavirus can be spread by contaminated:

- Hands
- Objects (toys, surfaces)
- Food
- Water

In the United States, rotavirus infections can cause diarrhea in adults who care for children, in older adults, and in adults who are traveling. Children are most likely to get rotavirus in the winter and spring (December through June).

Symptoms

Once a person has been exposed to rotavirus, it takes about two days for symptoms to appear.

Symptoms include:

- Fever
- Vomiting
- Diarrhea
- Abdominal pain

Vomiting and watery diarrhea may last from three to eight days in a child who is infected with rotavirus. Additional symptoms include loss of appetite and dehydration (loss of body fluids), which can be especially harmful for infants and young children.

Severe vomiting and diarrhea from rotavirus can lead to dehydration (loss of body fluids). During rotavirus infection, infants and young children, older adults, and people with other illnesses are most at risk for dehydration.

Symptoms of dehydration in children and adults include:

- Decrease in urination
- Dry mouth and throat
- Feeling dizzy when standing up

A dehydrated child may also cry with few or no tears and be unusually sleepy or fussy. Dehydration can lead to other serious problems. Severe dehydration may require hospitalization for treatment with intravenous (IV) fluids (fluids given to the patient directly through their veins). The best way to protect against dehydration is to drink plenty of liquids (oral rehydration therapy). The most helpful fluids for this purpose are oral rehydration fluids (ORF)*.

Rotavirus can spread easily. Good hygiene (handwashing) and cleanliness are important but are not enough to control the spread of the disease.

Vaccinated and unvaccinated children may develop rotavirus disease more than once because there are many different types of rotavirus and because neither vaccine nor natural infection provides full immunity (protection) from future infections. Usually a person's first infection with rotavirus causes the most severe symptoms.

Treatment

There is no antiviral drug to treat rotavirus infection. Antibiotic drugs will not help; this is because antibiotics fight against bacteria not viruses.

Vaccination

Rotavirus vaccines are very effective in preventing rotavirus gastroenteritis (inflammation of the stomach and intestines) and the accompanying diarrhea and other symptoms. CDC recommends routine vaccination of infants. For more information about the rotavirus vaccines, please visit cdc.gov/rotavirus/index.html or for additional information on preventing rotavirus with vaccines, please visit vaccineinformation.org/rotavirus.

The vaccines are very effective (85 percent to 98 percent) in preventing severe rotavirus disease in infants and young children, including rotavirus infection that requires hospitalization. Rotavirus vaccines will not prevent diarrhea or vomiting caused by other viruses, but they are very effective against rotavirus infection.

*Several products with ingredients similar to those in ORFs can be used to prevent or treat mild dehydration. These products—called oral rehydration solutions—are sold as pre-mixed fluids. Oral rehydration solutions that are commonly available in U.S. food and drug stores include Infalyte®, Kao Lectrolyte®, Naturalyte, Oralyte and Pedialyte®. If you are unsure about which product to use or how to use these pre-mixed fluids, contact your doctor.

Resources

Rotavirus – CDC
cdc.gov/rotavirus/index.html

Rotavirus – KidsHealth
kidshealth.org/parent/infections/stomach/rotavirus.html

Rotavirus – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/rota.html

Rotavirus Vaccine Information Statement – Immunization Action Coalition
immunize.org/vis/vis_rotavirus.asp

Rubella

Rubella, sometimes called "German measles," is a disease caused by a virus. Rubella is not related to measles at all. It received this name because the rash caused by rubella looks like measles and the disease was first discovered in Germany.

The infection is usually mild with fever and rash, but if a pregnant mother gets infected, the virus can also cause serious birth defects. The MMR vaccine protects against rubella.

Symptoms

Rubella usually causes the following symptoms in children:

- Rash that starts on the face and spreads to the rest of the body
- Low fever (less than 101 degrees)

These symptoms last two or three days. Older children and adults may also have swollen glands and symptoms like a cold before the rash appears. Aching joints occur in many cases, especially among young women. About half of the people who get rubella do not have symptoms.

Complications

In children, rubella is usually a mild disease. In rare cases, serious problems can occur. These include brain infections and bleeding problems.

Rubella is most dangerous for unborn babies. It can cause miscarriage or birth defects like deafness, intellectual disability, and heart defects. As many as 85 out of 100 babies born to mothers who had rubella in the first THREE months of pregnancy will have a birth defect.

Transmission

Rubella spreads when an infected person coughs or sneezes. The disease is most contagious when the person has a rash. But it can spread up to SEVEN days before the rash appears. People without symptoms can still spread rubella.

Vaccination

The MMR is a shot that combines vaccines for three diseases—measles, mumps, and rubella. It protects children from rubella by preparing their bodies to fight the rubella virus. Almost all children (at least 95 children out of 100) who get two doses of the MMR vaccine will be protected from rubella. The MMR vaccine should be routinely given when children are 12-15 months old, and a second dose should be given when they are 4-6 years old. They can get MMR at the same time as other vaccines. For additional information on preventing rubella with vaccination, please visit vaccineinformation.org/rubella.

Resources

Rubella – CDC
cdc.gov/rubella

Rubella – Immune Platoon Disease Database
cdc.gov/bam/diseases/immune/db/rubella.html

Rubella – KidsHealth
kidshealth.org/parent/infections/skin/german_measles.html

Rubella – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/rubella.html

Scabies

Scabies is a highly communicable skin disease caused by a tiny parasite called a mite. The mite penetrates the skin, causing a rash and intense itching, especially at night. Transfer frequently occurs by direct skin-to-skin contact and less often by exposure to infested clothing or bedding. The longer and more frequent the contact, the more likely the transfer. The mite feeds on skin cells and can only move by crawling. Symptoms may not appear for two to six weeks after contact, so the mites may be widespread before they are recognized. It is possible for mites to spread disease, and secondary infection may occur from scratching. Scabies occurs worldwide and affects all socioeconomic groups.

The scabies rash may present as small red spots, occurring most commonly on the hands and wrists. The elbows, underarms, waist, thighs, abdomen, genitalia and buttocks also can be affected. A teacher most likely would observe that the student is scratching frequently. Look for a rash, often with burrows under the skin.

Treatment

Treatment is relatively simple, safe and effective. Referral to the student's healthcare provider is necessary for the prescription lotion, which is applied at night over the entire body from the chin down. After eight to 12 hours, the preparation is washed off the skin. All family members may need treatment. Some medications require a re-treatment in one week. Follow recommendations of the healthcare provider and pharmacist carefully. The morning after the treatment, all clothing and bedding used and worn within the last three to four days should be laundered or dry-cleaned. Spraying of the home or school is not necessary. Freshly laundered clothing and bedding should be used after each application of medication.

Control Measures in School

When a teacher suspects the presence of scabies, the student should be sent to the clinic or office. Clinic/office personnel should:

- Confirm the presence of a skin rash, taking care to maintain the student's dignity and privacy.
- Notify parents and send student home with letter of recommendations for treatment.
- Check siblings who attend the school and any other children with symptoms of itching.
- Confirm that treatment has been initiated when child returns to school. If re-treatment is ordered, make a note to confirm this at the appropriate time.
- If treatment has not been initiated, call parents and send the child home again with a second letter.
- Notify the school social worker if a child misses more than two to three days of school.
- Students usually can return to child care or school the day after treatment.

Resources

Parasites, Scabies – CDC

cdc.gov/parasites/scabies

The following pages include letters to parents in English and Spanish.

Scabies Notification Letter to Parents

Date _____

Dear Parent/Guardian:

Based on observation in the class and clinic, your child _____was found to have symptoms characteristic of scabies. This is not a diagnosis, and you should follow up with your child's health care provider or the health department.

Scabies is a skin condition caused by a tiny mite that burrows under the skin and causes intense itching, especially at night. The areas most commonly affected are the hands and wrists, but other areas may be affected as well. Other family members should be checked as well if there is any rash or itching present.

Scabies is not serious and is easily treated. However, it is contagious and easily spread through bodily contact. For this reason, your child needs to be examined so that treatment can be started as soon as possible. It is usually treated with a prescription lotion. After the treatment, your child's clothing and bedding used in the last three to four days should be washed and dried or dry-cleaned. Follow your health care provider's instructions carefully.

Before your child returns to school, you will need a note from your child's health care provider (either that no treatment is necessary, or that treatment has been started). If you have further questions concerning the detection and treatment of scabies, please contact your child's health care provider or the health department.

Thank you for your cooperation in this matter.

_____ _____

Signature of Principal/ School Nurse/Clinic Personnel Phone #

Scabies Notification Letter to Parents (Spanish)

Fecha (Date) _____

Estimado Padre/Madre:

Después de observar a su niño (child's name) _____ en la clase y clínica, hemos encontrado que tiene síntomas característicos de la sarna. Este no es un diagnóstico, por consiguiente, usted necesita hablar con el proveedor de cuidados de la salud de su niño o con su departamento de salud.

La sarna es una condición de la piel causada por ácaros muy pequeños que se meten bajo la piel y causan mucha comezón especialmente en la noche. Las manos y las muñecas son las áreas del cuerpo más comúnmente afectadas, pero otras áreas también pueden ser afectadas. Otros miembros de la familia también deben ser revisados si tienen cualquier tipo de sarpullido o comezón.

La sarna no es seria y se puede tratar fácilmente. Sin embargo, la sarna es contagiosa y se puede pasar fácilmente de una persona a otra por el contacto físico. Por esta razón, su niño necesita ser examinado para que el tratamiento empiece lo más pronto posible. La sarna es usualmente tratada con una loción recetada. Después del tratamiento, toda la ropa del niño, sus sábanas y sobrecamas que haya usado en los pasados 3 a 4 días debe ser lavada y secada o lavada en seco. Siga cuidadosamente las instrucciones de su proveedor de cuidado de la salud.

Antes de que su niño regrese a la escuela, usted necesitará una nota del proveedor de cuidados de salud de su niño (indicando que no se necesita el tratamiento o que se ha empezado el tratamiento). Si usted tiene preguntas adicionales acerca de la forma de detectar o tratar la sarna, por favor comuníquese con el proveedor de cuidados de la salud de su niño o con el departamento de salud.

Gracias por su cooperación.

_____ _____

Firma del Rector (Signature of Principal) Personal de enfermería(Signature of School Nurse)

Sexually Transmitted Diseases (STDs)

Note: Review the sex education curriculum with your local school board's sex education advisory committees before providing any instruction. Some districts are "abstinence only" education.

The Centers for Disease Control and Prevention (CDC) has recognized that sexually transmitted diseases (STDs) are on the rise, especially in the 15-25-year-old age group. Georgia has been declared a high prevalence area for certain STDs such as syphilis, chlamydia, gonorrhea and herpes simplex virus type 2 (HSV-2) which causes genital herpes.

All STDs, including syphilis, HIV and gonorrhea, are increasing in prevalence among the 15-25-year-old age group. Therefore it is important to recognize high risk behavior that may expose a person to acquiring an STD.

Young (15-25-year-old) African American females account for the highest rate of newly acquired sexually transmitted infections in the country as per the data published by the CDC, as well as being at the most risk for acquiring secondary co-infections such as HIV, HSV and HPV (see CDC STD fact sheet for reference).

According to data released by the CDC of a pooled sample of teenagers across the country, approximately half of the teens in the study reported having sex. Among the girls, the STD prevalence was 40 percent. In girls reporting only one lifetime partner there was a one in five (20.4 percent) chance they had at least one STD. Girls with three or more partners had a prevalence of over 50 percent.

The predominant STD found among young women (15-25-year-old) is Human Papilloma Virus (HPV). The high prevalence of HPV indicates that teenage girls are at high risk for this infection, even those with few lifetime sexual partners. It is important to realize that most HPV infections clear on their own; however some infections persist over time, placing women at risk for cervical cancer and increasing their risk for contracting a secondary STD if and when exposed.

It is important to recognize the need for routine screening for chlamydia and gonorrhea to ensure prompt diagnosis and treatment and to avoid the serious long-term consequences of the disease, which include pelvic inflammatory disease (PID) and infertility. CDC recommends annual chlamydia and gonorrhea screening of all sexually active women aged 25 and under.

CDC supports a comprehensive approach to STD prevention that includes the promotion of abstinence as the surest way to prevent getting an STD, being in a mutually monogamous relationship with a partner known to be uninfected, and the consistent and correct use of condoms for sexually active people to reduce the risk of acquiring many infections. Condoms (used all the time and the right way) may lower your chances of passing STDs including HIV, HPV, HSV and G/C and related complications and unwanted pregnancies.

Sexually Transmitted Disease Surveillance 2016
cdc.gov/std/stats16/CDC_2016_STDS_Report-for508WebSep21_2017_1644.pdf

Sexually Transmitted Diseases Fact Sheet – CDC
cdc.gov/std/healthcomm/fact_sheets.htm

2015 Sexually Transmitted Diseases Treatment Guidelines
cdc.gov/std/tg2015/default.htm

Chlamydia

Chlamydia is the most frequently reported bacterial STD in the United States. In 2006, 1,030,911 chlamydia infections were reported to CDC from 50 states and the District of Columbia. An estimated 2,291,000 non-institutionalized U.S. civilians ages 14-39 are infected with chlamydia based on the U.S. National Health and Nutrition Examination Survey. In 2007, 15,665 chlamydia cases were reported among the 10-19 age groups in Georgia. Among this age group, 12,361 (81 percent) were females while males represented 930 (19 percent) of reported chlamydia cases. Females are four times more likely than males to be affected by chlamydia. Women are frequently re-infected if their sex partners are not treated. Chlamydia is a common STD caused by the bacterium, Chlamydia trachomatis, which can damage a woman's reproductive organs. Even though symptoms of chlamydia are usually mild or absent, serious complications that cause irreversible damage, including infertility, can occur "silently" before a woman ever recognizes a problem.

Symptoms

Chlamydia is known as a "silent" disease because about three quarters of infected women and about half of infected men have no symptoms. If symptoms do occur, they usually appear within one to three weeks after exposure. In women, the bacteria initially infect the cervix and the urethra. Women who have symptoms might have an abnormal vaginal discharge or a burning sensation when urinating. When the infection spreads from the cervix to the fallopian tubes (tubes that carry fertilized eggs from the ovaries to the uterus), some women still have no signs or symptoms; others have lower abdominal pain, low back pain, nausea, fever, pain during intercourse or bleeding between menstrual periods. Chlamydia infection can spread to the rectum especially in those patients that engage in anal intercourse. A complication of chlamydia infection in the rectum can include procititis and prostatitis, which will lead to painful defecation, blood per rectum and difficulty sitting. Men with signs or symptoms might have a discharge from their penis or a burning sensation when urinating. Men might also have burning and itching around the opening of the penis. Pain and swelling in the testicles are uncommon.

Treatment

Chlamydia can be easily treated and cured with antibiotics. Azithromycin 1 g orally in a single dose or doxycycline 100 mg orally twice a day for seven days are commonly used treatments.

Chlamydia – CDC Fact Sheet

cdc.gov/std/chlamydia/STDFact-Chlamydia.htm

Parent Information on Chlamydia – Kids Health

kidshealth.org/parent/infections/std/chlamydia.html

Gonorrhea

Gonorrhea is caused by Neisseria gonorrhoeae, a bacterium that can grow and multiply easily in the warm, moist areas of the reproductive tract, including the cervix, and fallopian tubes in women, and in the urethra (in women and men. The bacterium can also grow in the mouth, throat, eyes and anus.

Gonorrhea is very common. CDC estimates that more than 700,000 persons in the U.S. get new gonorrheal infections each year. In 2006, the rate of reported gonorrheal infections was 120.9 per 100,000 persons. The number of reported gonorrhea cases in Georgia among the age group 10-19 decreased from 6,130 in 2006 to 5,380 in 2007. However, that rate is now increasing in prevalence again in 2010 and 2011, with 15,852 infections reported in Georgia to the CDC in 2010, which is 161.3 cases per 100,000 population. Females are two times more likely than males to be affected by gonorrhea.

Symptoms

Signs and symptoms of gonorrhea infection appear two to five days after infection, but can take as long as 30 days to appear. Signs and symptoms include a burning sensation when urinating or a white, yellow or green discharge from the penis. Sometimes men with gonorrhea get painful or swollen testicles. In women, the symptoms of gonorrhea are often mild, but most women who are infected have no symptoms. Even when a woman has symptoms, they can be so nonspecific as to be mistaken for a bladder or vaginal infection. The initial symptoms and signs in women include a painful or burning sensation when urinating, increased vaginal discharge or vaginal bleeding between periods. Women with gonorrhea are at risk of developing serious complications from the infection, regardless of the presence or severity of symptoms which may lead to infertility and complicated disseminated disease. Symptoms of rectal infection in both men and women may include discharge, anal itching, soreness, bleeding or painful bowel movements. Rectal infection also may cause no symptoms. Gonooccoal infections in the throat may cause signs and symptoms such as sore throat, tonsillar enlargement, fever, painful swallowing and purulent exudates may be present in the orophyarnx.

Treatment

Several antibiotics can successfully cure gonorrhea in adolescents and adults. Ceftriaxone 250 mg IM in a single dose, cefixime 400 mg orally in a single liquid dose or cefixime 400 mg in tablet-form single dose were FDA-approved in April 2008 and are sold under the brand name Suprax®. However, documented drug-resistance has been seen to occur in treatment of gonorrhea infections, and therefore higher dosing is required to treat gonorrhea and cross coverage with azithromycin 1 gram should be given. The other medication option is ciprofloxacin 500 mg orally in a single dose. Current recommendations per the CDC include treatment coverage for both gonorrhea and chlamydia, as these STDs often occur simultaneously. Those treatment guidelines indicate that those infected with gonorrhea be treated with 250 mg of ceftriaxone and 1 gram of azithromycin.

Gonorrhea – CDC Fact Sheet

cdc.gov/std/Gonorrhea/STDFact-gonorrhea.htm

Teen Information on Gonorrhea – Kids Health

kidshealth.org/teen/infections/stds/std_gonorrhea.html

Genital Herpes

Results of a nationally representative study show that genital herpes infection is common in the United States. Nationwide, at least 45 million people ages 12 and older, or one out of five adolescents and adults, have had genital HSV infection. Genital herpes is an STD caused by the herpes simplex viruses type 1 (HSV-1) or type 2 (HSV-2). Most genital herpes is caused by HSV-2. Most individuals have no or only minimal signs or symptoms from HSV-1 or HSV-2 infection.

Symptoms

Symptoms that occur during the first outbreak can be quite pronounced. The first outbreak usually occurs within two weeks after the virus is transmitted. The primary episode typically is one or more blisters on or around the genitals or rectum. These vesicles/ blisters are very painful, they break and clear fluid leaks, and the resulting presentation are tender ulcers or "sores" that take two to four weeks to heal completely. Other signs and symptoms include fever and flu-like symptoms and swollen inguinal lymph nodes.

These outbreaks may reoccur, and some individuals experience multiple outbreaks and may need daily suppressive therapy to control number of outbreaks patient experiences. Some individuals with HSV-2 infection never have sores, or they have very mild signs that they do not even notice or that they mistake for insect bites or other skin conditions.

Treatment

No treatment can cure herpes, but antiviral medications can shorten and prevent outbreaks during the period of time the person takes the medication. In addition, daily suppressive therapy for symptomatic herpes can reduce transmission to partners. For a primary outbreak of HSV-2, the patient may be given acyclovir 400 mg orally, three times a day for seven to 10 days. Another treatment option is Valtrex® or valacyclovir 1 gram orally twice a day for seven to 10 days. The regimen for a recurrent episode is acyclovir 400 mg orally three times a day for five days, or Valtrex® 500 mg orally twice a day for five days.

For pregnant women who have a history of HSV-2 and no active lesions, suppression therapy is started in the third trimester at the provider's discretion and Valtrex® 500 mg should be taken orally every day until birth of baby. This regimen has been shown to diminish greatly the chances of a lesion and therefore allow for a vaginal birth. However, even when patients are treated for an outbreak of genital herpes, they can still pass infection to others even during periods of no active infection. Therefore all patients with HSV need to be counseled about transmission reduction and safe sex.

Genital Herpes – CDC Fact Sheet
cdc.gov/std/herpes/STDFact-herpes.htm

Parent Information on Herpes – Kids Health
kidshealth.org/parent/infections/std/herpes.html

Teen Information on Herpes – Kids Health
kidshealth.org/teen/infections/stds/std_herpes.html

HPV

Human papillomavirus (HPV) HPV is the most common STD in the United States. By the age of 50, an estimated 80 percent of all sexually active women will acquire genital HPV. Estimates are that 5.5 million people around the world are infected annually. Cervical cancer is almost always caused by the human papillomavirus. This year, in the United States, 3,700 women will die from cervical cancer—10 women per day.

Approximately 100 strains of HPV have been identified. About 40 HPV types are mucosal types of HPV. The mucosal HPV types are also called the genital (or anogenital) type HPVs because they typically affect the anal and genital area. Some strains are categorized as having a low risk of developing cervical cancer, such as types 6 and 11, which cause genital warts. Some other types are categorized as having a high risk, such as types 16 and 18. High risk types act as carcinogens and have been found in 99 percent of all cases of cervical cancer. The CDC estimates that types 16 and 18 are responsible for over 70 percent of cervical cancer cases.

Symptoms

HPV invades the human epithelial cells of the genital area of men and women. This includes the skin of the penis, vulvar area, anus and the lining of the vaginal mucosa, cervix, rectum and oral cavity. The time between exposure to the virus and having any symptoms can be three to four months. Most HPV types cause no symptoms and go away on their own. But some types can cause cervical cancer in women and other less common genital cancers— like cancers of the anus, vagina and vulva (area around the opening of the vagina). Some head and neck cancers (specifically of the tongue and tonsils) may be related to the high-risk types of HPV.

For the immunocompromised person, HPV can be quite severe and cause numerous and large genital warts and increase risk of genital cancers. The other clinical manifestation is that HPV can cause normal cells on infected skin or mucus membranes to become abnormal. These cellular changes occur over time. The abnormal manifestations on the skin are viewed as skin tags or warts which can be a few and small, non-tender to numerous clusters on the external genitalia and anal area of both men and women and are referred to as genital warts. Genital warts are not a life-threatening disease but are highly contagious. They can cause emotional stress, discomfort, pain, itching and irritation to the area. Treatment for this can be very uncomfortable.

Genital HPV is a common virus that is passed on through genital contact, most often during sex. Most sexually active people will get HPV at some time in their lives, though most will never even know it. It is most common in people in their late teens and early 20s. About 1 percent of sexually active adults in the U.S. (or 1 million people) have visible genital warts at any point in time.

Preventative Treatment

GARDASIL™ is the only human papillomavirus (HPV) vaccine that helps protect against four types of HPV. In girls and young women ages 9 to 26, GARDASIL helps protect against two types of HPV that cause about 75 percent of cervical cancer cases, as well as two more types that cause 90 percent of genital warts cases. In boys and young men ages 9 to 26, GARDASIL helps protect against 90 percent of genital warts cases. GARDASIL also helps protect girls and young women ages 9 to 26 against 70 percent of vaginal cancer cases and up to 50 percent of vulvar cancer cases.

HPB vaccines are administered in a three dose series. The second dose is administered 1-2 months after the first dose and the third dose 6 months after the first. Ideally females should get the vaccine before they become sexually active, when they may be exposed to HPV. Females who are sexually active may also benefit from the vaccine, but they may get less benefit from it because they may have already gotten an HPV type targeted by the vaccine. Few sexually active young women are infected with all HPV types covered by the vaccine so they would still get protection from those types they have not yet gotten. Currently, no test is available to tell if a girl/woman has had HPV in the past or which types she may have had.

It is important to note that the vaccine does not protect against all types of HPV— so it will not prevent all cases of cervical cancer. Since 30 percent of cervical cancers will NOT be prevented by the vaccine, it will be important for women to continue getting screened for cervical cancer (regular Pap tests). Most types of HPV infection don't lead to cancer. Women can protect themselves from cervical cancer by getting regular Pap tests and by getting treated early for any problems that could turn into cancer. If a

female is treated and diagnosed with an abnormal Pap smear due to HPV, they will need to continue to get pap smears on a more regular basis to prevent more invasive forms of cervical cancer. For additional information on the vaccine for preventing HPV, please visit vaccineinformation.org/HPV.

Treatment

HPV has no cure, but treatments are available for the health problems that some types of HPV can cause, like genital warts and cervical cancer. However, most genital HPV infections go away with the help of the body's immune system unless in the presence of immunosuppression. About 70 percent of HPV infections are gone within one year and 90 percent are gone within two years. Although HPV itself cannot be treated, the cell changes that come from an HPV infection can be treated. For example, genital warts can be treated; pre-cancer cell changes caused by HPV can be found by Pap tests and treated; and cervical, anal and genital cancers can be treated. No treatment is available for the virus itself, but a healthy immune system can usually fight off HPV naturally. Treatments do exist for the diseases that HPV can cause as discussed below.

External Genital Warts

Currently no cure can eradicate HPV infection; however, treatment options include removing the lesions caused by the virus. Visible genital warts can be removed by patient-applied medications, or by treatments performed by a healthcare provider. Some individuals choose to forego treatment to see if the warts will disappear on their own. No one treatment is better than another.

Precancerous Changes (Dysplasia) of the Cervix

Cervical cancer is most treatable when it is diagnosed and treated early. There are new forms of surgery, radiation therapy and chemotherapy available for patients. Women who have evidence of moderate or severe precancerous changes in the uterine cervix require treatment to ensure that these cells do not progress to cancer. In this case, treatment usually involves surgical removal or destruction of the involved tissue. Conization is a procedure that removes the precancerous area of the cervix using a knife, a laser or by a procedure known as LEEP (loop electrosurgical excision procedure), which uses an electric current passing through a thin wire that acts as a knife. LEEP is also referred to as LLETZ (large loop excision of the transformation zone). Cryotherapy (freezing) or laser therapy also may be used to destroy tissue areas that contain potentially precancerous changes. Other HPV-related cancers also are more treatable when diagnosed and treated early. New forms of surgery, radiation therapy and chemotherapy are available for patients with these diseases as well.

Genital HPV Infection – CDC Fact Sheet
cdc.gov/std/Hpv/STDFact-HPV.htm

HPV, Cancer and HPV Vaccines – American Cancer Society
cancer.org/docroot/CRI/content/CRI_2_6x_FAQ_HPV_Vaccines.asp

HPV – CDC
cdc.gov/hpv

HPV Information – Medline Plus
nlm.nih.gov/medlineplus/hpv.html

HPV Vaccines – National Cancer Institute
cancer.gov/cancertopics/factsheet/Prevention/HPV-vaccine

HPV Vaccine Information for Young Women – CDC
cdc.gov/std/hpv/STDFact-HPV-vaccine-young-women.htm

Teen Information on HPV – Kids Health
kidshealth.org/teen/sexual_health/stds/hpv_vaccine.html

Teen Information on Warts – Kids Health

kidshealth.org/teen/infections/stds/std_warts.html

What is HPV?

cdc.gov/hpv/WhatIsHPV.html

Syphilis

Syphilis is a sexually transmitted disease (STD) caused by the bacterium Treponema pallidum. It has often been called "the great imitator" because so many of the signs and symptoms are indistinguishable from those of other diseases.

In 2007, the number of reported primary and secondary (P&S) syphilis cases among the 10-19 age groups increased from 23 in 2006 to 34 in 2007. Of that number, 24 (71 percent) were males, while females represented 10 (29 percent) reported P&S cases. Males are twice as likely as females to be affected by syphilis.

Primary Stage

The primary stage of syphilis is usually marked by the appearance of a single sore (called a chancre), but there may be multiple sores. The time between infection with syphilis and the start of the first symptom can range from 10 to 90 days (average 21 days). The chancre is usually firm, round, small and painless. The location of the sore will correlate to where the infection first made contact with the patient and can be located in the genital area, rectum, mouth, throat or hands. The chancre lasts three to six weeks, and it heals without treatment. However, if adequate treatment is not administered, the infection progresses to the secondary stage.

Secondary Stage

Skin rash and mucous membrane lesions characterize the secondary stage. This stage typically starts with the development of a rash on one or more areas of the body. The rash usually does not cause itching. Rashes associated with secondary syphilis can appear as the chancre is healing or several weeks after the chancre has healed. The characteristic rash of secondary syphilis may appear as rough, red or reddish brown spots both on the palms of the hands and the bottoms of the feet. However, rashes with a different appearance may occur on other parts of the body, sometimes resembling rashes caused by other diseases. Sometimes rashes associated with secondary syphilis are so faint that they are not noticed.

In addition to rashes, symptoms of secondary syphilis may include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches and fatigue. It should be noted that syphilis at this stage is highly contagious, and precautions such as gloves shown be worn when examining the patient suspected to have secondary syphilis. The signs and symptoms of secondary syphilis will resolve with or without treatment, but without treatment, the infection will progress to the latent and possibly late stages of disease.

Late and Latent Stages

The latent (hidden) stage of syphilis begins when primary and secondary symptoms disappear. Without treatment, the infected person will continue to have syphilis even though there are no visible signs or symptoms. This latent stage can last for years. The late stages of syphilis can develop in about 15 percent of people who have not been treated for syphilis and can appear 10-20 years after infection was first acquired. In the late stages of syphilis, the disease may subsequently damage the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones and joints. Signs and symptoms of the late stage of syphilis include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness and dementia. This damage may be serious enough to cause death.

In the late and latent stages of infection, patients may progress to develop neurosyphilis. These patients will present with acute mental status changes and neurological complaints such as headache, visual changes, or vertigo. Neurosyphilis can be very dangerous and cause severe limitations in daily functioning and possibly death. Treatment requires the patient to be hospitalized for IV antibiotics for an extended period of time. If a patient presents with new onset of neurological complaints and history of positive syphilis test, patient should be worked up to rule out neurological involvement.

Treatment

Syphilis is easy to cure in its early stages. Primary, secondary and early latent stages are more commonly treated with Benzathine penicillin G 2.4 million units IM in a single dose. The recommended treatment for late and latent stages of syphilis without neurological involvement is Benzathine penicillin G 7.2 million units total, administered as three doses of 2.4 million units IM each at one-week intervals. Patients with suspected or confirmed neurosyphilis will need to be hospitalized for IV penicillin for 10-14 days, to prevent further neurological decline and possible death. Patients allergic to penicillin will need alternative treatment such as doxycycline 100mg twice a day for 28 days. For more information, go to: cdc.gov/std/tg2015/pen-allergy.htm,

Parent Information on Syphilis – Kids Health
kidshealth.org/parent/infections/std/syphilis.html

Syphilis – CDC Fact Sheet
cdc.gov/std/syphilis/stdfact-syphilis.htm

General STD Resources

Sexual Health Education in Schools
nasn.org/advocacy/professional-practice-documents/position-statements/ps-sexual-health

National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
cdc.gov/nchhstp

Schwab, Nadine C. and Gelfman, Mary H.B. *Legal Issues in School Health Services: A Resource for School Administrators, School* Attorneys, and Scho*ol Nurses.* New York: Authors Choice Press, 2005 (ISBN-978-0595358137).

Sexually Transmitted Diseases – CDC
cdc.gov/std

Sexually Transmitted Diseases – CDC Facts Sheets
cdc.gov/std/healthcomm/fact_sheets.htm

2015 Sexually Transmitted Diseases Treatment Guidelines
cdc.gov/std/tg2015/default.htm

STD Information for Parents – Kids Health
kidshealth.org/parent/infections/std/talk_child_stds.html

STD Information for Teens – Kids Health
kidshealth.org/teen/infections/stds/std.html

Child Sexual Abuse and STDs

Whenever a pre-pubertal child is diagnosed with an STD, further investigation needs to be done to determine how the child contracted the infection. That the child was a victim of sexual abuse is a very strong and real likelihood. As a mandated reporter, any suspicion of child abuse, including an STD in a pre-pubertal child, must be reported to DFCS (Department of Family and Children Services). Please see the mandated reporting in child abuse section (Chapter 1).

In order to make this report, contact the local DFCS office for your county, which can be found at: dfcs.dhr.georgia.gov. On the website, go to "county offices" and locate the office in your area to make the report. According to O.C.G.A. 16-6-3, a child must be 16 years old or older to consent to sex unless with his or her spouse.

To report child abuse:

Please call the DFCS Child Protective Center at: 1-855-GACHILD / 1-855-422-4453. Reports are taken 24 hours a day, 7 days a week. If you have an immediate emergency, please call 911 or your local police department.

PLEASE NOTE: This phone line is for reports of child abuse and neglect ONLY. Due to the importance and time-sensitive nature of reports of child abuse and neglect, your call may be discontinued if it is does not meet the abuse or neglect criteria.

For general inquiries, please contact your local county office. Contact information can be located here:
dfcs.georgia.gov/locations

Tetanus

Tetanus is a disease of the nervous system caused by Clostridium tetani bacteria.

Symptoms

Early symptoms – lockjaw, stiffness in the neck and abdomen, and difficulty swallowing

Later symptoms – severe muscle spasms, generalized tonic seizure-like activity, severe autonomic nervous system disorders

Complications

Bone fractures, abnormal heart rhythm. Tetanus causes death in about 10-20 percent of cases, with the highest rates occurring among older people.

Transmission

Tetanus enters the body through a break in the skin and is not transmitted from person to person.

Vaccination

There are four combination vaccines used to prevent diphtheria, tetanus and pertussis: DTaP, Tdap, DT and Td. Two of these (DTaP and DT) are given to children younger than 7 years of age, and two (Tdap and Td) are given to older children and adults.

Children should get five doses of DTaP, one dose at each of the following ages: 2, 4, 6, and 15-18 months and 4-6 years. DT does not contain pertussis, and is used as a substitute for DTaP for children who cannot tolerate pertussis vaccine.

Td is a tetanus-diphtheria vaccine given to adolescents and adults as a booster shot every 10 years, or after an exposure to tetanus under some circumstances. Tdap is similar to Td but also containing protection against pertussis. Adolescents 11-18 years of age (preferably at age 11-12 years) and adults 19 through 64 years of age should receive a single dose of Tdap. For adults 65 and older who have close contact with an infant and have not previously received Tdap, one dose should be received. Tdap should also be given to 7-10 year olds who are not fully immunized against pertussis. Tdap can be given no matter when Td was last received.

(Upper-case letters in these abbreviations denote full-strength doses of diphtheria (D) and tetanus (T) toxoids and pertussis (P) vaccine. Lower-case "d" and "p" denote reduced doses of diphtheria and pertussis used in the adolescent/adult-formulations. The "a" in DTaP and Tdap stands for "acellular," meaning that the pertussis component contains only a part of the pertussis organism.) For additional information on preventing tetanus through vaccination, please visit vaccineinformation.org/tetanus.

Resources

About Tetanus
cdc.gov/tetanus/about/index.html

Tetanus – Immune Platoon Disease Database
cdc.gov/bam/diseases/immune/db/tetanus.html

Tetanus – KidsHealth
kidshealth.org/parent/infections/bacterial_viral/tetanus.html

Tetanus: Protect Your Family with Vaccines
cdc.gov/Features/Tetanus

Tetanus – The Pink Book: Course Textbook – 13th Edition (April 2015)
cdc.gov/vaccines/pubs/pinkbook/tetanus.html

Tuberculosis

Tuberculosis (TB) is an airborne infection caused by the bacterium Mycobacterium tuberculosis (M. tuberculosis), which primarily infects the lungs but can infect other organs as well. TB is transmitted when droplets that carry the bacterium are expelled into the air when an individual with active pulmonary or laryngeal TB disease talks, coughs, sneezes, sings or shouts. There are two stages of TB, which are listed below.

Latent TB Infection (LTBI)

An individual becomes infected when TB bacteria are inhaled into the alveoli (tiny air sacs of the lung). During the initial period of TB infection, the body's immune system walls off the bacteria, preventing an attack on other organs or body systems. In individuals with non-compromised immune systems, the walled-off TB germ can lie dormant (asleep) for many years. Individuals who become infected with M. tuberculosis have no symptoms, do not feel sick and are not infectious (contagious) but do have a positive Mantoux tuberculin skin test. It is important to treat the LTBI to prevent active disease later.

Active TB Disease

If a person's immune system weakens, the wall breaks down; the germ awakens and attacks the body, causing active disease. Someone with active TB disease feels sick, has symptoms and is infectious (contagious). The symptoms of active TB disease will vary with the site of the disease (organ/system infected). The systemic symptoms of TB are the same regardless of the organ infected and include fever, night sweats, unexplained weight loss, fatigue and malaise. The lungs are the most common site of the disease — symptoms include cough lasting longer than three weeks and not responding to treatment, hemoptysis, chest pain and shortness of breath. Other organs/systems commonly infected in children include the brain/spinal cord (meningitis), the bone and the multiple organs/systems (disseminating or miliary TB).

A child does not usually transmit the disease to others because a child's cough is normally not forceful or deep enough to expel large amounts of bacteria into the air. TB is usually transmitted to children by close contact with an adult who has active TB. A young child with LTBI can progress quickly to active TB disease if not treated promptly. Infants and immunocompromised children are at higher risk for progressive primary or disseminated TB. Children from areas of the world with higher rates of TB or HIV associated with TB, such as Africa, India, Russia and Central/South America, may also be at higher risk. Helpful information about TB screening and treatment is listed below.

Some groups of children are at a higher risk for TB than others. They include:

- Children living in a house with an adult who had TB
- Children living in a house with an adult at high-risk for having TB
- Children with compromised immune systems
- Children born in or traveling to a country that has a high rate of TB

Screening

A Mantoux tuberculin skin test is placed on the child's forearm and read in 48 to 72 hours by a healthcare provider. The multiple-puncture test (Tine, Heaf) is not recommended as a screening tool. If the skin test is positive, it will leave a raised hardened bump (induration). Redness and/or soft tissue swelling does not indicate a positive reaction to the skin test. A positive skin test, indicating infection with the TB bacteria (LTBI), does not mean that the child has active TB disease. A positive skin test is followed by chest X-ray and other tests to rule out active TB disease as many children with TB do not present with symptoms.

Some children from outside the U.S. may have had BCG vaccine to prevent some serious forms of TB. This vaccine has been shown to have a relatively short-term effect in preventing disease. Children who have received BCG vaccine(s) may have false-positive tuberculin skin tests. However, tuberculin skin testing is not contraindicated for persons who have been vaccinated with BCG. All questions should be referred to the local health department.

Treatment

Treatment for TB infection and TB disease varies with each case. Treatment of LTBI is usually one drug (isoniazid) for nine months to prevent development of active TB disease. The treatment for active TB disease is a combination of four drugs. These antibiotics usually include isoniazid, rifampin, pyrazinamide, ethambutol or streptomycin for six to 12 months, depending on the site of disease. This long-term treatment is needed because the bacterium that causes TB multiplies very slowly. All active TB cases are treated with directly observed therapy (DOT) to ensure compliance with and completion of the treatment regimen.

Questions concerning children who have a positive skin test or who are being treated for active TB disease or LTBI should be referred to the child's primary care provider or local health department. Their primary care provider and/or the local health department will determine whether a child should be excluded from school.

Resources

Tuberculosis – CDC

cdc.gov/tb

Tuberculosis Section – Georgia Department of Public Health

dph.georgia.gov/tuberculosis-tb-prevention-and-control

Tuberculosis – KidsHealth

kidshealth.org/parent/infections/bacterial_viral/tuberculosis.html

School Health Clinic Guidelines For Sending Students Home

Communicable or infectious diseases are not uncommon in school-age children. Communicable means easily spread to others. For this reason, when a student is suspected of having a communicable (or infectious) disease, you may need to send the student home. Some of the diseases easily transmitted between students are chickenpox, measles, mumps, parvovirus, tuberculosis, hepatitis, Fifth disease, impetigo, mononucleosis, ringworm, sexually transmitted infections, gastroenteritis, influenza, Pertussis, etc.

To help you, the clinic personnel, decide if a student should be excluded from school, please refer to your district policies regarding exclusion from school and use the following checklist to assist you in the decision process. The list of signs and symptoms below may indicate the possibility of an infectious disease. If the symptoms point to possible infectious disease process, call the parent and send the student home for further medical follow-up. Write a progress note on any student that presents with these symptoms and be specific in your observations. Use back of this form for any additional notations.

_____Confusion Describe: _____

_____Fever (>____°F) Temperature: _____

_____Head Lice Describe: _____

_____Loss of appetite/stomachache (more than one day) Comments: (see back of page)

_____Persistent cough Comments: _____

_____Persistent itching Describe: _____
(include location)

_____Persistent lethargy (tiredness) Comments: _____

_____Persistent diarrhea Comments: _____

_____Rash or blisters (especially if draining) Describe: _____
(include location)

_____Ringworm Describe: _____
(include location)

_____Runny nose with green drainage (not on any treatment) Comments: (see back of page)

_____Vomiting more than once Comments: _____

These are only a few symptoms to be aware of and treatments vary for each disease or illness. It should be recommended to the parent(s)/guardian(s) that the student be seen by the doctor to determine if he/she has an infectious disease or illness. When excluding a child from school, send home with them any appropriate paperwork that may need to be signed by their doctor and/or parent/guardian. Informational material should be sent as well to assist the parent. Report to the Health Department if indicated.