

Maryland State Department of Education
Maryland Department of Health and Mental Hygiene
Maryland State School Health Council

MARYLAND STATE SCHOOL HEALTH SERVICES GUIDELINES

Management of
Communicable Diseases
In a School Setting

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INTRODUCTION

Communicable diseases are one of the most common causes of student absenteeism. Prevention and control of communicable diseases are recognized as essential responsibilities of the school health staff. Professional nurses were first introduced into the educational setting in the late 1800's for this purpose. An important goal of school health services today continues to be the prevention and control of communicable disease.

It is important to realize that methods used to control the spread of communicable diseases in the school setting have limitations. Many diseases have periods of communicability that precede the onset of identifiable symptoms or are without symptoms throughout the entire contagious period. Consequently, efforts to prevent or control the spread of communicable diseases must continue on an on-going basis.

Purpose

These guidelines will provide necessary information for school staff to identify and manage a student and/or employee with a suspected or confirmed infectious condition in a school setting. Procedures for the control of communicable diseases should be reviewed at least annually and revised as needed to assure conformity with current medical practices.

Definitions

Blood and body fluids – Amniotic fluid, human blood, blood products, breast milk, cerebrospinal fluid, menstrual blood, nasal secretions, peritoneal fluid, pleural fluid, purulent drainage, saliva, semen, synovial fluid, tears, vaginal secretions, and wound drainage.

Bloodborne pathogens – Microscopic organisms that are present in human blood or body fluids and which can cause disease in humans. (See also occupational exposure on page 4)

Carrier – An individual or animal that harbors a specific infectious agent, frequently in the absence of discernible clinical disease, and that is a potential source of infection to others.

Chemical disinfection – Application of a chemical agent to an article that renders the object incapable of transmitting disease to humans.

Colonization – The presence and multiplication of microorganisms, without tissue invasion or damage, resulting in a carrier state.

Contaminated – The presence of, or reasonably anticipated presence of, a potentially infectious agent on any item or surface.

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Direct contact transmission – “direct body surface to body contact and physical transfer of microorganisms between a susceptible host and an infected or colonized person.”¹

Exposure – Contact with an infectious person, environment, or contaminated item or surface that may be capable of disease transmission. Exposures are divided into three categories:

Percutaneous, mucous-membrane, and non-intact skin exposure to blood or other body fluids containing visible blood (Class I); Percutaneous, mucous-membrane, and non-intact skin exposure to body fluids or feces that do not contain visible blood (Class II); and Exposures of intact skin to blood or other body fluids containing visible blood (Class III).

Immunity – State of resistance to a communicable disease by a person due to natural body defenses or acquired by active or passive immunity.

Incubation period – The period of time from exposure to an infectious agent to the appearance of the first symptom(s).

Indirect contact – “contact of a susceptible host with a contaminated object, usually inanimate.”²

Infectious agent – An organism that is capable of producing infection or infectious disease in humans.

Occupational exposure – Skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties.

Period of communicability – The period of time during which an individual may transmit a disease either directly or indirectly.

Preventive measures – Actions taken to prevent or reduce the transmission of disease from one source to another.

Reportable disease – Diseases identified by the Maryland State Department of Health and Mental Hygiene (DHMH) as reportable to the local health department. (See Appendix E on Reportable Diseases and Conditions).

Sharps – Needles, broken glass, exposed dental wires, and other objects that are capable of puncturing human skin.

¹ American Academy of Pediatrics. In Pickering LK, ed. *2000 Red Book: Report of the Committee on Infectious Diseases*. 25th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2000: pp. 130-131.

² Ibid. p. 131.

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Special medical waste – Blood in liquid form, articles and materials such as bandages, paper towels, tissues, etc. that are contaminated with blood or body fluids.

Standard precautions – Guidelines recommended by the Centers for Disease Control and Prevention (CDC) to reduce the risk of transmission of blood-borne and other pathogens; they apply to blood, all body fluids, secretions, excretions (regardless of whether they contain blood), nonintact skin, and mucous membranes. The precautions are designed to reduce the transmission of microorganisms from both recognized and unrecognized sources of infection.

Transmission – Transfer or passage of a specific infectious agent either directly or indirectly from a source person, animal or inanimate object to a susceptible host. Direct transmission occurs when the infectious agent is transferred by direct contact, i.e., touching, kissing, sexual intercourse, biting or by direct projection of droplet spread, i.e., talking, sneezing, spitting, coughing, or singing. Indirect transmission occurs via contaminated objects or materials, e.g., toys, soiled clothing, bedding, cooking or eating utensils, food, water, or milk.

Transmission-based precautions – Procedures designed for individuals known or suspected to be infected with or carriers of highly transmissible or epidemiologically important pathogens for which additional precautions beyond Standard Precautions are needed. There are three types:

- Airborne precautions (Examples of such illnesses include measles, varicella, tuberculosis)
- Droplet precautions (Examples of such illnesses include meningitis, pneumonia, diphtheria, mycoplasma pneumonia, pertussis, influenza, mumps, rubella)
- Contact precautions (Examples of such illnesses include infections or colonization with multidrug-resistant bacteria, respiratory syncytial virus, impetigo, pediculosis, scabies)

General Information

In accordance with Section 18-201 of the Health General Article, Annotated Code of Maryland and the Code of Maryland Regulations (COMAR) 10.06.01 the local school system (LSS) must work collaboratively with the county health department to control outbreaks of communicable diseases in the school setting. **In the event of an outbreak, only the county health officer has the legal authority to exclude students and/or employees from school buildings.**

Outbreaks of reportable diseases must be immediately reported to the local health department, communicable disease program, and the school health services office. A current list of reportable diseases shall be on file in each school health suite. Special attention must be paid to protecting students and employees who have an increased risk of contracting a communicable disease, such as those on immunosuppressive medication or those not immunized and pregnant women.

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Students suspected of or showing symptoms of communicable disease will be excluded from school in accordance with the Department of Health and Mental Hygiene (DHMH) *Communicable Disease Summary: Guide for School and Child Care* (See Appendix B) and local policies and procedures. Regulations regarding exclusions are developed by the DHMH through the local health departments. These agencies are designated by COMAR 10.06.01 to manage communicable disease issues. LSSs are required to follow these regulations.

Students and or staff suspected of having serious communicable diseases may be referred to the school health services office in collaboration with the local health department for case evaluation and management. In some cases, a team approach may be indicated. Information about individuals with a communicable disease must be maintained in a strictly confidential manner.

Exposure Control

Every school must follow and have available the exposure control plan for its jurisdiction. (Refer to the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standard, 29 CFR 1910.1030 and the *Resource Manual for Handling Body Fluids in the School Setting* for additional information on this topic).

In accordance with the exposure control plan, all employees who have been identified as having potential occupational exposure to blood-borne pathogens in compliance with OSHA regulations will be offered Hepatitis B vaccine. There will be no cost to the employee for the vaccine.

Each LSS, in collaboration with the local health department, will establish and standardize information about what constitutes an exposure and the procedure employees must follow when an exposure to potentially infectious blood or body fluids has occurred. The steps to follow after exposure must be easily understood by all employees and be readily available to supervisory personnel. Exposures must be medically evaluated as soon as possible after exposure for maximum benefit. Employees must know where to go for post exposure counseling and treatment.

Health Services staff will routinely provide information on proper handwashing techniques to students and employees.

Special medical waste will be handled and disposed of in compliance with the exposure control plan. Sharps will be placed in puncture proof containers and disposed of in compliance with the exposure control plan.

Implementation Procedures for the Control of Communicable Diseases

It is important to realize that methods used to control the spread of communicable diseases in the school setting have limitations. Many diseases have periods of communicability that precede the onset of identifiable symptoms or are without symptoms throughout the entire contagious period. Consequently, efforts to prevent or control the spread of communicable diseases must continue on an on-going basis.

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Standard precautions apply to blood, all body fluids, secretions, and excretions (regardless of whether they contain visible blood), nonintact skin, and mucous membranes. They are designed to reduce the risk of transmission of microorganisms from both known and unknown sources of infection. (Refer to the local school system exposure control plan).

Hand washing is the single most effective technique for preventing the spread of communicable disease. Handwashing should be done:

- Before and after eating, drinking, or smoking
- Before and after handling student's medication or food
- Before handling clean equipment or utensils
- Before and after assisting students with feeding and toileting
- Before and after using the bathroom
- Before putting on and after taking off protective clothing or equipment
- After contact with blood, body fluids, secretions, and excretions
- After handling soiled diapers, menstrual pads, clothing, or equipment
- After caring for any student, especially those with nose, mouth, or ear discharge or drainage, and before initiating contact with another student
- Before handling contact lenses
- Before using cosmetics

The supplies needed for handwashing include:

- Soap
- Running water
- Scrub brush (optional)
- Paper towels or mechanical hand dryer
- Waterless hand cleaners

The proper technique for handwashing include the following steps:

- Remove rings, watches, bracelets, etc.
- Wet hands.
- Develop a good lather by rubbing hands together or with a scrub brush. Wash hands, getting between fingers and under nails, for at least 10 to 15 seconds.
- Rinse well under running water.
- Dry thoroughly using paper towels or mechanical hand dryer.
- Use paper towels to turn off faucets.
- Apply lotion, if necessary, to maintain good skin condition.
- Disinfect jewelry before wearing by washing with soap and water.
- Discard soiled paper towels and other disposable items in covered receptacles lined with plastic bags, sealing and discarding bags daily.

Refer to *Proper Handwashing Technique* in Appendix A.

Protective Equipment

Gloves (powderless vinyl gloves recommended) must be worn when contact with body fluids is anticipated. Vinyl gloves are recommended because of the possibility that staff or students may have an allergy to latex. Gloves must be removed promptly after use and before touching any noncontaminated item or environmental surface. Hands must be thoroughly washed after removing gloves. Refer to *Proper Removal of Gloves* in Appendix B. Handwashing facilities must be easily accessible for both students and employees.

Masks, eye protection, and face shields should be worn during procedures and personal care activities likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. This is intended to protect the mucous membranes of the worker's or caregiver's eyes, nose, and mouth (e.g., plumbers working on equipment that has blood or body fluids and persons suctioning tracheostomies).

Nonsterile gowns will protect the caregiver's skin and prevent the soiling of clothing during procedures and personal care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Soiled gowns should be removed promptly and safely.

Protective barriers for performing mouth to mouth resuscitation must be readily available in all health suites.

Refer to the *Resource Manual for Handling Body Fluids in the School Setting* for additional information.

Personal Hygiene Measures

Using good personal hygiene measures protects both the individual and others from unnecessary exposures to infectious agents. Students and staff should:

- Maintain optimal health with adequate nutrition, rest, exercise, stress reduction, regular medical care, etc.
- Wash hands frequently.
- Keep fingernails short and clean.
- Avoid mouthing pencils, toys, and other items shared by others.
- Avoid sharing personal items such as combs, lipstick, nail files, etc.
- Avoid touching or rubbing eyes.
- Cover nose and mouth when coughing or sneezing and dispose of tissues appropriately.
- Avoid wearing jewelry during work hours.

Environmental Control

Infectious agents can be spread through contact with environmental surfaces. Additional precautions should be taken in schools serving developmentally delayed students and in those facilities where there is a known or suspected carrier of a communicable disease considered transmissible by contact, e.g. impetigo, streptococcus, or Hepatitis A in diapered or incontinent individuals.

In addition to routine cleaning, staff should:

- Maintain storage areas for clean clothing, supplies, equipment and utensils that are separate from storage areas for soiled items.
- Maintain areas for storage and handling of food, first aid supplies, and medications that are not in close proximity to areas for soiled items.
- After each use, clean surfaces used for diapering and food handling, and items that have been mouthed by students, such as mats, wedges, and special chairs. Use a fresh (prepared daily) solution of $\frac{1}{4}$ cup of household bleach to one gallon of water.
- Place soiled disposable items such as gloves, paper towels, diapers, cover-up sheets, under-pads etc. in covered receptacles lined with plastic bags. The bags are to be sealed and discarded daily. Avoid using cloth laundry bags.
- Establish an appropriate cleaning schedule for the custodial staff.
- Pay special attention to cleanup of blood and body fluid spills and follow approved procedures for cleanup.

Personal care equipment, which has been used, must be handled so as to prevent skin and mucous membrane exposure and contamination of clothing.

Linen (if used in the school setting) that is soiled with blood, body fluids, secretions, or excretions should be handled, transported, and processed in a manner that prevents skin and mucous membrane exposure and contamination of clothing. Follow the local school system's Exposure Control Plan.

Immunization Procedures

Immunizations significantly reduce occurrences of communicable disease. State law requires that all students present proof of compliance with state immunization requirements. Current immunization requirements are distributed by DHMH.

A school principal or other person in charge of a school, public or private, may not knowingly admit a student, or retain a student who does not meet the immunization requirements as defined in COMAR 10.06.04.

School administrators are required to comply with COMAR 10.06.04. Students who are not in compliance will be excluded because they do not meet minimum requirements for attendance. The regulation authorizes principals to *temporarily* admit homeless students

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or other students who present an appointment date (not to exceed 20 calendar days) to obtain missing immunization records or receive needed immunizations. Consult with the local health department regarding students who have difficulty obtaining needed immunizations or records. Homeless students must be temporarily admitted and arrangements made to obtain needed records or immunizations.

Reporting of Absentee Rates

Student absenteeism will be monitored at each school. Local school health services staff will contact the health services office when schools are reporting an increase in absentee rates above a locally determined level. An attempt should be made to informally ascertain the cause for the absenteeism. Rates over a specified level, as determined by the local school system in collaboration with the local health department, will be reported to the health services office. The health services office will notify the local health department of high rates and suspected outbreaks of communicable diseases as appropriate.

Management of Individuals with Suspected Communicable Disease

Student

When a student is suspected of having a communicable disease, the following steps will be taken in accordance with the *Communicable Disease Summary: Guide for School and Child Care* (See Appendix D):

- Isolate the student as appropriate.
- Notify the principal or designee as appropriate.
- Notify the parents or guardians.
- Exclude the student as appropriate and refer to a health care provider for diagnosis and treatment.
- Notify the health department of any reportable disease. Be prepared to give the student's name, date of birth, parents/guardians, address, phone number (work and home), and the name and number of the health care provider.
- Determine when return to school is appropriate, e.g., a communicable disease is ruled out by the physician, the period of communicability has passed, the student is receiving appropriate treatment, the doctor or health department verifies that the student is no longer infectious, or a team approach has decided that the student may return, etc.
- Maintain the student's right to privacy. The decision whether to share information concerning the student's health status should be made on a case-by-case basis with the principal making the final decision in consultation with the school nurse.

Employee

When an employee is suspected of having a communicable disease, the health services office, along with consultation of other appropriate school system personnel, will determine if it is appropriate to exclude an employee from the work site.

Team Approach for Students

A team may have to be convened to make recommendations to the superintendent/designee regarding the educational or employment setting and programs for individuals with specific diseases as determined by the health services office in collaboration with the local health department. The team should include:

- Health services office staff
- A representative from the local health department
- Risk management office staff
- School principal
- Student's parents or guardians
- Student's health care provider, if possible
- Central office personnel as appropriate (i.e., public information officer, transportation staff)

In making a recommendation, the team may request information from other appropriate persons, such as teachers, staff, and infectious disease specialists, as needed.

Management of the Carrier

Students who are carriers of some communicable diseases often are not a significant health risk to others and should be offered an appropriate education. Employees should follow the LSS procedures for carriers of communicable diseases. Both student and employee should be trained in control measures to minimize the transmission of the disease. Student and employee are expected to carry out those measures. Each case must be resolved individually with reasonable accommodations for an employee or student.

Special Communicable Disease Issues

1) Methicillin Resistant Staph Aureus (MRSA) and Vancomycin Resistant Enterococci (VRE) in the School Setting:

Please refer to Appendix A, *Guidelines for Determining Placement of Children with Methicillin Resistant Staph Aureus (MRSA) and Vancomycin Resistant Enterococci (VRE) into Educational Programs*, prepared and distributed by the DHMH. Be aware that children having invasive devices such as tracheostomy tubes, gastrostomy tubes, urinary catheters, IV lines etc. are more at risk when exposed to MRSA and/or VRE. Plans should be made to monitor the ongoing status of individuals with MRSA or VRE in consultation with the local health department and the health care provider.

2) Tuberculosis in the School Setting:

The local health department determines the need for tuberculosis screening and individual case management procedures. Any concerns or questions dealing with this disease should be referred to the local health department.

Selected References

Communicable Disease Summary

The Communicable Disease Summary: Guide for Schools and Child Care Settings, (1998), prepared and distributed by the Maryland Department of Health and Mental Hygiene (DHMH), the Community and Public Health Administration, and the Epidemiology and Disease Control Program, is included as a quick reference for staff seeking information on symptoms, incubation periods, length of communicability, etc. The summary addresses the diseases and conditions most frequently seen in the school setting.

Directory of Health Departments

A current directory of local health departments is included to assist staff in contacting their respective agency for information or consultation with communicable disease concerns or to report a confirmed illness or condition included on the list of Reportable Diseases and Conditions.

Fact Sheets

An index and individual communicable disease fact sheets are included to provide easy access for Health Services staff reference. This information may be copied and shared with students, parents and school staff. The fact sheets may be accessed via the Internet at <http://edcp.org/html/cdindex.html>.

Reportable Diseases and Conditions

A current listing of confirmed or suspected diseases and conditions that must be reported to the local Health Department by Health Care Providers in accordance with the Annotated Code of the Public General Laws of Maryland, Article 18-201, and the Code of Maryland Regulations (COMAR) 10.06.01, Communicable Diseases is included.

Resource Manual for Handling Body Fluids in the School Setting. Maryland State Department of Education, Department of Health and Mental Hygiene, AIDS Administration, 2000.

Appendices

- A. Proper Handwashing Technique
- B. Proper Removal of Gloves
- C. *Guidelines for Determining Placement of Children with Methicillin Resistant Staph Aureus (MRSA) and Vancomycin Resistant Enterococci (VRE) into Educational Program*, (2001). Maryland Department of Health and Mental Hygiene.
- D. *The Communicable Disease Summary: Guide for Schools and Child Care Settings*, (1998). Maryland Department of Health and Mental Hygiene.
- E. *Diseases and Conditions Reportable by Health Care Providers* (1999). Maryland Department of Health and Mental Hygiene.