

Strategies for the Prevention of Methicillin Resistant *Staphylococcus aureus* (MRSA) in Schools: Policy, Infection Prevention, & Education Recommendations

New Jersey Department of Health, Communicable Disease Service

The following strategies are meant to help schools, child care centers, camps, and sports teams prevent the spread of community-associated methicillin-resistant *Staphylococcus aureus* (MRSA) before an outbreak occurs. These strategies focus on creating proactive policies that address potential cases of MRSA, ensuring effective infection control measures to kill MRSA bacteria, and educating students and staff to prevent MRSA infections.

BACKGROUND

Staphylococcus aureus, or staph, is bacteria commonly found on the skin or in the nose of healthy people. Some staph bacteria have become resistant to the antibiotics meant to kill them. Staph that is resistant to methicillin/oxacillin antibiotics is called methicillin-resistant *Staphylococcus aureus*. MRSA can be transmitted from person to person through close contact. Risk factors associated with the spread of MRSA includes living or working in crowded areas, frequent skin-to-skin contact, compromised skin (i.e. cuts or lesions), contaminated items or surfaces, and a lack of cleanliness. Outbreaks of MRSA have occurred in places including schools, child care centers, camps, dormitories, gyms, locker rooms, and among sports teams.

Single cases of MRSA infections should not be reported to the New Jersey Department of Health (NJDOH). **Confirmed or suspected outbreaks of MRSA should be immediately reported to the local health department where the facility is located.** Two or more cases of confirmed or suspected MRSA that occur within 14 days are considered a suspected outbreak. A confirmed outbreak is defined as two or more confirmed or suspect cases that are epidemiologically linked within a 14 day period. When reporting outbreaks of MRSA, NJDOH will be able to provide facilities with resources and subject matter expertise that can help stop other individuals from being infected with MRSA. If your school, child care center, camp, etc. suspects that there is an outbreak of MRSA, immediately contact the local health department where your facility is located.

Throughout this document schools, child care centers, camps, and other facility or organizations will be referred to as "schools." For ease of use, whenever a recommendation includes information that is important for child care centers, sports teams, or schools with athletics, you will see the symbols shown below:



Indicates information that may be especially important for **child care centers**



Indicates information that may be especially important for **sports teams or schools with athletics**

POLICY RECOMMENDATIONS

To limit the spread of MRSA infections in school settings, NJDOH recommends that schools include the following items in their policies, when possible:

Policy: *School staff shall take an active role in identifying skin infections.* Taking an active role includes educating students to notify school staff if they have any unusual, draining, or painful skin lesions and performing visual checks of exposed scrapes, scratches, or wounds.



Athletic coaches and teachers of sports teams, clubs, and classes should ask students about any lesions



before all sport practices, games, classes, or competitions, with a special emphasis on surveillance of groups involved in contact sports (e.g. football, wrestling). Students participating in games, meets, or competitions must comply with [New Jersey State Interscholastic Athletic Association \(NJSIAA\) rules and regulations](#), including compliance with infection prevention and control policies and skin checks.

Rationale: Transmission of MRSA infection among students and student athletes can have substantial public health impact. Actively asking students about potential MRSA infections can help prevent the spread of MRSA. These activities can ensure that a student can be referred for medical evaluation at the first sign of infection. NJSIAA rules and regulations must be followed in order for students to participate in various sport competitions.

Policy: *Students who complain of wounds or skin lesions that are painful or draining should be sent to the school nurse, health services, or appropriate staff member.* The potentially infected area should be completely covered and the student should perform hand hygiene before the student returns to their daily activities.

Rationale: Students with unusual skin lesions or other draining wounds could potentially transmit infectious agents to other students, teachers, and staff. Covering a potentially infected area can greatly reduce the risk of further contamination and prevent the spread of infection.

Policy: *When a MRSA or other skin infection is suspected, the student's guardian should be notified of the suspected infection.* The student should be referred to their primary care provider for evaluation and treatment. Following medical evaluation, the student or parent should be asked to provide verification of the healthcare provider's treatment plan, if applicable. If the student does not have a primary care provider, the school district shall coordinate an examination as per N.J.A.C. 6A.

Rationale: Proactively seeking evaluation and treatment can reduce the negative impact of the infection on a student's health. Providing documentation of the student's treatment plan will allow the school to ensure that the treatment plan is followed properly. Students infected with MRSA should follow their healthcare provider's treatment plan.

Policy: *If a student is diagnosed with MRSA, the school will ask the student and/or guardian if the student's teammates, friends, roommates, or family members have had a MRSA infection in the past month.* If other infected persons are suspected or identified in two or more households, the school or daycare will contact their local health officer or department to report an outbreak of MRSA.

Rationale: All school districts are required as per N.J.A.C. 6A and 8:57 to immediately report any suspected or confirmed outbreaks to their local health department. When transmission of MRSA is suspected, NJDOH and local health departments need to record the outbreak and assist in a public health investigation to ensure that future exposures to MRSA are stopped as soon as possible.

INFECTION PREVENTION

When a student with a suspect or confirmed MRSA skin infection is in the classroom or participating in sports teams and clubs, proper control measures should be followed. Control measures are practices for preventing additional infections. NJDOH recommends that schools, at a minimum, promote the following control measures, which focus on stopping the spread of infection through the environment, ensuring personal hygiene, and preventing contact with an infected site.

Prevent Environmental Contamination

Control Measure: *Clean high-traffic areas appropriately and regularly.* The school custodial staff should ensure that they are using [cleaning products that are registered as effective against MRSA by the U.S. Environmental Protection Agency](#) (EPA). High-traffic areas within the school should be cleaned as often as possible or at least daily. These areas may include bathrooms and sinks, gymnasiums, cafeterias, libraries, and other areas where students congregate. Special attention in cleaning and disinfection should be applied when cleaning high-touch surfaces and surfaces that come into contact with a person's skin (e.g. doorknobs, tables, handrails, chairs, wrestling mats, and other athletic equipment).



Rationale: Not all cleaning products are effective against MRSA and other bacteria. If a school is using an ineffective product, cleaning does not kill MRSA in the environment. Ensuring that high-traffic areas are cleaned properly reduces the risk that students and staff may become infected with MRSA.

Control Measure: *Make cleaning and disinfection products readily available to students and staff.* The school custodial staff should ensure that EPA registered cleaning wipes effective against MRSA are available for students and staff in high-traffic and high-risk areas. Cleaning wipes should be accessible in locker rooms, gymnasiums, weight rooms, libraries, and cafeterias so that students and staff can wipe down personal items, machines, equipment, and eating spaces before and after use. Signs may be posted to instruct students to clean their areas to ensure the appropriate use of wipes.



Rationale: If increased cleaning by custodial staff is not possible, providing EPA registered cleaning wipes to students and staff can reduce environmental contamination. MRSA bacteria have been found on high-touch school areas such as computer keyboards and workout machines. Providing EPA registered cleaning wipes may reduce the number of students or staff that touch contaminated surfaces between regular cleanings.

Control Measure: *Target cleaning of shared items and equipment.* Custodial staff should establish a written procedure and schedule for routine cleaning of items that are rented or shared between classrooms or students. This should include any materials sent to different classrooms, such as technology that is 'rented' for a period of time, toys, or athletic equipment. If there is equipment that has been in contact with potentially infectious wounds, drainage, or blood, staff should use a EPA registered disinfectant cleaner that meets the requirements of the [Bloodborne Pathogens Standard](#) developed by the Occupational Safety and Health Administration.



Rationale: Ensuring that athletic equipment and surfaces are not contaminated will reduce the risk of infection for other students, student athletes, and staff.

Control Measure: *Launder soiled clothing appropriately.* Guardians should be instructed to wash clothes and other soiled items (e.g. towels, sheets) with hot water and laundry detergent and dry items in a hot dryer to help eliminate bacteria, as appropriate. If the student or their guardian is not able to launder soiled clothing appropriately, the school should develop a method of ensuring that the student's clothing is appropriately cleaned.



Rationale: Like contaminated surfaces and equipment, clothing should be cleaned appropriately as well to remove any bacteria. Proper use of detergent, hot water, and hot dryers help ensure all bacteria is eliminated from clothes.

Promote Personal Hygiene

Control Measure: *Ensure that hand hygiene stations are available.* Alcohol-based hand sanitizer

stations should be located in all high-traffic areas to ensure that students and staff clean their hands before eating and after activities such as touching doorknobs and water fountains or opening lockers. Custodial staff should ensure that hand sanitizer stations are kept full.

Rationale: Increasing opportunities for hand hygiene can help reduce risk of infection in high-traffic areas.

Control Measure: *Encourage consistent hand hygiene.* The school nurse, teachers, and staff should promote that students thoroughly wash their hands using soap and warm water for at least 20 seconds when visibly soiled and use alcohol-based hand sanitizer when hands are not visibly soiled. Athletic coaches and teachers of sports teams, clubs, and classes should ensure that students wash their hands before and after every class, practice, game, or competition.



Rationale: Proper hand hygiene is one of the most basic ways to prevent the spread of infections.

Control Measure: *Prohibit sharing personal items.* Instruct students and student athletes to avoid sharing personal hygiene supplies and other items such as athletic clothing, towels, uniforms, lip balms, lotions, soap, razors, and personal sports equipment at all times. It is particularly important to avoid sharing personal items that may have been in contact with an infected wound or bandage. Hanging signs in bathrooms and locker rooms can encourage the proper use of personal items.



Rationale: Sharing personal items will allow the spread of bacteria from one person to another. Prohibiting the sharing of items that come in contact with a person's skin will reduce the risk of spreading MRSA infections.

Control Measure: *Promote personal hygiene before and after athletic events.* Athletic coaches and teachers of sports teams, clubs, and classes should ensure that students wash their hands before and after every class, practice, game, or competition. Students participating in contact sports (e.g. wrestling, football) or water activities (e.g. swimming, diving) should be encouraged to shower with personal soap before and after the game or activity.



Rationale: Washing hands and showering before contact activities can reduce the spread of potentially infectious agents.

Infection Control

Control Measure: *All wounds must remain properly covered.* All known or suspected skin infections must be covered with a clean, dry bandage to contain the drainage while the student or staff member is at school or attending school sponsored events. If a known or suspected skin infection is not covered or the bandage becomes wet, the infected student or staff should be send to the school nurse's office for the bandage to be changed.



Rationale: Keeping wounds covered will help control the spread of potentially infectious drainage to others and can protect the environment from contamination.

Control Measure: *Ensure infected athletes do not put others at risk.* Students participating in contact sports or other contact activities should ensure that their wound dressing stays intact during the anticipated activity. If the student athlete is participating in water sports such as swimming, water polo, or diving, the student's wound should be covered by water tight bandages.



Athletic coaches and teachers should actively check students with infections to make sure their

bandages remain intact and immediately pull students out of play if a bandage is removed during play. If a wound cannot be adequately covered or the drainage cannot be contained by the bandage, consider excluding the student or athlete from practice, game, class, or competition until the lesion is healed. Students participating in games, meets, or competitions must comply with NJSIAA rules and regulations, when relevant, including restricting participation if a student's infection cannot be controlled or puts others at risk.

Rationale: Keeping wounds covered will help control the spread of potentially infectious drainage to others and can protect the environment from contamination. Because bandages can shift or dislodge with activity or when wet, student athletes should pay careful attention to their bandages to ensure other athletes do not make contact with any potentially infectious wounds.

Control Measure: *Proper use of standard precautions is necessary.* The school nurse and other staff must follow standard precautions when providing wound care or dressing changes. This includes washing hands, wearing new gloves, and changing gowns or other barriers that have been in contact with an infected site. Contaminated dressings and other materials that had contact with a skin infection should be sealed in a plastic bag and appropriately discarded.



Rationale: Standard precautions and environmental cleaning have been proven to dramatically reduce the risk of transmitting potentially infectious agents. Ensuring that the school nurse and student care areas are not contaminated will reduce the risk of infecting others.

EDUCATION



It is important that students and staff are educated on how MRSA and other skin and soft tissue infections may spread. The five primary factors that facilitate the transmission of MRSA are: crowding, frequent skin-to-skin contact, compromised skin (i.e. cuts or lesions), contaminated items or surfaces, and a lack of cleanliness. Athletes and other students and staff involved in high-risk activities are likely to be in environments that include many of the factors that facilitate transmission of MRSA. These students and their parents should be educated on the preventable risk factors for MRSA, including:

- Contact with uncovered skin lesions,
- Sharing of person hygiene items,
- Sharing towels or clothing that has not been laundered
- Sharing of sports equipment, and
- Infrequent handwashing and poor hygiene practices

Education may also include the hanging of posters and placement of educational materials where students and staff may congregate. Posters and educational materials, including sports-specific signage, may be found at the [NJDOH](#) and [CDC](#) websites.

CONCLUSION

Transmission of MRSA skin and soft tissue infections among students and student athletes is always a possibility. Schools, daycares, and sports teams should be proactive in order to prevent the spread of MRSA. Skin infections must be recognized promptly and steps like those described above must be taken to limit the spread of infection to others. If a facility has any questions about how to prevent or address MRSA infections, they should never hesitate to contact NJDOH at 609.826.5964 during regular business hours.

If at any time a school has identified two or more cases of confirmed or suspected MRSA within 14 days,

the facility is required to report the suspected outbreak immediately to their local health department. Contact information for all local health departments can be found at localhealth.nj.gov. When reported, NJDOH and the local health department will be able to provide facilities with resources and subject matter expertise that can help stop other individuals from being infected with MRSA.

ADDITIONAL RESOURCES

Information and Advice about MRSA for School and Daycare Officials. Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/mrsa/community/schools/index.html>

MRSA Information for Coaches, Athletic Directors, and Team Healthcare Providers. Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/mrsa/community/team-hc-providers/index.html>

General Information about MRSA in the Community. Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/mrsa/community/index.html>

General MRSA Information and Educational Resources. Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/mrsa/community/posters/index.html>

New Jersey State Interscholastic Athletic Association website. Available at: <https://www.njisaa.org>

EPA's Registered Products Effective Against Methicillin Resistant Staphylococcus aureus (MRSA) and Vancomycin Resistant Enterococcus faecalis or faecium (VRE). Environmental Protection Agency. Available at: https://www.epa.gov/sites/production/files/2015-09/documents/list_h_mrsa_vre.pdf

OSHA's Bloodborne Pathogens Standard. Occupational Safety and Health Administration. Available at: https://www.osha.gov/OshDoc/data_BloodborneFacts/bbfact01.pdf

NCAA Sports Medicine Handbook 2014-15. National Collegiate Athletic Association. See: "Guideline 2J Skin Infections." Available at: <https://www.ncaapublications.com/p-4374-2014-15-ncaa-sports-medicine-handbook.aspx>

Antibiotic Resistance: Resources for Schools, Teachers, and Athletes. New Jersey Department of Health. Available at: <http://www.state.nj.us/health/cd/ar/#sta>