

MRSA OVERVIEW for Schools

Methicillin-Resistant *Staphylococcus aureus*

Staphylococcus aureus, or “staph,” are bacteria commonly carried on the skin or in the nose of healthy people. Approximately 25% to 30% of the population is colonized (when bacteria are present, but not causing an infection) in the nose with staph bacteria. Sometimes, staph can cause an infection. These bugs are one of the most common causes of skin infections in the United States. Most of these skin infections are minor (such as pimples and boils) and can be treated without antibiotics. However, staph also can cause serious infections (such as surgical wound infections, bloodstream infections, and pneumonia).

Some staph are resistant to antibiotics. Methicillin Resistant Staph aureus or MRSA is a type of staph that is resistant to a family of antibiotics commonly used to treat staph infections that include methicillin, oxacillin, nafcillin, penicillin and amoxicillin. While 25% to 30% of the population are “colonized” or are carriers of staph; about 1% of the population are colonized with MRSA.

Staph infections, including MRSA, occur most often among persons in hospitals and healthcare facilities (such as nursing homes and dialysis centers) who have weakened immune systems. These healthcare-associated staph infections include surgical wound infections, urinary tract infections, bloodstream infections, and pneumonia.

MRSA and other staph can also cause illness in persons outside of hospitals and healthcare facilities. MRSA infections that are acquired by persons who **have not** been recently (within the past year) hospitalized or had a medical procedure (such as dialysis, surgery, catheters) are known as Community-

Associated or CA-MRSA infections. People who are colonized with staph or MRSA do not usually have any symptoms. Staph or MRSA infections in the community are usually manifested as skin infections, such as pimples and boils, and occur in otherwise healthy people. These skin infections often begin with an injury to the skin such as a cut or scrape which allow the bacteria to enter the skin and cause an infection. Symptoms of infection include: Redness, warmth, swelling, tenderness of the skin, and boils or blisters. (Some infections are mistaken as “spider bites.”). Some people may also develop fever and chills.

Staph bacteria are one of the most common causes of skin infection in the United States and are a common cause of pneumonia, surgical wound infections, and bloodstream infections. The majority of MRSA infections occur among patients in hospitals or other healthcare settings; however, it is becoming more common in the community setting. Data from a prospective study in 2003, suggests that 12% of clinical MRSA infections are community-associated, but this varies by geographic region and population.

Some settings have factors that make it easier for staph infections (including MRSA) to be transmitted. These factors, referred to as the “5C’s” are as follows: **C**rowding, frequent skin-to-skin **C**ontact, **C**ompromised skin (i.e. cuts or abrasions, **C**ontaminated items and surfaces, and lack of **C**leanliness. According to the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia locations where the 5C’s are common include schools, dormitories, military barracks, households,

correctional facilities, and child care centers.

In the outbreaks of MRSA investigated recently by CDC, the environment has not played a significant role in the transmission of the organism. MRSA is transmitted most frequently by direct skin-to-skin contact.

GUIDELINES FOR SCHOOLS

MRSA in Schools

In the absence of an outbreak, individual cases of infections caused by these organisms in school do not warrant school closures or massive cleaning and disinfection efforts. The decision to close a school for any communicable disease should be made by school officials in consultation with local public health agencies and/or the Missouri Department of Health and Senior Services. MRSA skin infections are transmitted primarily by skin-to-skin contact and contact with surfaces that have come into contact with someone else's infection. When MRSA infections occur, cleaning and disinfection should be performed on surfaces that have come into contact with someone else's infection.

Cleaning and disinfection

Cleaning surfaces with detergent-based cleaners or Environmental Protection Agency (EPA)-registered disinfectants is effective at removing MRSA from the environment.

- Read instruction labels on all cleaners to make sure they are used safely and appropriately.
- Environmental cleaners and disinfectants should not be used on the skin to treat infections. In addition, antiseptics that are meant for use on the skin are not appropriate for environmental cleaning and disinfection.
- The EPA provides a list of disinfectants effective against MRSA.

www.epa.gov/oppad001/chemregindex.htm

Should the entire school community be notified of every MRSA infection?

- In Most cases it is unnecessary to notify the entire school community about a single MRSA

infection. The school nurse or physician should determine based on their medical judgment, whether some or all students, parents, and staff should be notified. In all cases the confidentiality of the student(s) must be maintained. Consultation with the local public health agency and/or DHSS should guide this decision.

Should students with MRSA skin infections be excluded from attending school?

- Unless directed by a physician, students with MRSA infections should not be excluded from attending school.
 - Exclusion from school should be reserved for those with wound drainage ("pus") that can not be covered and contained with a clean, dry bandage, and for those who cannot maintain good personal hygiene **no matter what organism is causing the infection.**
 - Students with active infections should be excluded from activities where skin-to-skin contact is likely to occur(e.g., sports) until their infections are healed.
- Students who are simply colonized with MRSA do not need to be excluded from school. *Staphylococcus aureus* commonly lives on or "colonizes" the skin of children and adults without causing disease.

Teachers

- If you observe children with open draining wounds or infections, refer them to the school nurse.
- Enforce hand hygiene with soap and water before and after using the bathroom. Alcohol-based hand sanitizers can be used if hands are not visibly soiled.

School Health personnel

- Use standard precautions (e.g., hand hygiene before and after contact wearing gloves) when caring for non-intact skin or potential infections. Use barriers such as gowns if soiling of the clothes is likely and face/eye protection if splashing is anticipated.
- Bandages and tape can be discarded in the

regular trash.

To prevent MRSA infections at the school, consider these general guidelines:

- Regular handwashing is the best way to prevent getting and spreading staph/MRSA. Encourage and practice hand hygiene.
- Practice and encourage good skin care. Since staph infections start when staph enter the body through a break in the skin, keeping skin healthy and intact is an important preventative measure.
- Ensure access to sinks, soaps, and clean towels.
- Ensure the availability of alcohol-based hand sanitizers, if soap and water are not accessible.
- Encourage daily showers with soap and water.
- Discourage sharing of personal items such as towels, razors, and toothbrushes.
- Regularly clean sinks, showers, and toilets by cleaning with a disinfectant detergent.
- Disinfect athletic equipment between users especially wrestling mats, benches and other items where there is skin contact.
- Launder sheets, towels, sports uniforms, and underclothing with hot water and detergent, and dry on the hottest setting.
- Wear gloves when handling dirty laundry.
- Wear gloves when caring for another person's wounds, and protect clothing from touching wounds or bandages.
- Encourage those infected to always keep draining lesions covered with dressings.
- Dispose of dressings containing pus and blood carefully.