MRSA & Staph in Schools
By Daniel Mahoney

School sports and activities such as wrestling, football, cheerleading, riding the bus and using the locker room all involve close contact with surfaces and other individuals. This contact creates the opportunity to spread skin infections. According to the New Jersey Department of Health and Senior Services, some common behaviors that can increase the potential for spreading Staphylococcus aureus, often referred to as staph, include:

• Sharing personal care items such as razors, bar soap, cosmetics or towels;
• Sharing clothing and uniforms that are not properly laundered;
• Sharing uncleaned athletic gear such as pads or helmets;
• Using mats and equipment that have not been disinfected.

The keys to reducing the potential spread of communicable disease are educating students and employees on personal hygiene, laundering clothing, covering skin wounds and disinfecting sports equipment and mats before and after use.

Staph
Staph is a type of bacteria commonly carried on the skin or in the noses of healthy people. Staph bacteria are among the most common causes of skin infections in the U.S. Most of these skin infections are minor and can be treated without antibiotics. However, staph bacteria can also cause serious infections (CDC, 2013b).

Skin infections caused by staph bacteria, including Methicillin-resistant Staphylococcus aureus (MRSA), may look like a pimple or boil, can be red, swollen or painful and can result in pus or other drainage. More serious infections may cause pneumonia, bloodstream infections or surgical wound infections (CDC, 2013b).

Skin Infection Risk Factors
CDC (2013c) recommends focusing on the five Cs when evaluating the risk factors associated with MRSA and staph skin infections:

• Crowding: School activities and conditions that involve large numbers of students in close proximity to each other enhance the risks.
• Contact: Sports activities that, by their nature, involve frequent skin-to-skin contact increase the chance of transmitting skin disease.
• Compromised skin: Cuts and abrasions that are not properly covered increase the chance that an individual may transmit or become infected.
• Contaminated items and surfaces: Equipment, materials and other sports-related supplies can support infectious bacteria. Those who come in contact with contaminated items may contract the skin infection.
• Cleanliness: Personal hygiene can reduce the potential for transmission of a skin infection. Schools can provide proper sanitizing equipment and encourage students to use these items to reduce the incidence of infectious bacteria on their skin. Educate students on handwashing basics, including vigorously washing with soap and water, using an alcohol-based hand rub and showering after rigorous activities are performed.

Guidelines for Athletes
Schools can help educate athletes by addressing the following items at the beginning of each season (CDC, 2013e).

Monitor Skin & Communicate
• Inform a parent, guardian, coach, school nurse, trainer or other healthcare provider if a possible skin infection has been detected. Early detection can reduce the amount of lost playing time and can decrease the chance the infection will become more severe.
• Inspect the skin for redness, warmth, swelling, pus and pain when abrasions or cuts are present.
• Infections can also occur at sites covered by body hair or where uniforms or equipment cause skin irritation or rubbing.
• Do not try to treat the infection by picking or popping the sore.
• Cover the area with clean, dry bandages until a healthcare provider is seen.

Practice Good Personal Hygiene
• Wash hands frequently with soap and water or an alcohol-based hand rub. Clean hands after playing sports, sharing weight-training equipment, caring for wounds, changing bandages and after using the toilet.
• Use liquid-based soaps instead of bar soaps when sharing with others.
• Use alcohol-based hand rubs and sanitizers when water and sinks are not available.
• Shower immediately after exercise and do not share towels.
• Wash uniforms and clothing after each use.

Take Care of Skin
• Wear clothing or gear designed to prevent skin abrasions and cuts.
• Cover skin abrasions and cuts with clean, dry bandages until healed.
• Change bandages following a healthcare provider’s instructions.

Determining When to Exclude Athletes From Events
When determining if athletes should be excluded from participating in an event, CDC (2013d) recommends the following:
• If sport-specific rules do not exist, in general, athletes should be excluded if wounds cannot be properly covered during participation.
• The term properly covered means that the skin infection is covered by a securely attached bandage or dressing that will contain all drainage and will remain intact throughout the activity.
• If wounds can be properly covered, good hygiene measures should be stressed to the athlete such as performing hand hygiene before and after changing bandages and throwing used bandages in the trash.
• A healthcare provider might exclude an athlete if the activity poses a risk to the infected athlete’s health (such as injury to the infected area), even if the infection can be properly covered.
• Athletes with active infections or open wounds should not use whirlpools, therapy pools and other common-use water facilities such as swimming pools that have not been cleaned between usage until infections and wounds have healed.
Do Not Share Items That Come in Contact With Skin

• Avoid sharing personal items such as towels and razors.
• Do not share open ointment containers (applied by placing hands into the container).

Take Precautions With Common Surfaces & Equipment

It may be difficult to determine if a surface has been cleaned. If unsure:
• Use a barrier, such as clothing or a towel, between skin and shared equipment.
• Shower immediately after having direct skin contact with people or shared surfaces.
• Clean hands regularly.
• Keep cuts and scrapes clean and covered with bandages or dressings until healed.

These procedures are especially important in locker rooms, gyms and other workout areas.

Guidelines for Coaches

Coaches working directly with students have an opportunity to observe, educate and intervene when they see students who may have unprotected skin conditions or who are demonstrating behaviors that may pose a communicable disease potential. CDC (2013d) guidance for coaches and athletic directors includes:
• Refer athletes with possible infections to a healthcare provider such as a team physician, athletic trainer, school nurse or primary care doctor.
• If the athlete is younger than 18 years old, notify the athlete’s parents/guardians about the possible infection.
• Educate athletes on ways to avoid spreading the infection.
• Consider excluding the athlete from participation until evaluated by a healthcare provider.

Cleaning & Disinfecting Athletic Facilities for MRSA

“Shared equipment that comes into direct skin contact should be cleaned after each use and allowed to dry. Equipment, such as helmets and protective gear, should be cleaned according to the equipment manufacturers’ instructions to make sure the cleaner will not harm the item,” (CDC, 2013a).

CDC (2013a) offers the following guidance for cleaning and disinfecting athletic facilities:
• Clean athletic facilities such as locker rooms to prevent the existence/spread of MRSA.
• Review cleaning procedures and schedules with the janitorial/environmental service staff.
• Every day, clean commonly touched surfaces and surfaces that come into direct contact with bare skin.

• Follow safety data sheets and instruction labels on cleaners and disinfectants, including household chlorine.

• Use detergent-based cleaners or EPA-registered detergents/disinfectants to remove MRSA from surfaces.
• Know that cleaners and disinfectants, including household chlorine bleach, can be irritating. Exposure to these chemicals has been associated with asthma and skin and eye irritation.

If you want something new, you have to stop doing something old.
Peter Drucker
bleach, so they are used safely and correctly.

• If using household chlorine bleach as a disinfectant, check the label to see if the product has specific instructions for disinfection. If no disinfection instructions exist, use 1/4 cup of household bleach in 1 gallon of water (a 1:100 dilution equivalent to 500 to 615 ppm of available chlorine) for disinfection of precleaned surfaces.

• Environmental cleaners and disinfectants should not be put on skin or on wounds and should never be used to treat infections.

• Know that insufficient evidence indicates large-scale use of disinfectants (e.g., spraying or fogging rooms and surfaces) will prevent MRSA infections more effectively than a more targeted approach of cleaning frequently touched surfaces.

• Repair or dispose of equipment and furniture with damaged surfaces that do not allow adequate cleaning.

• Cover infections to reduce the risk of surface contamination.

Daniel Mahoney, CSP, CIH, is vice president of risk control for Glatfelter Public Practice, a public entity specialist providing risk management services and insurance products to schools, municipalities, sewer/water authorities and emergency service organizations. For 28 years, Mahoney has provided safety, health and industrial hygiene services to a wide variety of public and private clients. He provides management guidance in industrial hygiene, health, safety, transportation and liability risk management. He has been published in ASSE’s Professional Safety and has been a guest speaker at local ASSE and AIHA chapter meetings. He is a member of ASSE’s Philadelphia Chapter and the Public Sector Practice Specialty. Mahoney may be contacted at dmahoney@glatfelters.com.

References


Reprinted With Permission

This article is reprinted with permission from Risk Communiqué, published by Glatfelter Public Practice, a division of Glatfelter Insurance Group.