



Rod R. Blagojevich, Governor
Damon T. Arnold, M.D., M.P.H., Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

MEMORANDUM

Date: January 2, 2009

To: Local Health Department Administrators

From: Damon T. Arnold, M.D., M.P.H., Director ATA

RE: IDPH Guidance on MRSA and other Staph infections in Schools

Attached you will find updated guidance on MRSA infection in schools. Sample letters to parents and infection control checklists are now included in this IDPH guidance, which also includes information on issues related to policy, infection control, and education/increased awareness.

Please be sure that this guidance is distributed to each public, private and parochial school within your jurisdiction.

For additional questions related to MRSA or other staphylococcal infections in schools, please contact Judy Conway, R.N., CIC, Infection Control Administrator at judith.conway@illinois.gov, or Craig Conover, M.D., Medical Director, Office of Health Protection, at craig.conover@illinois.gov.

cc: Dr. Christopher Koch, State Superintendent
Craig Conover, M.D., Health Protection, IDPH
Judith Conway, Health Protection, IDPH

**IDPH Guidance for Schools:
Students and Community Associated Staphylococcus Aureus (CA-MRSA) Infections
January 2009**

Background

Staphylococcus aureus, often referred to as “staph,” are bacteria commonly found on the skin or in the nose of healthy people. Approximately 25% to 30% of the population are colonized with staph bacteria (i.e., carry the bacteria without becoming ill). Sometimes staph causes minor skin infections (e.g., pustules, small boils) that can be treated conservatively, without antibiotics. However, on occasion, staph bacteria can cause much more serious skin infections, as well as bloodstream infections, pneumonia, etc.

Over the past several years, treatment of some staph infections has become more problematic because the bacteria have become resistant to various antibiotics. Methicillin-resistant *Staphylococcus aureus* (MRSA) is a type of staph that is resistant to some antibiotics, including the antibiotic methicillin. Infections caused by MRSA have historically been associated with ill persons in health-care institutions. However, MRSA has now emerged as a common cause of skin and soft tissue infections that may occur in previously healthy adults and children who have not had prior contact with health-care settings. This type of MRSA infection is known as community-associated MRSA (CA-MRSA).

CA-MRSA can be transmitted from person to person through close contact. Risk factors associated with the spread of MRSA includes direct skin-to-skin contact with colonized or infected persons (non-intact skin serves as a point of entry for the bacteria), sharing contaminated personal items (e.g., towels, razors, soap, clothing), inadequate personal hygiene, direct contact with contaminated environmental surfaces, and living in crowded settings. CA-MRSA infections are treatable; early recognition and good medical management, including, as needed, surgical drainage and proper antibiotic prescribing and use, help to ensure prompt resolution of infections.

Recently, the Illinois Department of Public Health (IDPH) has received increasing reports of both outbreaks and sporadic cases of CA-MRSA infections. Likewise, there has been an increase in the number of outbreaks of CA-MRSA skin and soft-tissue infections reported at the national level. Outbreaks of CA-MRSA have occurred among athletes, especially participants in contact sports (e.g., football, wrestling) and sports where participants are prone to skin abrasions.

Recommendations

To limit the spread of staph, including MRSA, in school settings, IDPH recommends the following with respect to policy, infection control, and education/increased awareness:

1. Policy

The school health service should take an active role in evaluating students with skin lesions, including lesions that resemble a “bug bite,” or other pustule skin lesions that appear to be infected. It is recommended that any unusual skin lesion or other draining wound be considered as potentially infectious to others and infection control measures should be in place to prevent the spread of infection. Students with any open, weeping, or pustule lesion on the skin (other than acne) should be promptly referred to a primary care provider for consultation.

MRSA generally does not spread through a shared classroom environment. However, transmission of MRSA infection among student athletes is well described, and can have substantial impact on students and schools. Therefore, a policy for active surveillance for skin infections should be implemented by the school nurse, school physician, and/or director, coach or trainer of sports teams (especially those teams involved in contact sports) to expedite referral for medical evaluation. Encourage coaches and/or athletic trainers to assess student athletes for any unusual skin lesions before practice or competition, and athletes to report skin lesions to coaches.

When MRSA infection is suspected, athletes should be referred to their primary care provider for evaluation and treatment. Following the medical evaluation, confirm that a treatment plan for the student athlete is in place. Those infected with MRSA or other staph infections should follow their healthcare provider's treatment plan, including completing antibiotic therapy, if an antibiotic was prescribed. (Note: IDPH has developed guidance for healthcare providers regarding MRSA infections, available at http://www.idph.state.il.us/health/infect/MRSA_Provider.htm.)

Because bandages can shift or dislodge with activity or when wet, students with draining wounds should not be allowed to participate in practices, games, or physical education classes that involves contact with others until the wound has stopped draining. A more stringent requirement, complete healing, may be recommended for wrestlers. The student may participate in non-contact athletic activities such as weight-lifting, running, or jogging provided he/she observes good hygienic practices (e.g., washing hands) and the wound can be covered at all times with a clean, dry, intact bandage taped on all 4 sides. In addition, IDPH [rules](#) prohibit use of licensed swimming pools by anyone with a skin infection, regardless of whether or not it is bandaged.

If MRSA is diagnosed in a student athlete, the school should evaluate the possibility of other cases among their teammates. Clusters of MRSA infections (i.e., two or more laboratory-confirmed cases during a 14 day period) should be promptly reported to the local health department, as required by Illinois Department of Public Health Rules and Regulations effective March 3, 2008. Please note that skin lesions are caused by numerous causes other than MRSA, and that self-reports of MRSA diagnoses are sometimes incorrect. Definitive confirmation of MRSA infection typically requires review of laboratory records or direct communication with a physician's office. In addition, two or more MRSA cases in a school do not necessarily mean transmission has occurred in the school setting. Local health departments can provide assistance in confirming MRSA diagnoses, evaluating the likelihood of facility-based transmission, and recommending control measures.

Typically, it is not necessary to inform the entire school community about a case of MRSA infection. When MRSA occurs within the school population, the school nurse and school physician should determine, based on the specific situation, and in consultation with school administrators, whether some or all parents and staff should be notified. It is prudent to notify parents of students on an athletic team when a case of MRSA has been confirmed in a team member; and school-wide notification is typically warranted when a school-associated outbreak has been confirmed by the local health department. In the event notification takes place, care must be taken to maintain the confidentiality of students to avoid stigmatization and anxiety. Local health departments can assist schools in making sure that notifications contain factually correct information.

2. Infection Control

The following infection control measures are prudent in school settings in order to reduce the likelihood of spread of skin infections:

- **Keep the Wound Covered.**

All skin infections, particularly those that produce pus, must be covered with a clean, dry dressing (e.g., bandage) to contain the drainage. Keeping the wound covered will help control the spread of potentially infectious drainage to others and can also protect the environment from contamination. When providing wound care or dressing changes in the school setting, staff must prevent any unprotected contact with potentially infectious materials by use of gloves. Use standard precautions (e.g., hand hygiene before and after contact, gloves) when caring for nonintact skin or potential infections. Use barriers such as gowns, masks, and eye protection if splashing of body fluids is anticipated. Contaminated dressings and other materials associated with the infected lesion should be placed in a plastic bag before discarding, as appropriate.

- **Hygienic Practices**

MRSA outbreaks have clearly occurred in settings where athletes did not have access to, or did not use soap for handwashing or showering. To prevent spread of MRSA or other infections, all members of the

school community should routinely be diligent with hand hygiene. To this end, ensure availability of adequate soap, warm water and towels. If facilities for hand washing are not available, provide alcohol-based waterless hand sanitizers with careful supervision to ensure appropriate and safe use.

- Advise any MRSA-infected student and all those who might have contact with the infected wound or wound dressing to thoroughly wash his/her hands using soap and warm water or to use an alcohol-based waterless hand sanitizer immediately after contact. Hand hygiene also should be performed after using multi-use equipment (e.g., weight equipment).

In addition, emphasize the importance of good hygiene overall with all students, including showering and washing with soap as soon as possible after ALL practices and competitions.¹ Showering also should take place before sports with extensive skin-to-skin contact (e.g., wrestling).

- **Sharing Personal Items**

Instruct students and athletes to avoid sharing personal hygiene supplies and other items such as athletic clothing, towels, uniforms, skin balms, skin lubricants, razors, and certain sports equipment. It is particularly important to avoid sharing personal items that may have been in contact with the infected wound or bandage. Also, do not permit students to share individual-use bars of soap. Provide alcohol-based waterless hand sanitizer for hand hygiene when soap and water is not available.

- **Laundering Soiled Clothing**

Team uniforms and clothing worn during practices should be laundered with hot water and laundry detergent as appropriate. Dry items in a hot dryer to help eliminate bacteria when possible. The disinfectant capability of chlorine bleach is well established. Its use is the most effective means of reducing the bacterial count in laundered items at any temperature. Oxygenated (color safe) bleach may reduce numbers of bacteria, but does not eliminate them, and oxygenated bleach is not approved for disinfecting and sanitizing by the EPA.

- **Environmental Surfaces**

Closure of schools for facility-wide disinfection is not recommended when MRSA infections occur. The most important approach to preventing MRSA transmission is through simple measures noted above, including good personal hygiene, and covering infections. However, the environment may play a role in some cases of MRSA transmission. Therefore, a written procedure and schedule should be established for routine surface cleaning of frequently touched surfaces and surfaces that come into direct contact with people's skin, such as shared athletic equipment (e.g., wrestling mats and strength training equipment). Ensure cleaning products are used in accordance with the manufacturer's instructions. Clean and disinfect environmental surfaces and athletic equipment that has been in contact with potentially infectious wound drainage, blood, or non-intact skin utilizing an EPA-registered disinfectant cleaner that meets the requirements of the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard or a 1:10 dilution of household chlorine bleach (1 part bleach in 9 parts water, prepared daily). Use an EPA-registered low-level disinfectant² (e.g., quaternary ammonium solution), 1:100 dilution of household chlorine bleach, or a general purpose cleaner to clean environmental surfaces and athletic equipment that is in contact with intact skin. Mats and other high-use equipment should be cleaned before and after each practice and several times a day throughout a wrestling tournament.

When feasible, use a clean towel as a barrier between bare skin and shared surfaces (e.g., exercise

¹ Students that require bandages taped on all four sides should shower at home. While in use, school showers should be cleaned and disinfected on a daily basis. In unusual situations where showering at home is not an available option, consult with the school nurse about use of a waterproof covering (plastic wrap or commercial product designed for this purpose), and infection control issues related to dressing changes, towels etc.

² A list of EPA approved disinfectants is available at <http://www.epa.gov/oppad001/chemregindex.htm>.

equipment). Use of barriers between bare skin and shared surfaces reduces the need for frequent sanitizer application. In addition, repair or discard equipment with damaged surfaces that cannot be adequately cleaned (e.g., equipment with exposed foam).

3. Education/Increased Awareness

Transmission of MRSA skin and soft tissue infections among students who participate in competitive sports is a significant concern. All persons (e.g., coaches, trainers, parents/caregivers, and teammates) associated with the school's competitive sport activities and sport teams should engage in initiatives to increase adherence to the school's policies and procedures designed to prevent transmission of MRSA skin infections, and awareness of risk factors for infections.

Providing information for student athletes and their parents regarding precautions and preventive measures related to CA-MRSA is prudent practice. Athletes and their parents should be aware that possible risk factors for MRSA skin and soft tissue infection occurring among athletes include:

- Physical contact/skin trauma
- "Turf burns"
- Contact with teammates' uncovered skin lesions
- Sharing protective equipment, clothing, or towels
- Sharing sports equipment
- Sharing personal hygiene items
- Reuse of unlaundered towels, clothing, uniforms, etc.
- Inadequate supply of dispensable or individual-use soap
- Cosmetic body shaving
- Poor personal hygiene practices, including infrequent hand washing
- Poor environmental cleaning of locker rooms/sport rooms

In addition, since staph infections start when staph enter the body through a break in the skin, keeping skin healthy and intact is a good preventive measure -- good skin care should be encouraged among student athletes.

Attachments:

- Sample informational letter to parents of student athletes
- Sample notification letter
- School athletic program infection control checklist (adapted from Tacoma-Pierce County (WA) Health Department. materials
- School health team infection control checklist (adapted from Tacoma-Pierce County (WA) Health Department materials

Additional Resources:

--MRSA Health Beat. Illinois Department of Public Health. Available at <http://www.idph.state.il.us/public/hb/hbmrsa.htm>

--Community-Associated MRSA Information for the Public. U.S. Centers for Disease Control and Prevention. Available at:

http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_public.html

http://www.cdc.gov/mrsa/mrsa_initiative/skin_infection/index.html

--MRSA Educational Materials (posters). U.S. Centers for Disease Control and Prevention. Available at:
http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_posters.html

--MRSA in Illinois: Guidelines for the Primary Care Provider. Illinois Department of Public Health. Available at
http://www.idph.state.il.us/health/infect/MRSA_Provider.htm

Sample informational letter for parents/guardians about MRSA (e.g., pre-season letter to all parents of football team members)

Dear Parent or Guardian:

You may have heard or seen media coverage concerning MRSA or methicillin-resistant *Staphylococcus aureus* infections in school-aged children. We would like to take this opportunity to provide you with some information about MRSA and, most importantly, how to prevent and control the spread of these infections.

Staphylococcus aureus, often referred to simply as “staph,” is a bacterium that is commonly carried on the skin or in the nose of healthy people. Approximately 30% of the population is colonized (when bacteria are present, but not causing an infection) in the nose with staph bacteria, and approximately 1% is colonized with MRSA, a type of staph that is resistant to certain antibiotics. Most of the infections caused by staph, including MRSA, are skin infections, such as boils. MRSA infections are most likely to occur among student athletes participating in sports where there is skin contact and/or trauma to skin (e.g., abrasions, “turf burns”). Staph skin infections can be red, painful, swollen, or have pus, or other drainage. Individuals who believe they may have a staph infection or MRSA infection should contact their medical provider for evaluation and appropriate treatment.

Practicing good hygiene is one of the most important things that we can all do to control the spread of staph and other infections:

- Keep hands clean by frequently washing with soap and water or using an alcohol-based hand sanitizer.
- Keep cuts and scrapes covered with a clean bandage until healed.
- Avoid contact with other people’s wounds or bandages.
- Avoid sharing personal items that directly touch the body, such as towels, razors, and water bottles
- Keep fingernails clean and clipped short.
- See your medical provider if you have a skin infection that is not getting better.

Students participating in contact sports or other activities that lead to close skin-to-skin contact should take additional precautions related to skin infections and hygiene:

- Do not share towels, clothing, or uniforms.
- Shower as soon as possible after practice or games are over; do not share bar soap.
- Keep equipment clean. Follow coaches’ directions about cleaning equipment.
- Wash dirty uniforms, practice clothing, and used towels with hot water and laundry detergent.
- Using a hot dryer, rather than air-drying, also helps kill bacteria.
- Report any cuts, abrasions, or wounds to the coach and school nurse.

Schools are cleaned daily with EPA-approved cleaners that kill a variety of viruses and bacteria, including MRSA. Although environmental cleaning is important for a variety of reasons, it is not a substitute for the measures listed above.

For more information about MRSA and how to prevent it, see:

- The Illinois Department of Public Health Website:
http://www.idph.state.il.us/health/infect/MRSA_home.htm
- The U.S. Centers for Disease Control and Prevention Website:
http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca.html

Contact Person

Address

Telephone

Fax

Sample informational letter informing parents/guardians of a cluster of MRSA skin infections

Dear Parent or Guardian:

(Insert name of school here) has received reports of (_____ e.g. *several cases*) of staph infection, possibly Methicillin-resistant *Staphylococcus aureus* (MRSA) within (e.g., *your child's athletic team*).

Staphylococcus aureus, often referred to simply as “staph,” is a bacterium that is commonly carried on the skin or in the nose of healthy people. Approximately 30% of the population is colonized (when bacteria are present, but not causing an infection) in the nose with staph bacteria. MRSA is a type of staph that has developed antibiotic resistance (certain antibiotics are unable to kill the bacteria). Since staph is spread primarily by direct (skin-to-skin) human contact or with direct contact to infection drainage of someone who is carrying or infected with the bacteria, anyone with a break in his or her skin is at risk for a staph infection. MRSA also may occur less frequently through indirect contact with contaminated surfaces or items.

Staph infections, including those due to MRSA, may begin abruptly. Symptoms may include a large area of redness on the skin, swelling and pain, followed by a pustule, abscess, boil or carbuncle (red, lumpy sores filled with pus). If left untreated, staph can infect blood and bones, causing severe illness that requires hospitalization. Individuals who believe they may have a skin infection should contact their medical provider for evaluation and appropriate treatment.

Students and their family members should take the following precautions to help prevent skin infections:

- Encourage students to keep their fingernails clean and clipped short.
- Encourage frequent hand washing with soap and warm water or using an alcohol-based hand sanitizer.
- Avoid contact with other people's infections or anything contaminated by an infection.
- Avoid sharing personal items that directly touch the body, such as razors, towels, deodorant, make-up, or soap.
- Clean and disinfect objects (such as gym and sports equipment) before use.
- Wash dirty clothes, linens, and towels with hot water and laundry detergent. Using a hot dryer, rather than air-drying, also helps kill bacteria.
- Encourage students who participate in contact sports to shower immediately after each practice, game, or match.
- Anyone assisting with infection care should wear gloves and wash their hands with soap and water before and after bandage changes.

Occasionally, students with MRSA infection require exclusion from the school setting — e.g., when draining lesions cannot be completely covered with a dry dressing, or if good hygiene habits cannot be maintained.

We encourage you to be vigilant in looking for signs and symptoms of staph infection. If you or any family members exhibit symptoms described above, contact your medical provider.

Attached you will find information developed by the Illinois Department of Public Health to assist you with the prevention and spread of MRSA. For more information about staph and MRSA, contact your medical provider, local health department, or check the Illinois Department of Public Health Website: http://www.idph.state.il.us/health/infect/MRSA_home.htm.

Contact Person

Address

Telephone

Fax

School Athletic Programs

SAMPLE INFECTION CONTROL POLICIES AND PROCEDURES CHECKLIST

Use this tool as a guide to determine which policies/procedures you already have, if they are being followed, and which policies and procedures you need to implement. This is a sample checklist; policies and procedures may vary.

	Policies/Procedures		
	Exist (✓)	Followed (✓)	Needed (✓)
General			
All hard environmental surfaces that may come into contact with body fluids are cleaned and sanitized daily with an EPA-approved disinfectant (if area in use).			
All floor and wall padding in athletic areas are washed daily, if athletic area is used.			
Separate mop heads/buckets are used for each activity area, locker rooms, and rest rooms. Mop heads and buckets are cleaned regularly.			
Towels/linens laundered on premises are washed in hot water and dried in a hot dryer			
<i>Notes:</i>			
Wrestling Room and Mats			
Wall padding, benches and door knobs are wiped-down with quaternary ammonium (quat) or 1:100 bleach solution after each practice and meet, and several times a day throughout a tournament.			
Floors are cleaned before and after any moveable mats are used.			
Mat surfaces with <i>small</i> holes or tears are repaired with mat tape. When mat sides are in poor condition, mats are taped together for meets <i>and</i> for practice.			
Mat surfaces are replaced promptly when there are <i>large</i> holes or surfaces are excessively worn.			
Both sides of mats are thoroughly cleaned before and after each use for practices and meets.			
A separate mop head/bucket is used specifically for cleaning mats; mop heads and buckets are washed regularly.			
<i>Notes:</i>			
Weight Room			
Weight machine padding is inspected regularly, and promptly replaced if punctured or torn.			
Tape on grip areas on weight bars, dumbbells and machines is replaced regularly.			
Grip areas on weight bars, dumbbells, and machines, and lift belts are wiped down daily.			

Wall dispensers of alcohol-based hand sanitizer ($\geq 60\%$ alcohol) are placed at each entry/exit. Athletes and coaches are instructed to use when entering/leaving room -- minimum use; may use more often.			
Floors, benches, supports, pads, light switches and door knobs are cleaned daily (when room in use).			
<i>Notes:</i>			
Locker Rooms/Shower Rooms			
Wall dispensers for liquid soap are located next to showers.			
Soap dispensers should have “unit” refills.			
All shower and locker room areas are cleaned and disinfected daily (if used).			
<i>Notes:</i>			
Sports equipment (balls, racket grips, bats, gloves) is cleaned regularly.			
All shared equipment that comes in direct contact with the skin of an athlete (wrestling head gear, football helmets, and fencing wires) should be cleaned and sanitized after each use.			
<i>Notes:</i>			
First Aid			
Hand sanitizer (60% alcohol or greater) is in first aid kit.			
When caring for any athlete injury, disposable gloves are used and hand hygiene is performed, both before and after providing first-aid.			
Scoops are used (not hands) to take ice out of cooler to make ice packs for injuries. Scoop is cleaned daily when in use and NOT stored in ice container.			
Single-use portions of antibiotics, salves and other ointments are removed from any larger dispensing unit prior to application. Any unused product is NOT returned to the original dispenser, but discarded.			
Athletes with open, potentially contagious wounds are kept from participating in contact sports until wounds are not draining.			
Athletes with potential skin infections are referred to the team physician or their own medical provider.			
<i>Notes:</i>			
Education of Athletes/Parents			
Athletes are encouraged to follow good hygiene practices, including frequent hand washing, showering immediately following each practice or competition, and NOT sharing water bottles.			
Athletes are instructed to NOT share personal hygiene items (bar soap, razors, etc.), or topical ointments, antibiotics and salves.			

<p>Athletes are encouraged to promptly report abrasions, lacerations or skin infections to a coach/team trainer or school nurse.</p>			
<p>Athletes who use weight room are encouraged to wear workout clothes that minimize skin contact with benches and equipment.</p>			
<p>Athletes are reminded to wash used practice clothes, uniforms, and towels. (Use hot water and bleach when feasible.)</p>			
<p>Athletes are informed of infection control precautionary measures, such as the importance of hand hygiene, showering immediately after sports activities, and washing practice clothes/uniforms after they are worn once.</p>			
<p><i>Notes:</i></p>			
<p>Signature: _____</p>	<p>Date: _____</p>		

School Health Team

SAMPLE INFECTION CONTROL POLICIES AND PROCEDURES CHECKLIST

Use this tool as a guide to determine which policies/procedures you already have, if they are being followed, and which policies and procedures you need to implement. This is a sample checklist; policies and procedures may vary.

	Policies/Procedures		
	Exist (✓)	Followed (✓)	Needed (✓)
Reporting			
If two or more MRSA cases that may be linked (e.g., in a classroom or one athletic team), the local health department is notified.			
Referrals are made to licensed physicians when a MRSA skin infection is suspected.			
Athletes are strongly encouraged to report possible skin infections to coaches and coaches/trainers are encouraged to assess athletes regularly for skin infections and report findings to school health team.			
<i>Notes:</i>			
Infection Control in the Health Room			
Contact precautions are used when doing wound care. Standard precautions are used in all circumstances.			
Disposable gloves are worn if contact with non-intact skin or mucous membranes is expected. Hand hygiene with soap and water or alcohol hand sanitizer is performed before starting care and <i>immediately</i> after removing gloves.			
Potentially contaminated surfaces are cleaned with an EPA-registered disinfectant. If surfaces are visibly soiled they are cleaned first and then wiped down with an EPA-registered disinfectant.			
Health room cots (surfaces that come in contact with patient) are cleaned if visibly dirty and wiped down after each use.			
Potentially soiled linen and clothing are washed with laundry detergent. Use hot water and bleach when feasible.			
Door knobs, phones, keyboards, light switches, and other hand-touch items in health room are cleaned/wiped down twice daily (if area in use).			
Medical machines are wiped with isopropyl alcohol or			

other low level disinfectant after each use.			
<i>Notes:</i>			
Prevention and Transmission Control -_General			
Persons with open wounds keep them covered with dressings that are taped on all four sides.			
Students or staff members who are MRSA-colonized or MRSA-infected are not routinely excluded from the classroom. Exclusion is reserved for those persons with wound drainage that cannot be contained with a clean, dry dressing taped on all four sides.			
Athletes and coaches who participate in contact sports are strongly encouraged to shower immediately after practices, matches, or games.			
<i>Notes:</i>			
Signature _____	Date _____		