

Information on Staphylococcal Infections For Jailors

The following guidelines are intended to serve as recommendations for the creation of a policy for the management of methicillin resistant Staphylococcus aureus (MRSA). These guidelines can be adapted to accommodate different facilities and environments.

Antibiotic resistant-bacteria currently pose a significant health threat. A person in your facility may have already experienced an infectious disease that has not responded to treatment with antibiotics. Two important factors in the development of resistance to any antibiotic are the extensive use of antibiotics and people sharing or not completing a course of antibiotics. While the situation is alarming, everyone can help in the effective control and prevention of antibiotic resistant infections. This information is provided to assist you specifically in the control and prevention of staphylococcal (commonly called staph) infections. However, these measures are effective against almost all infectious diseases.

BACKGROUND

Staphylococcus aureus

Staphylococcus aureus (staph) has long been recognized as a common cause of boils and soft-tissue infections as well as more serious conditions such as pneumonia or bloodstream infections. According to the Centers for Disease Control and Prevention, twenty-five to thirty per cent of adults and children in the United States are “colonized” with staph—the bacteria are present but do not cause illness. Staph colonization usually occurs in the armpit, groin, genital area, or the inside of the nose, with the nose being the most densely colonized. Although staph is carried in the nose, it is not usually transmitted through air droplets (airborne). Most infections occur through direct physical contact of the staphylococci with a break in the skin (cut or scrape), during contact with a person with the bacteria, or during contact with an inanimate object (such as clothing, bed linens, or furniture) that is soiled with wound drainage.

Susceptibility to infection depends on factors such as immunity and general state of health. In the past, these staph infections typically have been easy to treat with an inexpensive, short course of one of the penicillins, cephalosporins, or other usually well-tolerated antibiotics. Times have changed and many of these staphylococci are now resistant to penicillin and other commonly used antibiotics.

Methicillin resistant *Staphylococcus aureus* (MRSA)

Methicillin is an antibiotic that represents a group or class of antibiotics. A MRSA (often pronounced mer-sa) infection, unlike a common *Staphylococcus aureus* infection, cannot be treated with the penicillins, including Augmentin®, dicloxacillin, or other methicillin-related antibiotics. These bacteria are also resistant to the cephalosporins. Consequently, the treatment is often longer, more expensive, and more complicated, with frequent recurrence of infections. Depending on the antibiotic resistance patterns, alternative antibiotics, such as trimethoprim/sulfamethoxazole (Bactrim®, Septra®), minocycline, or clindamycin, may be considered. For serious infections, vancomycin has become the treatment of choice, but this can only be administered intravenously and must be carefully monitored. Other newer antibiotics, such as linezolid or daptomycin, may also play a role in the treatment of serious infections, but these antibiotics, along with vancomycin, may be rendered ineffective through the development

of bacterial resistance. The Centers for Disease Control and Prevention recently reported the first two cases of vancomycin-resistant *Staphylococcus aureus* infections. This underscores the need for aggressive control and prevention measures for all antibiotic resistant organisms.

Originally, MRSA was found only in hospitals and long-term care facilities, such as nursing homes. In the past few years, there have been increasing reports of MRSA not associated with the medical environment. The Infectious Disease Epidemiology and Surveillance Division (IDEAS) of the Texas Department of Health has noted an increasing number of reports of MRSA from local and regional health departments, the public, physicians, schools, and jail facilities.

PREVENTION STRATEGIES

Jail administrators may need to introduce a policy that inmates be encouraged to report wounds or skin infections to jail personnel. The facility should assure that the other inmates do not have contact with the infected site of the affected inmate or the contaminated physical environment. These precautions will need to be customized depending on the location of the wound.

RECOMMENDATIONS FOR JAIL ADMINISTRATION

- Do keep draining wounds covered.
- Do not allow an inmate's draining wound or infection to come into contact with other inmates
- Do permit the inmate or employee to participate in non-contact activities if wounds are covered and the infected person observes good hygienic practices—washing hands, showering, and laundering clothes
- Do permit the inmate or employee to return to contact activities when the wound has healed. Because MRSA is difficult to treat, this may be a few weeks or longer
- Do arrange to have utensils and dishes washed in the usual manner with soap and hot water or using a standard home dishwasher
- Do wash clothes with the usual detergent in hot water and dry thoroughly using the hottest setting possible
- Do provide clean non-sterile gloves for employees to use when caring for inmates' wounds

EMPHASIZE THIS TO YOUR EMPLOYEES AND INMATES:

HAND WASHING IS THE SINGLE MOST IMPORTANT BEHAVIOR IN PREVENTING INFECTIOUS DISEASE.

Hands must be clean before you touch

- Eyes
- Mouth
- Nose
- Any cuts, scrapes, or open wounds

Hand Washing Procedure:

- Use warm running water.
- Wet your hands and wrists.
- Use a thumbnail size dab of liquid soap.
- Work soap into a lather and wash between fingers, up to wrists and under fingernails for

at least 15 seconds.

- Dry hands thoroughly using a clean cloth towel or paper towel.

Wash your hands:

- After sneezing, blowing, or touching your nose
- Before and after close contact with another person
- After using the toilet
- Employees should wash hands before leaving the jail

Due to fire hazard, alcohol-based gel sanitizers may not be placed generally throughout the facility. However, employees should be encouraged to carry small individual use containers of an alcohol based hand sanitizer as a substitute when soap and water are not available, or use alternative hand sanitizer products that do not contain alcohol. **Follow manufacturer** directions or generally place enough hand sanitizer in the palm of your hand to thoroughly cover your entire hand. Rub hands together until dry.

OTHER GENERAL PRECAUTIONS:

- Do not share towels or other personal care items
- Do not share soap
- Do not wear artificial nails
- Do keep fingernails short (no longer than the tip of the finger)
- Do use a skin moisturizer to prevent dry, cracked skin
- Do place soiled items in a plastic bag or other waterproof container if laundry is not done at the facility
- Do prewash or rinse items that have been grossly contaminated with body fluids. Then wash clothes for a full cycle in hot water and dry on the hottest cycle possible
- Do inform the laundry personnel of these precautions if laundry is sent to another facility
- Do clean the jail facility at least daily using a commercial disinfectant or a fresh (daily) solution of one part bleach and 100 parts water (1 tablespoon bleach in one quart of water)
- Do clean items used by inmates such as recreational equipment with a commercial disinfectant or fresh solution of bleach

RECOMMENDATIONS TO JAILORS FOR CARE OF DRAINING WOUNDS

COMMUNICATION WITH THE PHYSICIAN:

It is extremely important that jailors communicate with the physician or medical staff regarding the diagnosis and treatment of any sores or wounds the inmates have. The physician should perform a culture and susceptibility test to determine what bacteria the inmate has and what treatment will be the most effective with the fewest side effects. The physician may determine that the inmate does not need an antibiotic. If an antibiotic is prescribed, the inmate must take all medication even after the infection seems to have healed. Assure that the medications are administered in the correct dose and at the appropriate time. Never permit medications to be shared, not even topical medications. The physician may recommend that the inmate be restricted from certain activities in which there might be physical contact, such as sports, until the wound is no longer draining. Follow the physician's instructions for dressing changes, application of a topical ointment, and all other directions. If the inmate does not respond to treatment, inform the physician. When an inmate is released, give him adequate medication for

use until a private physician can attend him and medical records relevant to treatment of the infection.

INITIAL WOUND CARE PRECAUTIONS:

- Treat any draining wound as a potential MRSA infection
- Do not permit other inmates to come in contact with the infected inmate's wound or a contaminated physical environment
- Do not permit uninfected inmates to use bedding or exercise mats or equipment that are used by inmates with draining wounds
- Be sure the inmate is seen by a physician or other licensed health care practitioner
- Inform the physician of the possibility of MRSA. Many MRSA wounds have been mistaken for spider bites.
- Inform the physician that you want a culture and susceptibility test
- Ask the physician to inform you of the culture results.
- If the wound is uncultured or you are not informed of the culture results, treat the wound as MRSA
- Wounds that contain significant amounts of pus and which are not yet draining should be evaluated by a physician or qualified health provider to see if medical drainage of the pus is indicated. Significant amount of pus can render antibiotics ineffective, since there may be no circulation to carry the antibiotics to the site of infection.

PERSONAL HYGIENE AND CLEANING

- Provide inmates with soap, water, and clean towels
- Employees should carry and use an alcohol-based hand sanitizer when soap and water are not available
- Clean cells, equipment or any part of the jail that the infected inmate frequents before any other person comes in contact with the equipment or area, e.g., bed, chairs, exercise equipment.
- Clean with commercial disinfectant or fresh (daily) solution of diluted bleach (1 tablespoon of household bleach to one quart of water) or phenol-containing product such as Lysol® or Pinesol®
- A phenol-containing spray can also be used to disinfect any cloth or upholstered surface
- Carry laundry away from the body in a plastic or other lined bag that will not allow wet articles to drain through (wash hands after loading soiled laundry into washer)

CHANGING WOUND DRESSINGS

- Do not allow inmates with draining wounds or infections to have physical contact with other persons until the wound has stopped draining and has healed
- Give the infected individual a single cell.
- Keep the wound covered
- Give inmates who change their own wound dressings proper instruction in avoiding contamination of other persons or the environment. (One page instruction sheet available.)
- Change the wound dressings
 - Any time that drainage is apparent
 - As directed by the physician
 - At least twice a day
- Put on clean gloves just before touching broken skin
- Remove gloves promptly and discard after use, before touching uncontaminated items,

environmental surfaces, and before touching another person

- Wash hands immediately after contact with the wound even if gloves were worn
- Wash hands between tasks and procedures on the same inmate to prevent cross-contamination of different body sites
- Place disposable items that have come in contact with the infected site in a separate trash bag and close the bag before placing in the common garbage
- Disinfect reusable items such as scissors or tweezers. Wash visible blood or drainage off with soap and water. Wipe with 70% isopropyl alcohol (rubbing alcohol). Allow to air dry. Do not use these items on any other person

MEDICATIONS

- Give antibiotics only to infected persons for whom the medication is prescribed
- Give all the antibiotic that is prescribed, even if the wound appears to have healed
- Do not give antibiotics to uninfected inmates or employees in an effort to prevent infections

ADDITIONAL SOURCES OF INFORMATION

When in doubt of the correct procedure to follow, contact your healthcare provider, your local or regional health department, or the Infectious Disease Control Unit of the Texas Department of State Health Services.

Additional information on bacteria, antibiotics, resistant organisms, disinfection, wound healing, and other treatment for infections can be found in your local library or the following web sites.

Department of State Health Services

<http://www.tdh.state.tx.us/ideas/factsht/factsht.htm>

Centers for Disease Control and Prevention

<http://www.cdc.gov/ncidod/hip/ARESIST/mrsa.htm>

<http://www.cdc.gov/drugresistance/community/>