

Methicillin Resistant *Staphylococcal aureus* (MRSA) Skin and Soft Tissue Infections (SSTI)¹

Information for Medical Assistants and Nursing Staff

Methicillin resistant *Staphylococcus aureus*, (MRSA) is a type of *Staphylococcal aureus* bacteria that has become resistant to some antibiotics, like penicillin and cephalosporin. MRSA most often causes skin and soft tissue infections. In 2006, 76 percent of MRSA infections that were reported in Pierce County were skin and soft tissue infections.²

In the past, hospital-associated (HA) MRSA was acquired almost exclusively through hospital or long-term-care facility stays. Recently new strains of community-associated (CA) MRSA have been infecting people in the community, some of whom have no previously identified risk factors. CA MRSA is also infecting hospital patients, making it difficult to determine what type of MRSA is responsible for their infections. Some people may carry MRSA on their skin or in their nose even after being treated for an infection. This is called being colonized or a carrier. Colonized individuals can still be a source of transmission to others.

Clinical Presentation:

- Spider/insect bite look-a-like: *very common presentation*
- Cellulitis: Inflammation of skin
- Impetigo: Fluid-filled lesions or abraded skin with honey-colored crust
- Folliculitis: Infection of hair follicle(s) – looks like pimple(s)
- Furunculosis: Deeper infection that has extended below hair follicle
- Carbuncle: Multiple adjacent hair follicles and substructures are affected
- Abscess: Pus-filled mass under the skin
- Infected Wound: Pre-existing wound (surgical or traumatic injury) that has become infected

Diagnosis & Treatment:

- Culturing a wound before beginning treatment with an antibiotic is extremely important. (Always clean a wound before obtaining a culture.)
- Antibiotic treatment is based on culture and sensitivity results.
- Sometimes antibiotics are not needed and incision and drainage of a wound is the only treatment required.

Transmission:

MRSA SSTIs are spread by skin-to-skin-contact with an infected person or by contact with an object (fomite) or surface that is contaminated with MRSA. MRSA can live on uncleaned surfaces for several months.

Risk Factors:

Situational risk factors include:

- crowded living conditions
- challenges in maintaining cleanliness and personal hygiene
- lack of access to healthcare

Behavioral risk factors include:

- frequent skin-to-skin contact
- having abraded or injured skin
- sharing personal hygiene items
- sharing sports equipment
- overuse of antibiotics
- taking antibiotics incorrectly

Prevention:

Washing your hands with soap and water or using alcohol-based hand sanitizer frequently is the best preventive measure. Alcohol hand sanitizers kill MRSA on the skin within 15 seconds of application. Using an environmental disinfectant to clean surfaces and equipment helps to reduce or eliminate MRSA in the environment.

Patient Education:

Teach MRSA-skin infected patients how to take care of themselves and avoid transmitting MRSA to others. Provide a copy of the Living with MRSA booklet to take home. The booklet is available in English and Spanish on the Tacoma-Pierce County Health Department website (www.tpchd.org/mrsa).

¹ For more information, refer to the *What to do about MRSA in Outpatient Clinics/Medical Offices Toolkit*: www.tpchd.org/mrsa

² Tacoma-Pierce County Health Department, Communicable Diseases, reported MRSA cases.

How to Reduce the Spread of MRSA in a Health Care Setting

Avoid touching your face, (especially your nose) while providing patient care to prevent self-inoculation with MRSA or other virulent organisms.

Precautions for Staff

- **Hand Hygiene:** Hand washing or use of 60% or greater alcohol-based hand sanitizer is the best means of preventing the spread of infections. If hands are visibly soiled, and after using the restroom, wash hands with soap and water; alcohol gel is not adequate. Hands should be washed or hand gel used after removing gloves and before and after all patient contacts.
Hand-hygiene in and hand-hygiene out of all examination rooms: Wear gloves for contact with patient non-intact skin or mucous membranes. Change gloves between tasks and gel/wash hands when gloves are removed.
- **Fingernails:** Fingernails should be less than ¼ of an inch long and fingernail enhancements should not be worn. Nail enhancements include but are not limited to artificial nails, tips, wraps, acrylics, gels, or any other item applied to nails. Several outbreaks in hospitals have been traced to artificial nail contamination.
- **Gowns/Fluid-Resistant Aprons:** Gown or fluid resistant aprons should be worn during wound care and whenever personal clothing or skin may come in contact with body fluids of any kind. Gowns should be removed before leaving the examination/treatment room.
- **Masks/Eye Protection/Face Shields:** Face and eyes should be protected whenever splashing or splatter is likely such as during an incision and drainage or wound irrigation procedure. Aerosolization can contaminate the environment and anyone or anything in the immediate area.

Precautions in Waiting Rooms

Drainage from MRSA SSTIs is infectious. Patients with uncovered, open or draining lesions/wounds or visibly soiled and wet dressings should be provided with clean, dry dressings to cover the area and taken directly to an exam room.

Precautions in Exam Rooms

- Use hand hygiene before touching clean areas or supplies (e.g. keyboards, trays, wound care supplies, etc.)
- Do not carry clean supplies, such as scissors and tape, in your pockets to use for multiple patients
- Use only sterile instruments and basins when performing wound care
- Clean and disinfect all patient care equipment and environmental surfaces that have been used or touched.
 - o Clean surfaces with friction first, then disinfect
 - o Disinfect surfaces with an EPA-registered disinfectant rated for hospital or healthcare use
 - o Always use gloves when cleaning to protect your hands

Refer to the **Quick Reference for Environmental Cleaning** that is located in *What to do about MRSA in Outpatient Clinics/Medical Offices Toolkit* that may be found at: www.tpchd.org/mrsa

Examples of MRSA infections:



Photos courtesy of Los Angeles Public Health, the Centers for Disease Control and Prevention, Pierce County Needle Exchange, and Mark Grubb, MD