| **Methicillin-resistant Staph aureus: Management in the Outpatient Setting** |
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I. Purpose: This document is intended to provide clinical guidance for management of Methicillin Resistant Staphylococcus aureus (MRSA) skin and soft tissue infections (SSTI) in the outpatient clinical setting.

II. Background: Methicillin-resistant S. aureus (MRSA) are resistant to β-lactam antibiotics, including penicillinase-resistant penicillins (methicillin, oxacillin, nafcillin) and cephalosporins. MRSA have been long recognized as pathogens among hospitalized patients and persons with certain healthcare-associated risk factors. Available data suggest that in recent years, the frequency of Community Acquired MRSA (CA-MRSA) infections among otherwise healthy persons without typical healthcare-associated MRSA risk factors has also been increasing.

III. Assessment of risk factors for MRSA:
MRSA should be considered in the differential diagnosis of all patients presenting with skin and soft tissue infections as well as those with more severe illness compatible with S. aureus infection (sepsis syndrome, osteomyelitis, septic arthritis, severe pneumonia and post-influenza pneumonia). A presenting complaint of spider bite should raise suspicion for MRSA infection.
Risk factors that should increase the level of suspicion for healthcare and/or community associated MRSA:
• High prevalence of MRSA in the community or patient population (as indicated by results of antimicrobial susceptibility testing, clinical experience and surveillance data)
• History of MRSA infection or colonization
• Close contact with someone known to be infected or colonized with MRSA
• Recent or frequent antibiotic use
• Recurrent skin disease
• Crowded living conditions (e.g., incarceration, homeless shelters, barracks)
• Cluster of infections among sports participants or other groups who have skin-to-skin contact or shared clothing, equipment, or personal hygiene items
• Complaint of “spider or insect bite”
• SSTI with failure to respond to β-lactam antibiotics
• MRSA transmission through sexual contact has been reported
• History in the past year of:
  Hospitalization
  Admission to a long term care facility (nursing home, skilled nursing, or hospice)
  Dialysis and end-stage renal disease
  Diabetes mellitus
  Surgery
  Indwelling catheters or medical devices that pass through the skin into the body
  Injection drug use

IV. Infection control for outpatient management MRSA SSTI
MRSA is transmitted primarily through skin-to-skin contact, including via hands (especially healthcare workers’ hands) which may become contaminated by contact with a) colonized or infected patients, b) one’s own colonized or infected
body sites, or c) devices, items, or environmental surfaces contaminated with body fluids containing MRSA.

A. A combination of standard and transmission based precautions (i.e., contact precautions), is recommended for patients with MRSA colonization and infection in the outpatient setting.

B. Contact precautions (gown and gloves) should be used for ALL patients with open or draining SSTI and when contact with uncontrolled infectious secretions is possible.

C. Patient Placement and Room Usage:
   • Place patient in private exam room, if feasible.
   • Patients may be placed in a room with another patient as long as there is spatial separation and adherence to standard and transmission based precautions.
   • A “dirty” procedure room for MRSA patients is not necessary.
   • Patients do not have to wait until the end of the day for procedures, ambulatory surgery or care.

D. Standard Precautions include:
   • Perform hand hygiene before and after each patient contact. This may consist of an alcohol-based hand sanitizer if hands are not visibly soiled or soap and water.
   • Mask coughing patients; if coughing patient is unable to mask or when performing a respiratory exam the healthcare worker, including provider, will wear a mask with eye protection.
   • After glove removal and hand hygiene, do not touch potentially contaminated environmental surfaces or items in the patient's room to avoid transfer of microorganisms to other patients and environments.
   • Use barrier protective coverings as appropriate for noncritical surfaces that are 1) touched frequently with during the delivery of patient care; 2) likely to become contaminated with blood or body substances; or 3) difficult to clean

E. Contact precautions include:
   • Wear gloves when touching non-intact skin or mucous membranes, visibly soiled linen, or visibly soiled equipment and surfaces.
   • Gown if body contact with patient or contaminated secretions is anticipated
   • Wear gloves, gown, and face protection (surgical mask with eye shield) when performing wound care procedures; irrigating, debriding, performing I & D, or working with complex wounds.
   • Discard gloves/gown and perform hand hygiene immediately before leaving exam room.
   • Minimize environmental contamination through use of environmental barriers (blue pads, trash bags).
E. Environmental Cleaning
- Use an EPA registered cleaner/disinfectant for environmental cleaning and follow manufacturer’s instructions for use. Do not use alcohol alone to disinfect the environment or equipment.
- Wear gloves when cleaning/disinfecting the environment. Always perform hand hygiene after removing gloves.
- Wear gown if clothing is likely to be soiled during the cleaning process.
- Wipe thoroughly all environmental surfaces touched by patient or staff during encounter with a disinfectant and allow to air dry.
- If surface has visible body substance contamination: clean surface, discard towel, re-wipe or spray with disinfectant, and let dry.
- Change cleaning cloths (paper towel or wipes) frequently between surfaces.
- Room may be used immediately after cleaning/disinfecting environmental surfaces.

F. Equipment and Supplies
- Perform hand hygiene prior to accessing clean and sterile supplies to prevent cross contamination of supplies.
- Clean all equipment touched by patient and staff with an approved disinfectant.
- Disinfect or sterilize, as appropriate, all reusable items immediately after use and prior to storage (includes bandage scissors).
- Discard unused contaminated disposable supplies, i.e., unopened supplies on a used procedure tray.

G. Trash and Laundry
- Contain trash and laundry at the point of use.
- Discard soiled cloth laundry in a fluid resistant laundry hamper or plastic bag.
- Discard disposable paper sheets and gowns in regular trash

V. Information for patients with MRSA infection and their caregivers. Patient education is a critical component of SSTI management. Clinicians should educate patients, caretakers and household members on specific measures to limit spread of infection to close contacts, including in the household and other living environments.

A. Key infection control messages for patients to prevent transmission of MRSA:
- Take antibiotics as prescribed until all the medicine is taken.
- Notify your healthcare provider immediately if you are having trouble taking the medication, or the infection is getting worse.
- Frequent hand hygiene is very important for everyone in the patient’s environment to prevent spread.
- Alcohol based hand sanitizers will kill MRSA and other pathogens within 15 seconds.
- Use soap and water when hands are visibly soiled and after touching dressings or anything else soiled.
• Keep wounds and lesions covered with clean, dry bandages, especially when drainage is present.
• Patients that cannot maintain adequate hygiene and keep wounds covered with clean, dry bandages should be excluded from activities where close contact with other individuals occurs, such as daycare or athletic practice, until their wounds are healed.
• Use clean, disposable, nonsterile gloves to change bandages.
• Put disposable waste (e.g., dressings, bandages) in a separate trash bag and close the bag tightly before putting it in with the regular garbage.
• Do not share personal items (e.g., towels, washcloths, razors, clothing, or uniforms) or other items that may have been contaminated by wound drainage.
• Use an environmental disinfectant or dilute bleach solution to regularly clean and disinfect contaminated surfaces, i.e., doorknobs, light switches, counters, phones, toilets, sinks, computer keyboards and mouse. MRSA can live for weeks to months on surfaces.
• Wash soiled linens and clothes with hot water and laundry detergent. Drying clothes in a hot dryer, rather than air-drying, may also help kill bacteria in clothes.
• Wash utensils and dishes in the usual manner with soap and hot water or use a standard home dishwasher.
• Avoid skin-to-skin contact including contact sports until the infection has healed.
• Be sure to tell any healthcare providers who treat you that you have MRSA, a “resistant staph infection”.