

Community-associated Methicillin-resistant *Staphylococcus aureus* (CA-MRSA): Fact Sheet for Healthcare Providers

Methicillin-resistant *Staphylococcus aureus* (MRSA) was first noted in 1961 and the first nosocomial outbreak in the United States occurred in 1968 in Boston, MA.

Traditionally MRSA infections have been associated with hospitalization or other healthcare-associated risk factors, but in recent years healthcare providers have observed MRSA infections in an increasing number of people who lack traditional healthcare-associated risk factors. These people appear to have community-associated (CA) infections.

Definition of CA- MRSA

CA-MRSA infections are defined as MRSA infections in people with no history of the following risk factors within the year prior to the MRSA culture date:

- Hospitalization or surgery
- Permanent indwelling catheters or percutaneous medical devices
- Residence in a long-term care facility
- Dialysis
- MRSA culture >48 hours after hospital admission

Previous research on CA-MRSA in Minnesota has shown several differences in patient demographic and isolate characteristics compared to healthcare-associated methicillin-resistant *Staphylococcus aureus* (HA-MRSA) patients and isolates:

- CA-MRSA patients tend to be younger than patients with HA-MRSA.
- CA-MRSA isolates have been shown to be susceptible to more non-beta-lactam antimicrobials compared to HA-MRSA isolates.

- Pulsed-field gel electrophoresis (genetic fingerprinting) shows distinct differences between CA-MRSA and HA-MRSA strains.

Spectrum of CA-MRSA infection

The majority of CA-MRSA infections present as skin and soft tissue infections such as abscesses or cellulitis.

CA-MRSA can also cause other skin conditions such as impetigo, folliculitis or furunculosis. In rare cases, CA-MRSA can cause invasive infections such as joint infections, necrotizing pneumonia or septicemia.

Diagnosis and Treatment

Healthcare providers are encouraged to obtain appropriate specimens for culture and susceptibility testing. Incision and drainage are useful in the treatment of localized skin abscesses (Lee, et al. *Ped Infect Dis J.* 2004;232:123-7). Empiric therapy should be based on local susceptibility patterns and the clinical evaluation of the patient.

(www.health.state.mn.us/divs/idepc/newsletters/dcn/2004/novdec04.pdf – CA-MRSA in Minnesota, DCN).

Treatment should be modified depending on the culture and susceptibility results and on the clinical course of the patient.

Prevention

MRSA infections are spread by close skin to skin contact with a person with MRSA infection or colonization or by coming into direct contact with a surface or item contaminated with MRSA (such as wound dressings, towels or linens).



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Standard Precautions should be used to help prevent the spread of MRSA in the healthcare setting.

- Clean hands with an antimicrobial soap or alcohol-based hand rub before and after each patient, even if gloves have been worn.
- Wear gloves when examining infected areas and appropriately dispose of gloves after use.
- Properly dispose of all dressings contaminated with drainage from the infected site.
- Clean surfaces and equipment in the exam or hospital room that may have been contaminated by the patient with a commercial disinfectant or with a 1:100 bleach and water solution.
 - Launder all linens that come into contact with drainage or secretions from the infected site in hot water and dry with a high dryer setting as the heat will help to kill any bacteria still present after the wash.

What healthcare providers can do to help prevent the spread of community-associated MRSA

- Inform the patient about his/her MRSA diagnosis, even if the patient is receiving antimicrobial therapy to which the bacteria are susceptible.
- Counsel the patient to inform other healthcare providers that he/she has a history of MRSA infection.
- Counsel the patient on appropriate wound care and standard precautions necessary to prevent the spread of MRSA to other household members and contacts.
 - Keep wound covered with clean, dry bandage
 - Clean hands after changing bandage
 - Don't share towels or clothing

Reporting MRSA

Minnesota rules governing communicable diseases require healthcare providers to report deaths or serious illness (ICU admission) due to community-associated *Staphylococcus aureus* (both methicillin-sensitive and methicillin-resistant) to the Minnesota Department of Health. Additional reporting information is available at www.health.state.mn.us/divs/idepc/dtopics/reportable/ or by phone at 612-676-5414 (toll free 877-676-5414).