

# What You Need to Know About MRSA

By Greg Schaffer

You respond to your local personal care home, for a 78-year-old female patient that is “not feeling well.” As you prepare to transport the patient, the nurse tells you that the patient has MRSA. What does this mean to you? What precautions should be taken on, and following this patient care encounter?

MRSA is short for Methicillin-Resistant Staphylococcus Aureus.

Staphylococcus aureus (SA), often referred to as “staph,” are bacteria commonly carried on the skin or in the nose of healthy people. Occasionally however, staph can cause an infection; staph bacteria are one of the most common causes of skin infections in the United States. Most of these infections are minor and can be treated without antibiotics. However, staph bacteria can also cause serious infections, such as surgical wound infections and pneumonia.

The (M) in MRSA stands for Methicillin, which is a powerful antibiotic drug. MRSA includes several strains of the SA germ that are not killed by powerful antibiotics like Methicillin. Over the past 50 years, treatment of these infections has become more difficult because staph bacteria have become resistant to the various antibiotics available.

Staph bacteria can be found on the skin and in the nose of some people without causing illness. This is called colonization. Approximately 25 to 30% of the population is colonized in the nose with staph bacteria at a given time. Infection occurs when the staph bacteria cause disease in a person. People also may be colonized or infected with MRSA, the staph bacteria that are resistant to many antibiotics.

Staph and MRSA infections are not routinely reported to public health authorities, so a precise number is not known. It is believed that as many as 100,000 persons are hospitalized each year with MRSA infections.

Staph bacteria can cause different kinds of illness, including skin infections, bone infections, pneumonia, severe life-threatening bloodstream infections, and others. Since MRSA is a staph bacterium, it can cause the same kinds of infection as staph in general; however, MRSA occurs more commonly among persons in hospitals, nursing, and healthcare facilities.

Most MRSA infections that EMS will encounter develop in hospital or nursing home patients who are elderly or very sick or who have an open wound, such as a bedsore; or a urinary catheter or an IV line in place. MRSA infections acquired in hospitals and healthcare settings can be severe. In addition, certain factors can put some patients at higher risk for MRSA including prolonged hospital stay, receiving broad-spectrum antibiotics, being hospitalized in an intensive care or burn unit, spending time close to other patients with MRSA, having recent surgery, or carrying MRSA in the nose without developing illness.

MRSA causes illness in persons outside of hospitals and healthcare facilities as well. EMS may encounter these patients daily but will usually be unaware of the patient's infection. Cases of MRSA diseases in the community have been associated with recent antibiotic use, sharing contaminated items, having active skin diseases, and living in crowded settings. Clusters of skin infections caused by MRSA have been described among injecting drug-users, incarcerated persons, and players of close-contact sports.

Most staph bacteria and MRSA are susceptible to several antibiotics, and most staph skin infections can be treated without antibiotics by draining the sore. Patients who are only colonized with staph bacteria or MRSA usually do not need treatment.

Staph bacteria and MRSA can spread among people having close contact with infected people. MRSA is almost always spread by direct physical contact, and not through the air. Spread may also occur through indirect contact by touching objects (i.e., blood pressure cuff, sheets, wound dressings) contaminated by the infected skin of a person with MRSA or staph bacteria.

So, let's cut to the chase, what precautions should you take on, and following this patient care encounter?

1. Wash hands thoroughly with soap and water. Good hand washing after all person-to-person contact is the most important measure for reducing the spread of the bacteria. It is the key to minimizing and preventing many infections that the EMS provider will encounter, including MRSA. Frequent hand washing cannot be emphasized enough. Whether or not your patient is reported to have an infection or not, your best action to guard against you contracting an illness or spreading a bacteria to your patient is hand washing.
2. Keep cuts and abrasions clean and covered with a bandage until healed, and wear gloves.

3. Avoid contact with the patient's wounds or material contaminated from wounds.
4. Make sure stretcher sheets are changed and the cot is cleaned and disinfected properly following patient care.
5. Any non-disposable items that came in contact with the patient should be cleaned and disinfected thoroughly before use on another patient. For example, many services still use blood pressure cuffs on patient contact, after patient contact, without proper cleaning and disinfecting. Many bacteria can be harbored on a standard blood pressure cuff. Your service may want to look into disposable cuffs, if not make sure the cuff is cleaned and disinfected properly.
6. Additional MRSA specific precautions:
  1. Respiratory infections such as bronchitis or pneumonia with MRSA:  
The infectious material is sputum and respiratory secretions. Gloves are needed when handling respiratory secretions. You should wash hands properly following removal of gloves. Masks may be worn if the person infected is coughing.
  2. Urinary tract infections with MRSA:  
The infectious material is urine. Gloves are needed when contact with urine or indwelling catheter, wash hands well after removal of gloves.
  3. Wound or skin infections with MRSA:  
The infectious material is the drainage. Gloves are needed to touch wound, drainage or dressing, wash hands well after removal of glove

This information should make you more knowledgeable of MRSA and provide some basic precautions. These precautions should reduce your chances of acquiring an infection, as well as limiting the possibility that you will pass the infection on to another patient.

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