



Clinical Update

For Telephone Triage Nurses

November 2007

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Key Point: There were an estimated 94,360 cases of MRSA in the United States in 2005.

Dear Nursing Colleague:

The health topic that has received the most media attention this past month is the “Super Bug”. The “Super Bug” is the lay term that the media is using to describe a type of *Staphylococcus* bacteria that is resistant to penicillin-type medications.

Staphylococcus aureus is a bacteria that can cause a variety of skin infections including pimples, boils, abscesses, cellulitis, wound infections, and impetigo. It can also cause more serious infections like staphylococcal pneumonia, sepsis, and Toxic Shock Syndrome.

In the 1960's strains of *Staphylococcus aureus* that were resistant to penicillin-type antibiotics started appearing in hospitals and health care settings. These were referred to as Methicillin-Resistant *Staphylococcus aureus* (**MRSA**) Infections.

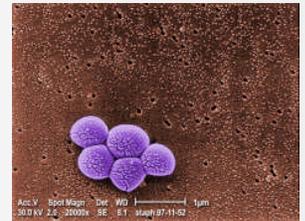
More recently, strains of penicillin-resistant *Staphylococcus aureus* have increasingly become the cause of skin infections in healthy individuals in the community. These are now being referred to as Community-Acquired Methicillin-Resistant *Staphylococcus aureus* (**CA-MRSA**) Infections^{1,2}. There have been outbreaks in athletes (e.g., wrestling teams) and in prison populations.

How did this become a hot media topic? First, there was an article in the *Journal of the American Medical Association*³. This article showed that CA-MRSA is much more common than we had thought. According to the article there were an estimated 94,360 cases of MRSA in the United States in 2005.

Second, recently the media has reported several cases involving high school students.

The CDC website is an excellent internet resource for answering callers questions about this topic.

Regards,
David Thompson, M.D., FACEP



Magnified 20,000X, this colorized scanning electron micrograph (SEM) depicts a grouping of methicillin resistant *Staphylococcus aureus* (MRSA) bacteria.

Source:
CDC; Jim Biddle; 1998.



This 2005 photograph depicts an abscess located on the hip of a prison inmate, which had begun to spontaneously drain, releasing its purulent contents. The abscess was caused by MRSA.

Source: CDC; Bruno Coignard; Jeff Hageman

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Community-Acquired MRSA

Medical Term: Community-Acquired Methicillin Resistant Staphylococcus Aureus (CA-MRSA).

Symptoms:

- ◆ Skin infections including pimples, boils, abscesses, cellulitis.
- ◆ Look for a tender red lump, spreading redness, drainage of pus, fever.

Risk Factors:

- ◆ Contact sports
- ◆ Sharing towels, razors
- ◆ Weakened immune system (e.g., HIV positive)
- ◆ Living in unsanitary or crowded conditions (e.g., prisons)

Treatment:

- ◆ An abscess or a boil may need treatment with incision and drainage.
- ◆ CA-MRSA often requires antibiotic treatment. The choice of antibiotic is best determined by the results of a culture.

Prevention:

- ◆ Keep your hands clean. Wash your hands frequently with soap and water or use an alcohol-based hand sanitizer
- ◆ Keep a cut or scrape clean. Apply an OTC antibiotic ointment and cover it with a bandage.
- ◆ Do not touch other people's cuts or bandages.
- ◆ Do not share personal items like towels or razors.

Internet Resources:

- ◆ CDC Patient Information Sheet. Consider printing this one page document out and keeping it close at hand. You should also consider emailing this link to inquiring callers.
See: <http://www.cdc.gov/ncidod/dhqp/pdf/ar/MRSAPatientInfoSheet.pdf>
- ◆ CA-MRSA Information for the Public. This comprehensive web page is a great reference and source of additional information.
See: http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_public.html.

New Adult Guidelines

Have you taken a look at these 5 new adult after-hours telephone triage guidelines?

- ◆ Mouth Pain
- ◆ Mouth Symptoms
- ◆ Pregnancy - Fever
- ◆ Pregnancy - Headache
- ◆ Ring Stuck on Finger or Toe

New Pediatric Guidelines

Have you taken a look at these 5 new pediatric after-hour telephone triage guidelines?

- ◆ Diabetes - Low Blood Sugar
- ◆ Diabetes - High Blood Sugar
- ◆ Urination - All Other Symptoms
- ◆ Urination - Wetting (Enuresis)
- ◆ Urine - Unusual Color or Odor

If you do not have these guidelines, then talk with your call center manager or your call center software company.

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Key Point: Consider MRSA in skin infections being treated with antibiotics and not improving.

References

1. Fridkin SK, Hageman JC, Morrison M, et.al. Methicillin-resistant Staphylococcus aureus disease in three communities. N Eng J Med. 2005;352:1436-44.
2. Allen UD. Community-acquired MRSA: a practitioner's guide. CMAJ. 2006; 175(2): 145.
3. Klevens M, Morrison MA, Nadle J, et.al. Invasive Methicillin-Resistant Staphylococcus aureus Infections in the United States. JAMA. 2007;298:1763-1771.

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