



Department of Health and Human Services
Centers for Disease Control and Prevention

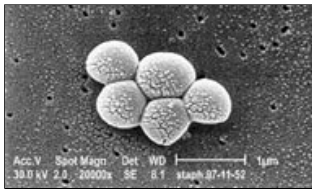
MRSA in Healthcare Settings

Updated: October 3, 2007

MRSA has been featured in the news and on television programs a great deal recently. MRSA stands for Methicillin-resistant *Staphylococcus aureus*. This type of bacteria causes “staph” infections that are resistant to treatment with usual antibiotics.

MRSA occurs most frequently among patients who undergo invasive medical procedures or who have weakened immune systems and are being treated in hospitals and healthcare facilities such as nursing homes and dialysis centers. MRSA in healthcare settings commonly causes serious and potentially life threatening infections, such as bloodstream infections, surgical site infections, or pneumonia.

In addition to healthcare associated infections, MRSA can also infect people **in the community at large**, generally as skin infections that may look like pimples or boils and can be swollen, painful and have draining pus. These skin infections often occur in otherwise healthy people.



Electron micrograph depicting a group of MRSA bacteria (CDC/Janice Carr)

How MRSA Spreads in Healthcare Settings

When we talk about the spread of an infection, we talk about sources of infection - where it starts, and the way or ways it spreads - the *mode* or *modes of transmission*.

In the case of MRSA, patients who already have an MRSA infection or who carry the bacteria on their bodies but do not have symptoms (colonized) are the most common sources of transmission.

The main mode of transmission to other patients is through human hands, especially healthcare workers' hands. Hands may become contaminated with MRSA bacteria by contact with infected or colonized patients. If appropriate hand hygiene such as washing with soap and water or using an alcohol-based hand sanitizer is not performed, the bacteria can be spread when the healthcare worker touches other patients.

MRSA and the Expensive Results of Antimicrobial Resistance

Along with MRSA, many significant infection-causing bacteria in the world are becoming resistant to the most commonly prescribed antimicrobial treatments. What causes this and what does it mean?

Antimicrobial resistance occurs when bacteria change or adapt in a way that allows them to survive in the presence of antibiotics designed to kill them. In some cases bacteria become so resistant that no available antibiotics are effective against them. At this time, treatment options still exist for healthcare-associated MRSA.

People infected with antibiotic-resistant organisms like MRSA



Improving the quality of health care, community by community

This 4-part primetime television series explores the quality crisis and the innovative solutions being undertaken by providers, patients and their families to transform the care provided by the institutions we all depend on. The goal of *Remaking American Medicine* is to inspire and empower viewers, both members of the general public and health care professionals, to join in efforts to transform American health care.

CDC is one of numerous National Partners in the Remaking American Medicine national outreach

are more likely to have longer and more expensive hospital stays, and may be more likely to die as a result of the infection. When the drug of choice for treating their infection doesn't work, they require treatment with second- or third-choice medicines that may be less effective, more toxic and more expensive.

So this means that if you or I get an MRSA infection, we may suffer more, and we may pay more for our treatment. Yet American society as a whole suffers more and pays more too because of the increased burden and expense in the healthcare system.

MRSA: a Growing Problem in the Healthcare Setting, But One with a Cure

MRSA is becoming more prevalent in healthcare settings. According to CDC data, the proportion of infections that are antimicrobial resistant has been growing. In 1974, MRSA infections accounted for two percent of the total number of staph infections; in 1995 it was 22%; in 2004 it was 63%.

The good news is that MRSA is preventable. The first step to prevent MRSA, is to prevent healthcare infections in general. Infection control guidelines produced by CDC and the Healthcare Infection Control and Prevention Advisory Committee (HICPAC) are central to the prevention and control of healthcare infections and ultimately, MRSA in healthcare settings. To learn more about infection control guidelines to prevent infections and MRSA go to <http://www.cdc.gov/ncidod/dhqp>.

CDC welcomes the increased attention and dialogue on the important problem of MRSA in healthcare. CDC, state and local health departments and partners nationwide are collaborating to prevent MRSA infections in healthcare settings. To see what CDC is doing about MRSA go to http://www.cdc.gov/ncidod/dhqp/ar_mrsa_CDCactions.html

Learning More

- **Healthcare-Associated Methicillin Resistant *Staphylococcus aureus* (HA-MRSA)**
Overview, facts, prevention and control information for healthcare personnel, educational materials, more
- **CDC Antibiotic / Antimicrobial Resistance gateway website**
Gateway to resources both inside and outside CDC

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Division of Healthcare Quality Promotion (DHQP)

National Center for Preparedness, Detection, and Control of Infectious Diseases

campaign. This campaign is spreading the word about the pioneering work being accomplished in improving health care, and to generate the widest possible audience for the public television series.

- **Visit the Remaking American Medicine campaign site >>**
- **Learn about the television programs >>**

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