What is MRSA?


Staph

Staphylococcus aureus (more commonly known as Staph) is a type of bacterium that is frequently present on healthy people's skin or in the nose. The bacteria are capable of causing both minor and serious infections. Antibiotics are important tools in treating such infections. Because Staph developed resistance to penicillin not long after that antibiotic became widely available, newer antibiotics were developed to treat Staph infections. Among those new antibiotics was methicillin. Unfortunately, many Staph became resistant to the new antibiotics, so treatment of such "methicillin-resistant *Staphylococcus aureus* (MRSA)" infections became more difficult.

MRSA bacteria were first detected in the United States in 1968. By the early 1990s, MRSA accounted for 20-25% of Staph bacteria found in hospitalized patients. By 1999, MRSA accounted for more than half of Staph in patients in intensive care units in U.S. hospitals.


MRSA

In the last decade, MRSA has arisen in the community environment as a frequent cause of skin and soft tissue infection (often showing as a build-up of pus) and occasional life-threatening pneumonias. It has long been associated with infections that originate in hospitals and other healthcare facilities. As a result, MRSA is of concern to the U.S. military medical community.

What is DoD doing about MRSA?

Like civilian hospitals in the United States, the hospitals and clinics of the Department of Defense (DoD) have, for decades, worked hard to prevent and control infections in their patients. All DoD hospitals have received an official stamp of approval through accreditation by The Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the nation's predominant standards-setting and accrediting body in health care, which requires that health care facilities conduct comprehensive infection control programs.

The DoD preventive medicine community has increased efforts to avoid colonization, transmission, and infections by MRSA and other bacteria and viruses in our troop population. These efforts include emphasizing hand hygiene at basic and advanced training sites with increased availability and use of alcohol-based antimicrobial hand gels.

Among the many measures that DoD hospitals and health care facilities use to deal with such infections are the following:

Hospital staff and visitors must wash their hands before and after seeing patients.

Hospital staff must use gloves, gowns, and masks when caring for infected patients or patients vulnerable to infection.

Patients with infections, or those at high-risk, are placed in isolation precautions.

Service members coming directly from theater are immediately placed in isolation precautions for 48-72 hours and tested for MRSA infections, among other infections.

Surveillance of patients and the hospital environment for the presence of infection or bacteria that are linked to hospital-acquired infections.

Routine cleaning and disinfection of the hospital environment.

Careful review of antibiotic prescribing practices.

Administrative support to ensure the following:
- placing hand hygiene sinks and alcohol hand gel in appropriate areas
- maintaining adequate staffing levels
- enforcing adherence to infection control practices

An Infection Control Program, which is responsible for:
- training and educating staff in prevention measures
- carrying out surveillance activities
- monitoring compliance with control measures
- investigating and analyzing problems as they arise
- creating and modifying, as needed, hospital policies and practices to control infections
- reporting to external agencies as required by law or policy.

Is DoD doing further research to prevent infections?

The DoD infectious disease collaborative research organization (Infectious Disease Clinical Research Program) is currently studying ways to improve preventive practices for MRSA in the military. For example, they are studying the efficacy of chlorhexidine wipes in preventing MRSA colonization and infection in Marine officer candidates at Marine Corps Base Quantico.

For more information about these studies and related issues, contact your closest Military Treatment Facility or Infectious Disease Services at the following medical centers: