

INFORMATION PAPER

SUBJECT: Impact of MRSA in the Military Healthcare System (MHS)

1. PURPOSE: To provide information on MRSA infections in the Military Healthcare System

2. FACTS:

a. *Staphylococcus aureus* (“staph”) bacteria are commonly found in the environment, and also on the skin and noses of healthy people. On occasion, staph can cause clinical infections and is one of the most common causes of skin infections in the US. Most are minor and can be treated without antimicrobial agents. However, some are serious infections (pneumonia, surgical wound infections, bloodstream infections, etc.) and may result in death. Over the years, treatment of serious staph infections has become more difficult because staph bacteria have developed resistance to commonly used antibiotics. These bacteria are called Methicillin-Resistant *Staphylococcus aureus* (MRSA).

b. The CDC has categorized MRSA infections into Healthcare-associated MRSA (HA-MRSA) and Community-associated MRSA (CA-MRSA). Staph infections (including HA-MRSA) occur most frequently among persons in hospitals and healthcare facilities (nursing homes, dialysis centers, etc.) who have weakened immune systems. MRSA infections that occur in healthy persons who have not been hospitalized or had a medical procedure in the past year are called community-associated (CA-) MRSA. The school-associated MRSA cases in the media recently are community-associated (CA-) MRSA.

3. MRSA in DoD.

a. Outbreaks of MRSA have occasionally occurred among military trainees. In 2002, there was an outbreak of MRSA among trainees at a Marine Recruit Training base. Prior to the outbreak, the monthly incidence of MRSA did not exceed 2 cases per 1,000 recruits. During the outbreak periods (Aug-Dec 2002), the monthly incidence ranged from 4.9-11.0 cases per 1,000 recruits. Outbreak contributing factors were the close-physical contact environment of training, and the physical nature of recruit training resulting in minor cuts/abrasions that increase the risk of developing skin infections. Control measures to improve hygiene were instituted to include frequent hand washing and the use of antibacterial hand sanitizers. Subsequently, the Navy Environmental Health Center (NEHC) published the “Guidelines for the Management of Community-

Acquired Methicillin-Resistant *Staphylococcus aureus* (CA-MRSA) Infections in the US Navy and Marine Corps (Attached).

b. Carriage of MRSA in military personnel. A published review of the literature about MRSA among military personnel reports that the carriage rate of MRSA has ranged between 1 – 9 % among recruits. Carriers of MRSA were more likely to develop subsequent clinical infection than recruits carrying methicillin sensitive *Staphylococcus aureus* (MSSA). Among military outpatients, the rates of staphylococcal carriage were 38% for MSSA and 2% for MRSA.

c. Data from Defense Medical Surveillance System (DMSS), located at the Army Medical Surveillance Activity at Forest Glen, MD:

All admissions to military hospitals for “infection with microorganisms resistant to penicillins” (V09.0) (includes MRSA and other non-staphylococcal organisms) for CY2001-20006:

YEAR	2001	2002	2003	2004	2005	2006
ADMISSIONS	93	212	299	516	721	845

(Note: Current data does not allow distinction between hospital-associated infection and community-associated infection.)

d. Data from TRAC²ES and JMeWS indicate 127 Staphylococcal infections have been diagnosed in the CENTCOM area of operations since the beginning of 2005. In the databases, none of those infections is identified as due to MRSA.

4. The CDC Website (<http://www.cdc.gov/Features/MRSA/>) has much information for clinicians and patients on MRSA (including attached information sheet for patients).