

Medscape Medical News from the:

Fifth Decennial International Conference on Healthcare-Associated Infections (ICHA) 2010

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From Medscape Medical News

MRSA Found in 4% of Healthcare Workers; Most Are Healthcare-Related Strains



Emma Hitt, PhD

April 6, 2010 (Atlanta, Georgia) — Approximately 4% of healthcare workers tested positive for methicillin-resistant *Staphylococcus aureus* (MRSA) in a large screening effort, a new analysis reports.

Carlos Guerra, MD, from the Brody School of Medicine at East Carolina University in Greenville, North Carolina, presented the findings here at the Fifth Decennial International Conference on Healthcare-Associated Infections 2010.

The researchers sought to determine the prevalence and genotypes of MRSA isolates from various groups of healthcare workers, and to evaluate the effectiveness of eradication therapy with nasal mupirocin.

Among 7894 healthcare workers who were offered screening, 3638 (46.1%) accepted and were screened with a nasal swab beginning in January 2007. The investigators analyzed the swabs for MRSA genotype, comparing MRSA isolates taken from healthcare workers involved in direct patient care with those not involved in patient care. MRSA isolates were also tested for mupirocin susceptibility.

Of the healthcare workers tested, 4.3% were MRSA-positive. Among those involved in direct patient care, 4.6% were positive; among nonclinical staff, 4.2% were positive. In addition, three quarters of healthcare workers involved in direct patient care who were positive were infected with a healthcare-related MRSA strain, compared with just over half (54%) of nonclinical staff ($P \leq .052$).

Mupirocin eliminated MRSA in 75% of carriers for at least 3 months. However, 25% had carriage detected again within 3 months.

Mupirocin susceptibility testing indicated that 8.9% of initial isolates had high-level resistance and 10.3% had low-level resistance. Development of resistance was detected among 2.6% of those previously treated with mupirocin.

According to the study's principal investigator, Keith M. Ramsey, MD, from the Brody School of Medicine, finding such a low percentage of healthcare workers who were MRSA-positive was encouraging.

"At our institution, we have had tremendous success in preventing both surgical-site infections and device-related infections using universal admission MRSA screening of all patients and voluntary screening of staff," Dr. Ramsey told *Medscape Infectious Diseases*. It is difficult to separate "the impact of screening and eradicating MRSA carriage from the staff from that of the patients," he said.

According to Kerri A. Thom, MD, MS, assistant professor of epidemiology and preventive medicine from the University of Maryland in Baltimore, other studies have shown a similar rate of MRSA carriage in healthcare workers.

"An interesting finding is that 54% of [healthcare workers] without direct patient care were harboring hospital-acquired MRSA strains, suggesting that, in this setting, transmission of hospital-acquired strains is occurring outside of direct patient care areas," she said.

"This would be unusual based on the current literature," she told *Medscape Infectious Diseases*.

Dr. Thom emphasized that all healthcare workers should practice Standard Precautions when caring for patients. "By following these guidelines, healthcare workers are protecting both themselves and their patients from the transmission of potential pathogens."

This study was not commercially funded. Dr. Guerra and Dr. Thom report no relevant financial relationships. Dr. Ramsey reports being a consultant for BD GeneOhm, and serving on the speakers' bureau for MedImmune, Cubist, and OrthoMcNeil.

Fifth Decennial International Conference on Healthcare-Associated Infections (ICHA) 2010: Abstract 682. Presented March 20, 2010.

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Disclosure: Emma Hitt, PhD, has disclosed no relevant financial relationships.

Dr. Hitt does not intend to discuss off-label uses of drugs, mechanical devices, biologics, or diagnostics not approved by the FDA for use in the United States.

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