

Study finds MRSA screening saves hospitals money

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Screening patients in the intensive care unit (ICU) for methicillin-resistant *Staphylococcus aureus* (MRSA) produces cost savings for the whole hospital, according to a study that used a statistical simulation model published in the February issue of the *American Journal of Infection Control*, the official publication of APIC - the Association for Professionals in Infection Control and Epidemiology.

Conducted by a team of researchers at the Minneapolis Veterans Affairs Medical Center, a 279-bed teaching hospital and outpatient facility, the goal of the study was to determine the costs per hospital admission of screening ICU patients for MRSA and isolating patients who tested positive. They found that even under the most conservative assumptions the screening would be cost-neutral if early detection of MRSA would lead to a reduced rate of infection and transmission within the hospital. Under optimal assumptions, screening could result in savings of almost \$500 per [hospital admission](#).

The research was led by John A. Nyman, PhD, a health economist at the University of Minnesota School of Public Health. It assessed the possible impact and cost effectiveness of active detection of MRSA and isolation on frequency of MRSA infections in the ICUs and hospital-wide.

"This study presents evidence of the cost savings from implementing a program that targets the ICU population but that has an effect that is hospital-wide," according to Dr. Nyman and his colleagues. "Although we find that this program pays for itself through the MRSA infections

prevented, it is important that hospitals also consider how this type of program fits into their overall institutional, infection-prevention programs and realize that this intervention is only one of many alternative interventions that are designed to prevent healthcare-associated infections."

The authors contend that this approach could complement other strategies to further reduce the incidence of MRSA infection. "We owe it to the patients to continue to assess and improve our preventive strategies," they say in conclusion.

MRSA is an antibiotic-resistant bacteria that can lead to severe infections and is associated with approximately 19,000 deaths annually, according to the Centers for Disease Control and Prevention (CDC). A 2006 survey conducted by APIC showed that 46 out of every 1,000 inpatients were either infected or colonized with MRSA -- a rate eight times higher than previous estimates. The annual cost to treat MRSA in hospitalized patients is estimated at \$3.2 to 4.2 billion.

Some policy-makers have recommended universal screening to reduce hospital-acquired MRSA infection. APIC has called for a more targeted, evidence-based approach that allows hospitals to tailor screening efforts based on their unique situation and recently published an updated Guide to the Elimination of MRSA Transmission in Hospital Settings, 2nd Edition, including a section on active surveillance testing.

"The findings from this research by Dr. Nyman and colleagues are interesting but also highlight the importance of application of these by infection preventionists, based on risk assessment at their affiliated facilities," said APIC 2011 President Russell Olmsted, MPH, CIC, Epidemiologist in Infection Prevention & Control Services, St. Joseph Mercy Health System, Ann Arbor, Michigan. "A broad focus that addresses prevention of all pathogens is critical. With the U.S.

government's increased focus on preventing all HAIs, it will be even more important for facilities to make sure they are doing everything possible to reduce and ultimately eliminate these infections."

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