

Study shows universal surveillance for MRSA significantly decreased HAIs at PCMH

July 13 2010

Pitt County Memorial Hospital (PCMH) today announced results of a study demonstrating that universal surveillance for methicillin-resistant *Staphylococcus aureus* (MRSA) decreased health care-associated infections (HAIs) related to devices. Infection rates decreased 68 percent for ventilator-associated pneumonias (VAP); 51 percent for central line-associated bacteremias (CLA-BSI); and 49 percent for catheter-associated urinary tract infections (CAUTI).

The study was led by Keith Ramsey, M.D., medical director for infection control at PCMH, and professor of medicine at The Brody School of Medicine at East Carolina University. Universal surveillance, also known as all-admissions surveillance, introduces the testing of all patients upon admission, not just high-risk patients, and has been shown to be far more effective than targeted active surveillance when monitoring for MRSA infections. If patients test positive for MRSA, they are put on contact precautions that include isolation, [hand hygiene](#), room signage, patient-dedicated equipment, personal gowns and gloves, and they are decolonized with mupirocin/chlorhexidine bath.

"At PCMH we have made it our mission to take pre-emptive action to reduce the risk of patients transmitting or acquiring an infection while under our care," Ramsey said. "This particular study demonstrates that universal surveillance plus eradication help to reduce HAIs related to devices, which continues to be a major challenge for hospitals and health

care facilities in the United States."

The study was presented today by Kathy Cochran, manager of infection control at PCMH, during a poster session (Poster #: 8-056) at the Association for Professionals in Infection Control and Epidemiology (APIC) 2010 annual conference in New Orleans. The BD GeneOhm™ MRSA assay, an in vitro molecular diagnostic test that provides definitive results within two hours of laboratory time, was used in the study.

During the surveillance period, rates for MRSA-associated HAIs decreased for each device as follows:

- VAPs per 1,000 vent days decreased 68 percent from 1.065-to-0.296 (p
- CLA-BSIs per 1,000 line days decreased 51 percent from 0.244-to-0.124 (p
- CAUTI rates per 1,000 foley days decreased 49 percent from 0.207-to-0.101 (p

In addition to the poster presentation, Ramsey will present Universal MRSA Screening: Selecting the Best Practice for the Best Price on Wednesday, July 14, 2010 at 4 p.m. in Conference Auditorium 3. In addition, Ramsey will discuss necessary steps for implementing universal admission screening for MRSA.

According to the Centers for Disease Control and Prevention (CDC) in American hospitals alone, HAIs account for an estimated 1.7 million infections and 99,000 associated deaths each year. Of these infections:

- 32 percent of all HAIs are urinary tract infections

- 22 percent are surgical site infections
- 15 percent are pneumonia (lung infections)
- 14 percent are bloodstream infections.

MRSA bacteria can cause a potentially fatal infection that does not respond to commonly used antibiotics and is a significant cause of HAIs. The CDC estimates that approximately 126,000 people are hospitalized each year with MRSA infections, and about 19,000 die, with an estimated annual cost of \$3.2 billion to \$4.2 billion to U.S. hospitals.

Provided by Manning Selvage & Lee

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