Computerized monitoring systems enable hospitals to more aggressively combat infections

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Hospitals that adopt advanced computer technology to identify healthcare-associated infections (HAIs) are more likely to have implemented best practices to prevent such infections, according to research presented today at the 37th Annual Conference and International Meeting of the Association for Professionals in Infection Control and Epidemiology (APIC).

Researchers at the University of California conducted a telephone survey with Quality Directors of 241 general acute care hospitals, representing 80 percent of the total number of hospitals in California, from October 2008 to January 2009. The study was designed to analyze the relationship between hospital use of automated surveillance technologies and implementation of evidence-based infection control practices.

According to the study results, while only a third of California hospitals are using computer technology to identify infections on a timely and accurate basis, those that have show advantages in making important changes in providing care. The study found that hospitals that use automated surveillance systems to identify HAIs were more likely than those that rely on manual methods to have fully implemented research-based practices to reduce MRSA infections (85% vs. 66%), ventilator-associated pneumonia (96% vs. 88%), and surgical care infection practices (91% vs. 82%).

"Our findings suggest that hospitals that use automated surveillance technology are able to put more HAI elimination strategies into place that will ultimately reduce the risk of infection," said Helen Halpin, ScM, PhD, lead author of the study and professor of Health Policy at University of California, Berkeley. "Manual identification of infections is costly, time-consuming and diverts staff time from prevention activities. The advantages of automated surveillance are enormous in an era where the Centers for Medicare and Medicaid Services and many private insurers will no longer pay for the additional costs attributable to certain HAIs and many states report infection rates publicly."

Automated surveillance technologies or data mining systems are computerized systems designed to collect infection data, thereby allowing infection preventionists to better protect patients by identifying and investigating potential clusters of HAIs in real time. Electronic surveillance streamlines the review and collection of infection data, provides a larger amount of information than manual methods and reduces staff time spent on surveillance and clerical tasks, allowing infection preventionists to devote more time to activities that protect patients. In response to the need for expanded monitoring and reporting of HAIs, APIC has published a position paper supporting the use of automated surveillance technologies in the healthcare setting as an essential part of infection prevention and control activities.

"As Dr. Halpin's research suggests, automated surveillance technology provides infection preventionists with more data and frees them to take action on that data," said APIC 2010 President Cathryn Murphy, RN, PhD, CIC. "With governments focusing more closely on HAIs and antibiotic resistance an increasing threat, now is the time for hospital administrators to commit the resources for electronic infection monitoring systems as well as enough trained staff to interpret the information and lead infection prevention initiatives."

Dr. Halpin cautioned that people should not infer from her research that hospitals that use automated surveillance technology have lower rates of

infections, just that they are more likely to have implemented evidence-based best practices to prevent HAIs.

According to the World Health Organization, on any given day, more than 1.4 million patients are affected by a healthcare-associated infection. In the U.S., HAIs are associated with an estimated 99,000 deaths and incur $30 to 40 billion in excess healthcare costs annually.

Halpin's poster was presented at APIC's Annual Conference. The meeting, which is the largest annual gathering of infection preventionists from around the world, takes place July 11-15 in New Orleans.

Provided by Association for Professionals in Infection Control