Health Care–Associated MRSA Rates Decrease

BY DOUG BRUNK

SAN DIEGO — The incidence of health care–associated invasive methicillin-resistant *Staphylococcus aureus* infections in the United States fell 12.5% between 2005 and 2007, a decline that was statistically significant.

The decline was even greater among patients with hospital-onset bloodstream MRSA infections, according to preliminary results from a study of data from the Active Bacterial Core (ABC) surveillance program. The ABC is a component of the Emerging Infections Program Network, a collaboration between the Centers for Disease Control and Prevention (CDC), state health departments, and universities.

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DR. KALLEN

Although the result are encouraging, they are preliminary and require further prospective analysis, lead investigator Dr. Alexander J. Kallen cautioned at the annual meeting of the Society for Healthcare Epidemiology of America.

"The 2007 data set has not been finalized, and although only a small number of additional reports are expected, this may result in some changes in these estimates," said Dr. Kallen, a medical officer with the CDC's Division of Healthcare Quality Promotion in Atlanta.

The ABC surveillance program began tracking MRSA infections in 2004 and includes a catchment area of about 15 million people at facilities in nine states—California, Colorado, Connecticut, Georgia, Maryland, Minnesota, New York, Oregon, and Tennessee.

Dr. Kallen and his associates evaluated only MRSA-causing, invasive health care–associated infections—defined as MRSA isolated from a normally sterile site—in a resident of the surveillance area from 2005 to 2007. This included hospital-onset isolates, defined as isolates cultured more than 2 calendar days after admission when the day of admission is day 0, and health care–associated community-onset isolates, which were cultured 2 days or less after admission in patients with a recent health care exposure. Health care exposures included presence of a central venous catheter at the time of admission, a history of dialysis, an overnight stay in a health care facility, or surgery within the previous year.

In another component of the study, clinicians at eight of the nine facilities were asked to complete a 42-question survey about MRSA-related infection control practices.

Nearly 90% of the isolates were from a bloodstream infection; the next most common syndrome was pneumonia or empyema, followed by skin and soft tissue infection, Dr. Kallen reported.

Between 2005 and 2007, the overall in-

cidence of all invasive MRSA infections fell 12.5%, from 42.7 per 100,000 patients to 34.4 per 100,000 patients, which was statistically significant.

When the researchers studied the subset of patients with bloodstream infections, defined as a positive blood culture, they observed a 21% decrease in hospital-onset infections between 2005 and 2007 and a 12% decrease in health care–associated community-acquired infections during the same time period. Both reductions were statistically significant.

Meanwhile, the incidence of MRSA bloodstream infections in dialysis patients fell 7% during the time period, a reduction that did not reach statistical significance.

According to the survey portion of the study, nearly 70% of responding facilities performed some type of active surveillance testing. More than 80% of facilities used contact precautions for MRSA patients, used dedicated equipment for MRSA patients, could detect previously MRSA-colonized or infected patients at admission, and maintained at least simple measures of MRSA incidence or prevalence.

Limitations of the study include the fact that ABC "is a population-based surveillance system and that use of the catchment area population as a denominator for this analysis of health care–associated infections may be suboptimal," Dr. Kallen said.

He emphasized that he and his associates "cannot determine the precise cause for this fall in MRSA incidence from our data. This is one cross-sectional study. However, health care facilities we polled had implemented a large number of MRSA-control interventions."

Dr. Kallen had no conflicts of interest to disclose. ■

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