

Nosocomial *C. difficile* Surpasses MRSA in Study

VITALS

Major Finding: The rate of nosocomial CDI was about 25% higher than the rate of such infections due to MRSA, and about 25% higher than the rate of combined ICU device-related infections.

Data Source: A study of 28 community hospitals in the Southeastern United States.

Disclosures: None reported.

BY MIRIAM E. TUCKER

ATLANTA — Hospital-onset *Clostridium difficile* infection was more common than infection due to methicillin-resistant *Staphylococcus aureus* in a study of 28 community hospitals in the Southeastern United States.

The finding comes from an analysis of data from the Duke Infection

Control Outreach Network. The analysis also showed that health care-associated *C. difficile* infection (CDI) occurs approximately as often as health care-associated bloodstream infections or combined device-related infections, Dr. Becky Miller reported at the 2010 International Decennial Conference on Healthcare-Associated Infections.

Because methicillin-resistant *Staph-*

lococcus aureus (MRSA) has received so much attention, many infection control initiatives have targeted MRSA and have not been aimed specifically at *C. difficile* infection.

Moreover, most of the previous studies on health care-associated infections have been done at large tertiary care facilities rather than smaller community hospitals where most U.S. patients actually receive care.

"We feel that studies done in community hospitals are relevant from an epidemiologic standpoint," said Dr. Miller, an infectious disease fellow at Duke University, Chapel Hill, N.C.

In an analysis of more than 3 million patient-days during the 24-month period from Jan. 1, 2008, through Dec. 31, 2009,



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DR. MILLER

there were 847 cases of hospital-onset, health care facility-associated CDIs and 680 cases that were due to MRSA. (For brevity, Dr. Miller referred to these as nosocomial infections during her presentation.)

There were 838 cases of hospital-wide bloodstream infection. There were 681 cases of combined ICU device-related infections, including 251 cases of ICU catheter-associated bloodstream infections, 132 cases of ICU ventilator-associated pneumonia, and 298 cases of ICU catheter-associated urinary tract infection.

The rate of nosocomial CDI was 0.28/1,000 patient-days, while the rate of nosocomial infection due to MRSA was 0.23/1,000 patient-days and the rate of hospital-wide BSI was 0.28/1,000 patient-days.

The rate of nosocomial CDI was about 25% higher than the rate of such infections due to MRSA, and about 25% higher than the rate of combined ICU device-related infections (the latter rate was calculated per device day).

The CDI rate also was about as common as hospital-wide nosocomial bloodstream infections, Dr. Miller reported.

In an interview, Dr. Miller said that MRSA infection declined steadily during the 5-year period from 2005 through 2009, while *C. difficile* infection declined initially until 2007, then rose and surpassed MRSA in 2009.

Epidemiologic studies are needed to determine whether the relative decline in MRSA is related to prescribing practices, geographic differences, improved infection control practices, or other patient factors.

"Development of effective prevention strategies for this emerging infection is needed," she said. ■

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