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Select Abstract:

Progress in Reducing National Burden of Invasive Methicillin-Resistant Staphylococcus aureus Infections — United States, 2005–2010

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Background: Methicillin-resistant Staphylococcus aureus (MRSA) continues to be one of the most common antimicrobial-resistant pathogens in community and healthcare settings. We describe national estimates of invasive MRSA infections in 2010 and compare them with 2005 estimates.

Methods: Population-based surveillance for invasive MRSA in 9 metropolitan areas with approximately 19 million persons was performed from 2005 through 2010. A case was defined as MRSA cultured from a normally sterile body site without MRSA culture in the prior 30 days, and further classified as hospital-onset (HO, cultured >3 days after admission), health care-associated community-onset (HACO, cultured ≤3 days after admission and/or either dialysis, hospitalization, surgery, long-term care residence in the prior year, or presence of a central vascular catheter within 2 days prior to MRSA culture), or community associated (CA) if none of the previous criteria were met. National estimates were calculated using US Census and US Renal Data System data, adjusting for age, race, gender, and receipt of chronic dialysis.

Results: An estimated 82,042 (95% confidence interval [CI]: 79,718–84,411) invasive MRSA infections occurred nationally in 2010 (compared to 111,345 in 2005); of these, 13,799 (95% CI: 12,875–14,789) were CA, 51,290 (95% CI: 49,461–53,197) were HACO, and 15,744 (95% CI: 14,758–16,796) were HO. Adjusted national estimated incidence rates have decreased since 2005: CA by 20.3% (18.5–22.1%), HACO by 22.7% (21.8–23.6%), and HO by 48.3% (47.4–49.4%, P<0.001 for all comparisons).

Conclusion: An estimated 29,300 fewer invasive MRSA infections occurred in the United States in 2010 compared to 2005, with greatest declines in hospital-onset infections. Effective strategies for preventing infections outside acute care settings will have the greatest impact on reducing the US national burden of invasive MRSA infections.

Keywords: methicillin-resistant Staphylococcus aureus, surveillance