Reply to Chalmers et al

TO THE EDITOR—We thank Chalmers et al [1] for highlighting several important aspects of our study on staphylococcal community-acquired pneumonia (CAP), recently published in Clinical Infectious Diseases [2]. We agree that vancomycin is heavily used for empirical treatment of many hospitalized patients with CAP who have a low risk of methicillin-resistant Staphylococcus aureus (MRSA) infection. Furthermore, we agree that inclusion of healthcare-associated pneumonia (HCAP) as an indication for anti-MRSA therapy in recent pneumonia guidelines from the American Thoracic Society and Infectious Disease Society of America [3] has probably contributed to the heavy use of anti-MRSA antibiotics.

We did not intend to imply that all patients with CAP admitted to an intensive care unit (ICU) should be treated empirically with anti-MRSA antibiotics. Rather, with a MRSA prevalence of 2.7% among ICU patients and particularly severe outcomes for these MRSA-infected ICU patients, we believe our data support selective rather than universal treatment of ICU patients with anti-MRSA antibiotics. We advocate for a thoughtful clinical assessment of individual ICU patients when deciding whether to initiate empirical anti-MRSA coverage and for the rapid obtainment of high-quality specimens for etiologic testing, including lower respiratory tract specimens whenever possible. Unfortunately, precise guidelines are not available to assist clinical judgment on whether to start anti-MRSA antibiotics [4]. When anti-MRSA antibiotics are empirically started, they can frequently be safely stopped when results of the initial round of etiologic testing return [5]. Until more rapid testing becomes available, overtreatment with anti-MRSA antibiotics is, unfortunately, likely to continue out of concern for the rare but life-threatening condition of MRSA pneumonia. Hence, we strongly advocate developing better rapid diagnostic tools to determine the cause of pneumonia.

Between the diagnoses of CAP and hospital-acquired pneumonia lie a wide spectrum of patients presenting from the community with recent healthcare exposure who do not fit well into either category. The HCAP paradigm lumps most of these “between” patients with the hospital-acquired pneumonia group [3]. To include a broader spectrum of patients, some of whom may have been at risk for resistant pathogens, we defined CAP more broadly in our study and enrolled several classes of patients with “HCAP criteria,” namely, those receiving long-term hemodialysis, immunocompetent patients hospitalized 30–90 days before their pneumonia presentation, some immunosuppressed patients, and independently functioning nursing home residents [2, 6]. However, we did exclude patients who had certain clinical features placing them at high risk for multidrug-resistant pathogens, including severe immunosuppression, hospitalization in the
past 30 days, and functionally dependent nursing home residents; therefore, we cannot comment on the prevalence of MRSA in these patients. In addition, our exclusions led to lower inpatient mortality and disease severity scores than reported in some other pneumonia studies that were more inclusive of these high-risk patients [7].

We are hopeful that additional evidence gathered during the 10 years since the HCAP guidelines were published will support recommendations for more judicious use of empirical anti-MRSA antibiotics in the forthcoming pneumonia guidelines. However, although our study was conducted at 5 (not 3) hospitals, we also agree that additional large, high-quality studies are necessary to understand regional differences in MRSA prevalence and guide evidence-based selection of empirical antibiotics.

Notes

Disclaimer. The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention (CDC).

Financial support. This work was supported by a cooperative agreement with the CDC (grant U18 IP000299). W. H. S. was supported in part by the National Institute of General Medical Sciences (grant K23GM110469), and C. G. G. was supported in part by the National Institute on Aging (grant R01AG043471).

Potential conflicts of interest. W. H. S. reports payment for serving on scientific advisory boards for BioFire Diagnostics and Venaxis and being a consultant for Abbott Point-of-Care. R. G. W. reports payment as a scientific advisor to Accelerate Diagnostics. K. M. E. has served on a data and safety monitoring board for Novartis, and her institution has received research support from Novartis. C. G. G. has served as a consultant for Pfizer. All other authors report no potential conflicts. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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