

## Etiology of community-acquired pneumonia in hospitalized patients in Jordan

To the Editor

I read with interest the article "Etiology of community-acquired pneumonia in hospitalized patients in Jordan" by Dr. Al-Ali et al<sup>1</sup> recently published in Saudi Medical Journal, and would like to make a few comments. The study evaluated the causative organisms of community-acquired pneumonia (CAP) in Jordanian patients requiring hospital admission. The study excluded patients who were discharged from the hospital within the last 2 weeks prior to admission.<sup>1</sup> The most recent guidelines for the management of adults with hospital-acquired, ventilator-associated, and healthcare-associated pneumonia (HCAP) had included the definition of the latter entity.<sup>2</sup> The HCAP includes any patient who was hospitalized in an acute care hospital for >2 days within 90 days of the infection as well as those who received recent intravenous antibiotic therapy in addition to those who had chemotherapy or wound care within the past 30 days of the current infection; or attended a hospital or hemodialysis clinic.<sup>2</sup> Thus, the exclusion of patients who were admitted in the last 2 weeks may actually mislabel patients as having CAP rather than correctly identifying them as having HCAP. Therefore, the organism, especially gram negative, may reflect the association with HCAP. In addition, the study of Dr. Al-Ali et al indicated that 16% of the pediatric group, and 29% of adults, had received prior antibiotics.<sup>1</sup> It has not been documented if the antibiotics were administered orally or intravenously.

The study identified *Streptococcus pneumoniae* (*S. pneumoniae*) as the most frequent cause of CAP in adults (26%) and children (14%).<sup>1</sup> However, there was no information regarding the antibiotic susceptibility of *S. pneumoniae* in this small group (n=118). In Saudi Arabia, a high frequency of penicillin resistance was reported. In our institute, the rate of high-level resistance to penicillin existed in 19.8% of all isolates and none of the isolates were resistant to ceftriaxone.<sup>3</sup> Similarly, in a study from the central part of Saudi, 14.9% of tested *S. pneumoniae* were highly resistant to penicillin.<sup>4</sup> Thus, it would have been very informative to include the antimicrobial resistance of the isolated *S. pneumoniae* from Jordan to give an idea of the problem of antimicrobial resistance in the country.

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### Reply from the Author

We thank the correspondent for his interest in our paper.<sup>1</sup> I agree that some of the patients included in our study might have health care associated pneumonia (HCAP) rather than community acquired pneumonia (CAP), however, the first guidelines for preventing HCAP were published after we recruited the patients in our study.<sup>5</sup> However, none of our patients were in a nursing home nor received intravenous antibiotics prior to admission to the study. Regarding the second point of *S. pneumoniae* susceptibility to antibiotics, as you know the number is too small to draw any conclusions. We had 9 isolates of *S. pneumoniae* in adult patients; 4 were sensitive to penicillin, 3 showed intermediate susceptibility, and 2 were resistant.

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