

## Correspondence

### Frequency and antimicrobial susceptibility of Gram-negative bacteria isolated from 2 hospitals in Makkah, Saudi Arabia

To the Editor

I read with interest the article by Asghar and Faidah<sup>1</sup> on the frequency and antimicrobial susceptibility of Gram-negative bacteria (GNB) isolated from 2 hospitals in Makkah, Saudi Arabia. Clearly, the knowledge of the clinical and economic impact of antimicrobial resistance is useful to influence programs and behavior in healthcare facilities, to guide policy makers, and funding agencies, to define the prognosis of individual patients, and to stimulate interest in developing new antimicrobial agents and therapies.<sup>2</sup> Antibiotic-resistant GNB are a prominent and growing problem among hospitalized children. Epidemics caused by these organisms have been implicated in many outbreaks in children's hospitals, primarily in neonatal intensive care units. These epidemics are characterized by efficient patient-to-patient transmission of the outbreak clone through the hands of caregivers and exposure to contaminated inanimate sources.<sup>3</sup> Asghar and Faidah<sup>1</sup> demonstrated in their study that GNB were isolated in 51 out of 1137 (4.5%) non-duplicate clinical specimens in pediatric wards, namely, *Escherichia coli* (*E. coli*) and *Pseudomonas aeruginosa*. This frequency is markedly lower than 20% reported by Babay et al<sup>4</sup> where *E. coli* and *Klebsiella pneumoniae* were the predominant GNB isolates. This reduced frequency of GNB cannot be considered as a precise index to reflect the efficient antimicrobial resistance surveillance and antibiotic restriction policy adopted in pediatric units in Saudi Arabia as different methodologies were used in both studies where blood specimens were only applied in Babay et al<sup>4</sup> study compared to multiple sites clinical specimens applied in Asghar and Faidah study.<sup>1</sup> Certain factors were significantly related to prevailing GNB isolates in pediatric hospitals, namely, number of past intensive care unit admissions, administration of intravenous antibiotics within the past 12 months, residence in a chronic care facility, and exposure to a household contact who had been hospitalized in the past 12 months.<sup>5</sup> Since infection with resistant GNB is associated with a high economic burden, which is partly related to increased

antimicrobial drugs utilization compared with infection with sensitive organisms,<sup>6</sup> regular evaluation of infection control programs including both antimicrobial resistance surveillance and antibiotic restriction policy is crucial as it helps diminish the hospital care expenditures and improves susceptibilities to antimicrobial drugs without jeopardizing patients clinical outcomes and duration of hospitalization.

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### Reply from the Author

The author emphasis the problem of antibiotic resistance among GNB as demonstrated in our published paper. He discussed also the variation between our results and others. Anyway, these comments are particularly useful in future study.

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