Reviewer’s report

Title: Healthcare Utilization and Costs Associated with S. aureus and P. aeruginosa Pneumonia in the Intensive Care Unit: A Retrospective Observational Cohort Study in a US Claims Database

Version: 2 Date: 7 April 2015

Reviewer: Marin Kollef

Reviewer’s report:

Major Revisions:

1. Kyaw provide an analysis of costs and outcomes for ICU patients with S. aureus (SA) pneumonia and P. aeruginosa (PA) pneumonia compared to patients without pneumonia. Not surprisingly those with SA and PA pneumonia had greater costs and LOS. I am not sure how much these data add to the existing literature on this topic. It is well know that SA and PA pneumonia are a/w with worse outcomes including mortality, LOS, and hospital costs compared to ICU patients without pneumonia. The authors need to make a better case justifying the need for this study/analysis.

2. It might have been more interesting to have compared SA and PA pneumonia to other causes of less virulent and antibiotic resistant pneumonia, such as E. coli and MSSA pneumonia (differentiating MSSA from MRSA). This would have been a more novel analysis.

3. Table 3 is long and difficult to interpret. I would suggest condensing it or eliminating it all together.

4. It was not clear to me if this study was driven by a pharmaceutical company. If so, the exact role of that company should be explained.

5. There is no data on antibiotic susceptibility nor on the use of appropriate antibiotic therapy. Again, this would have added valuable data to the study making it of more interest.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

None.