Reviewer's report

Title: Prevalence of Staphylococcus sp and S. aureus in wounds of hospitalized patients in inland regions of the Northeast of Brazil and associated factors: a cross-sectional study

Version: 2 Date: 17 April 2014

Reviewer: Jennifer S McDanel

Reviewer's report:

Major Compulsory Revisions

1. The length of the Introduction and Discussion sections should be shortened, and the sections should highlight the main points/concepts of the manuscript. Some of the information included within these sections does not pertain to the main points of the manuscript, and this information draws the reader away from the focus of the paper.

2. This study is unique because it examined wound infections caused by Staphylococcus sp. in a population that resides in a remote, rural, and undeveloped region of Brazil that has extreme impoverishment. I think this aspect could be emphasized more throughout the manuscript and abstract.

3. A main result of this project that is mentioned in the Discussion section but needs more emphasis is that wound infections caused by MRSA are not common in this region and many of the patients who got an MRSA wound infection have had previous exposure to the healthcare setting by either/or having a prior hospitalization or antibiotic exposure. Therefore, interventions could be targeted at preventing the spread of MRSA in the healthcare setting. Additionally, mortality rates were high for patients who acquired a MRSA wound infection (50%). Are there any other interventions that can be implemented to potentially reduce the mortality rate?

4. In the Methods section under paragraph three, there are a few terms that need more explanation. What are considered consumer goods? What information was included for living conditions? When did the previous hospitalizations occur, 6 months or a year since the hospitalization due to the wound infection? When did previous antibiotic use occur, 6 months or a year since the hospitalization due to the wound infection?

5. Please give a detailed description on how often samples and data were collected throughout 2012. How many patients had wounds that were potentially missed? Were some of the patients with wounds seen at outpatient clinics instead of being admitted to the hospital?

6. How many patients had multiple wounds? If a patient had multiple wound infections, were all the wounds swabbed or was only one wound selected? Were patients included only once in the study?

7. Please include more information on the patients with wound infections caused
by MRSA. Were the wounds of patients with MRSA infections started at home or in the hospital? Did the patients with MRSA infections have necrosis or septicemia? How many patients with an MRSA wound infection also had nasal colonization?

Minor Essential Revisions
8. In Table 1, define urban and rural areas.
10. In the Methods section under Statistical analysis, consider changing “multiple analysis” to “multivariable analysis”.

Discretionary Revisions
11. How many beds does the Hospital Regional do Serido have or approximately how many patients per year does this hospital admit?
12. Which antibiotics were prescribed to the patients for their Staphylococcus wound infections?
13. Could some of the wound infections be caused by multiple organisms (polymicrobial infections)? If patients are not infected with Staphylococcus sp. what other organism may be causing the wound infection?
14. Another potential direction of the manuscript is to only include wound infections caused by Staphylococcus aureus and MRSA since there is currently more clinical interest on these organisms.
15. How many of the Staphylococcus sp. wound infections may have been acquired in the hospital? How would you define hospital-acquired wound infections?
16. Can molecular typing (such as pulsed-field gel electrophoresis or spa typing) be performed on the S. aureus isolates specifically the MRSA isolates? This information would identify which strains are circulating within the region and if the strains are related.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.