

Comments to the Authors

Thank you for the opportunity to review this article. The authors used a virtual modeling system to understand the effects on all hospitals in Orange County, California of 1) testing all incoming patients for MRSA and 2) having medical personnel follow contact isolation procedures with MRSA-positive patients. Comparisons were made between the impact of single and multiple hospitals implementing the intervention. I recommend further review of statistical data and modeling formula by another peer-reviewer.

Upon revision, the article should be accepted for publication.

Major Concerns:

- The introduction lacks a clear understanding of proper contact isolation procedures. It is equally important for medical personnel to wear a gown and gloves while in a patient's room, as it is that he/she remove the gown and gloves upon exiting the room. Medical personnel must also sanitize their hands when entering and leaving a patient's room.
- Also in the introduction, additional evidence is needed to support the claim that "it may be highly cost-effective for an individual hospital to implement MRSA control measures". Authors should consider including data on the cost of sufficient PPE and MRSA screening supplies vs. the cost of MRSA treatment. This will further emphasize the importance of the study's findings.
- The discussion includes examples of programs aiming to improve hospital performance; it is extensive and should be limited to those that parallel this study's focus on increasing screening and contact isolation.

Minor Concerns:

- The degree of contact isolation compliance (i.e. 25%, 50%, and 75%) is never defined. For example, in regard to 25%, does this mean that a quarter of healthcare workers are compliant while the remaining are not? Or does this mean that all healthcare workers are compliant only 25% of the time?
- Please rework the last sentence of the introduction. It is unclear that the authors compared post-intervention data against pre-intervention data (as explained in the last paragraph of subsection EXPERIMENTS)
- In the last sentence of subsection EXPERIMENTS, validation is needed for the time period chosen before beginning assessment, i.e. "...assessed the relative decrease in MRSA prevalence from pre-intervention levels and the number of averted cases per year after surveillance and isolation took full effect, which was approximately six months after implementation".
- The hospital transfer matrix illustrated in Appendix Exhibit 2 makes it seem like the virtual model rerouted subjects to hospitals J, K and M only.