Author’s response to reviews

Title: The impact of central line insertion bundle on central line-associated bloodstream infection

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Version: 4 Date: 3 June 2014

Author’s response to reviews: see over
Miss Sheryl Ramos
BMC Infectious Diseases
MS: 1976163721125606
Article title: The impact of central line insertion bundle on central line-associated bloodstream infection

We deeply appreciated your kind consideration for accepting our manuscript (MS-1976163721125606) for publication in *BMC Infectious Diseases*. We also thank you very much for your instructive suggestions. In this manuscript, we addressed all items the reviewer pointed out.

I hope the revised manuscript is now fully acceptable for publication in *BMC Infectious Diseases*.

Best wishes,

Chih-Cheng Lai
Editor’s comment

"Your manuscript has now been re-reviewed. The reviewer had some comments for further improvement of your manuscript. I hope you can give these comments considerations. A final decision will be made upon receiving your revision."

Reply: Thanks for your comment. All of the reviewers’ suggestions were incorporated into the revised manuscript accordingly.
Reviewer: 1
Reviewer's report

Minor Essential Revisions

1. Could you elaborate on how ICU personnel were educated on the scope and practice of each central line bundle?

Reply: Thanks for your comment. We had added the description about education accordingly.

2. Please explicitly state that the CDC NHSN definitions were used for the ease of the reader.

Reply: Thanks for your comment. We had explicitly stated the CDC NHSN definition accordingly.

3. "In summary, our results suggest that maximal sterile barrier during insertion may be the most effective preventive strategy among the four central line insertion bundles." This should be rewritten as "In summary, our results suggest that maximal sterile barrier precautions during catheter insertion is an essential component of the care line insertion bundle"

Reply: Thanks for your comment. The sentence was revised accordingly.

4. In the conclusion you write: "The difference between external and internal validity should therefore be more nuanced." - Please explain the nuance: namely that in other ICUs the compliance with these care items will differ, so the impact of MSB precautions on the CLABSI rate will be different when there are different MSB compliance rates between hospitals/ICUs. An ICU with 80% MSB use will not benefit as much from a quality improvement bundle encouraging compliance with MSB precautions versus an ICU with 20% compliance.

Reply: Thanks for your comment. We had added your comment into the revised manuscript.

5. Elaborating further on point 4, please describe how the use of a bundle/checklist with compliance measurement can identify gaps in prevention measure compliance specific to individual ICUs. I feel this is an important and practical point to be made, strengthening the evidence behind the use of the central line bundle. This reflects the results of our recent meta-analysis on quality
improvement interventions for CLABSI prevention, which suggested an additional preventive effect through use of bundles/checklists: Blot K - Prevention of central line-associated bloodstream infections through quality improvement interventions - Clinical Infectious Diseases 2014

Reply: Thanks for your comment. We had added your suggestion and the associated reference.