Reviewer's report

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

Version: 3
Date: 27 May 2014

Reviewer: Koen Blot

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Minor Essential Revisions

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

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

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"

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.

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.

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

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.