Reviewer's report

Title: ROSC rates and live discharge rates after cardiopulmonary resuscitation by different CPR teams - a retrospective cohort study

Version: 0 Date: 12 Sep 2017

Reviewer: Claudius Balzer

Reviewer's report:

This is a review of BANE-D-17-00314 entitled: "Differences in patient outcomes for cardiopulmonary resuscitation performed by rapid response, resident, and emergency teams" by Tak Kyu Oh et al. In this manuscript, the authors examined the outcome of patients after cardiac arrest and resuscitation performed by three different teams in- and out-of-hospital. Results show that resuscitation by groups with more work experience causes a higher rate of ROSC, while long term survival is not related to quality of team performances.

The authors have collected and analyzed a large data set; however, interpretation of their work needs to be improved. My greatest concern is the inclusion of out-of-hospital cardiac arrests. Due to a completely different setting, with limited availability of all necessary resources, the outcome in relation to team performance should not be compared to in-hospital cardiac arrests. This can be seen in Table 1, showing a lower number on defibrillation and advanced airway attempts compared to in-hospital cardiac arrests. Even though this was mentioned in the limitations, it may have a statistically significant influence.

Further comments:

- Methods: May want to provide a hypothesis with a post-hoc power analysis.

- Results: Tables are confusing because of missing units or unclear definitions of "yes" and "no".

- Conclusion: The authors should discuss, why they recommend better training because of higher ROSC rates, even if the live discharge rate is not improved. May want to use an alternative title: "Experienced teams improve ROSC rate, but not live discharge rate of patients after cardiac arrest and resuscitation".
At the least, the authors should send this manuscript to an expert in English editing and academic writing. There are numerous errors in sentence structure, missing commas, redundant words, and many spelling mistakes (e.g. Table 1).

I feel there are interesting findings here, worthy of publication, but considerable revision is required.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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