Reviewer's report

Title: Reduced level of arousal and increased mortality in adult acute medical admissions: A systematic review and meta-analysis

Version: 0 Date: 15 Sep 2017

Reviewer: Mark Yates

Reviewer's report:

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The method is well described and appropriate for this systemic review. The authors rightly comment on the heterogeneity of the reporting of arousal, low quality of evidence and the potential for significant bias. I wonder if this could be mitigated by restriction of years in the inclusion criteria - assuming awareness and use of scales for arousal have improved over time.

While I accept the statistical outcome of association, which confirms existing clinical knowledge, I think the clinical relevance of the statistical outcome should be explored in the discussion. It would seem that the means of the GCS in the died versus survived are close and the CI approached 1 at the upper end suggesting there would be considerable overlap. It would, if comparing arousal to lactate and hypotension be helpful to comment not just on mortality OR but the CI of these comparison clinical markers of mortality. Over all I think the conclusion are reasonable.

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

Yes

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.

Yes
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

Quality of written English
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Acceptable

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