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: 06 Sep 2017

Reviewer: Gideon Caplan

Reviewer's report:

This is an interesting and well written manuscript.

Major issues.

1. The idea behind meta-analysis is that individual studies may show conflicting results or not have the statistical power to uncover some "hidden" truth that only meta-analysis can elucidate. I cannot recall ever seeing a meta-analysis where every single study included in the analysis has already found the phenomenon being studied significantly changed and all in the same direction, as can be seen in the Forest plot in figure 2. To me, this means that leaving the results at that is to waste the readers time. Not to mention reviewers. The authors should feel morally compelled to add value to the existing data. Whether that be by some sort of meta-regression analysis or putting more thought into the whole exercise and coming up with other clever ideas, I don't mind.

2. Despite point 1 the analysis, as shown in figure 2, was associated with significant heterogeneity. The authors should mention that in the results, and state which analysis was used, fixed or random effects, and also discuss why there was heterogeneity.

Minor issues

1. P.3 The introduction demurely says that "Some studies report that reduced level of arousal is associated with mortality." This suggests to me that some do not. Were there actually any studies that that showed reduced arousal was associated with reduced mortality?

2. P.9 Astonishingly, given point 1 above in the Major issues, the authors summarised the findings as only suggesting that patients with reduced arousal have a higher level of mortality. I think the evidence supports a stronger conclusion.
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 am able to assess the statistics

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