**Reviewer’s report**

**Title:** An empirical comparison of Bayesian modelling strategies for missing binary outcome data in network meta-analysis

**Version:** 0 **Date:** 07 Feb 2019

**Reviewer:** Kan Li

**Reviewer's report:**

The author systematically evaluated different Bayesian modelling strategies/scenarios for handling missing binary outcome in network meta-analysis. Generally, the paper is in well written. However, my major concern is that it lacks a clear contribution to the literature or the author states it poorly. The author evaluates the agreement of compared methods under various scenarios, some of the founding are same to the previous literature, but it is not clear that the work provides a novel method or a novel finding. It is interesting because the author gives some recommendation for good practice based on the finding, which may provide insight to other researchers.

I have few major comments,

1. Please give more detail how the Bayesian NMA model is extended and how the IMOR parameter is incorporated in the model.

2. Please give more detail about IF and SUCRAS, as well as node-splitting approach in section 2.8.

3. It would also be interesting to see as supplement results that when other prior distribution or informative prior distribution on log IMPRs are used in analyses, such as B3.

**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.

Unable to assess

**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

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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