Reviewer’s report

Title: A DAG-based comparison of interventional effect underestimation between composite endpoint and multi-state analysis in cardiovascular trials

Version: 1 Date: 04 Apr 2017

Reviewer: Sayan Dasgupta

Reviewer’s report:

This is a revision of a previous submission where authors study a survival framework with composite endpoints, motivated by a randomized controlled clinical trial in heart failure patients.

I am mostly happy with the response to my previous comments, and the changes made to the draft. However, there are still several typos that I found in the draft (especially in parts of the draft that were added in the revision). I am listing the ones that I found below. My advice to the authors is to go through the draft again carefully to make sure there are no more typos in the final submission. I am happy to recommend 'Acceptance with discretionary revisions.'

1. Page 10, Section 4, lines 35-37:
   i) $\rho \in \{1, 1.05, 1.1, 1.15, 1.2, 1.25, 1.3\}$ instead of $\rho \in \{1, 1.05, 1.1, 1.15, 1.2, 1.25, 3\}$.
   ii) $\theta \in \{0, 0.6\}$ instead of $\theta=0.6$.

2. Page 10, section 4, lines 59-60:
   $\lambda_1+\lambda_2=1.31$ instead of $\lambda_1+\lambda_2=1.17$.

3. Page 11, section 4, lines 53-54:
   $\theta > 0$ and/or $\rho > 1$ instead of $\theta > 0$ and/or $\rho > 0$.

4. Page 10, section 4, lines 61-62 carried over to the next page:

   `The higher the mortality rate,...explains this result'.
   Poor sentence construction, please restructure to clarify.

5. Page 11, section 4, lines 30-33:

   `Under an increased mortality...terminal events'. 
Poor sentence construction, please restructure to clarify.

6. Lot of references are missing (replaced by question marks throughout the draft) from the revision pdf in the BMC format. I checked the version of the article that the authors submitted as a supplementary file, and the references seemed to be okay there. So must be that the final document wasn't compiled properly. Please make sure this is taken care of.

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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Please indicate the quality of language in the manuscript:

Acceptable

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