Reviewer’s report

Title: Evaluation of the impact of disease prevention measures: A methodological note on defining incidence rates

Version: 0 Date: 22 Jan 2017

Reviewer: Shuling Liu

Reviewer's report:

General:

Overall, the manuscript is very well-written. The authors raised a very important question in epidemiologic studies and conducted thorough investigation of comparing two different definitions of incidence rates.

I have two major comments and several minor comments about the manuscript.

Major:

1. On page 7, there are two important assumptions about the observation time and treatment time being equal between two study groups. It might be better to provide some references about those assumptions, which seem quite strong for some diseases. Is there any impact if they do not hold? Would they affect how the investigators should choose between those two different incidence rates?

2. On page 12, the authors mentioned Poisson regression with normal random effects. However, the results of these analyses were not shown in the manuscript. And it is very interesting to see how the two definitions would influence the risk-adjusted incidence rates.

Minor:

1. It may be more clear if the authors can provide the definitions of "time at risk", "observation time" and "protective efficacy" in the Background section.
2. It seems that equation (2) is not the focus of the manuscript and the results did not show notable difference for using (1) and (2). Therefore, the authors could consider deleting equation (2) to make the manuscript more concise. For example, the authors can just mention that more accurate estimate of the deduction of treatment time exists and put it the supplementary materials.

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

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

Acceptable
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal