Reviewer’s report

Title: The impact of repeated vaccination on influenza vaccine effectiveness: a systematic review and meta-analysis

Version: 0 Date: 05 May 2017

Reviewer: Michael Jackson

Reviewer's report:

In this manuscript, the authors present a meta-analysis of observational influenza vaccine effectiveness (VE) studies, specifically focusing on the effects of prior season's vaccination on current season VE. This is an important topic that is receiving a great deal of attention currently, so this review is very timely. I have a few suggestions for improving this manuscript.

1) Introduction, lines 71-77: The choice to consider prior vaccination from three different perspectives (two patient-focused, one policy focused) is an excellent way to approach this. It would help if the authors were more explicit about what policy question is being answered by the "policy-relevant scenario".

2) Methods, line 87: What is the reason for restricting to observational studies, and not including clinical trials?

3) Methods, lines 109-114: It would help to be explicit about the meaning of delta VE - that delta VE values greater than 0% favor current season vaccination in all comparisons.

4) Results: Why is there a forest plot (Figure 2) for A(H1N1) but not for A(H3N2) or B in the main manuscript?

5) Results: In the forest plots, the sizes of the data points are not scaled by sample size, which is the typical approach in meta-analyses. Please either scale the data points or give sample sizes in the figures, so that readers can see which studies are the most influential.

6) On a related note, how much of the apparent vaccine interference for 2014/15 is driven by the single Canadian study (ref 6)?

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

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