Reviewer's report

Title: Systematic review of models estimating the cost-effectiveness of routine varicella and herpes zoster vaccination in high-income countries

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Reviewer: Carlos A Castañeda-Orjuela

Reviewer's report:

Major Compulsory Revisions

1. General comments

The research topic is very pertinent, however the authors have not a clear research question for the review and results are abundant and very heterogeneous. This analysis is not systematic review because no responds to only one question and the evidence synthesis implemented by the authors is very limited. Authors should select what data want to present in the article and use appropriate methods for evidence synthesis (i.e. contingency tables with resume measurements, and graphics).

In general there are available guidelines to conduct cost-effectiveness evaluation in the literature, and from international agencies (i.e. ISPOR Good Practices for Outcomes Research Index, available at http://www.ispor.org/workpaper/practices_index.asp). Authors should review the recommendations following and compare results among studies include in the review, for example, differences in cost-effectiveness ratios among countries, immunization strategies, perspectives, or funding sources, in spite of a long description of the approaches used in each study.

The article will be very interesting if the authors will do a bigger effort in the data synthesis and comparison between all studies, and not only an individual descriptive analysis.

Specific comments

Background

2. Objective. Authors lack to clearly state the punctual study objective. What is the goal of the systematic review? Compare the cost and cost-effectiveness? Compare models? Compare countries?, etc.

3. This section looks very long, especially with respect to vaccines' review. Authors should synthetize it to show the relevant points for their analysis.

Methods.

4. Search strategy. In spite that the article's tittle only refers to cost-effectiveness analysis, search strategy includes all economical evaluation methods. It is difficult to compare between different types economic evaluation.

5. No quality evaluation was reported in methods section.
6. No mention to how compare the different studies was reported.

Results

7. Very general review of the results is presented in this section. Expressions like few, some most, the majority are presents, but no reference to how many and which studies were.

8. Study characteristics. It is difficult to follow the total numbers and which studies correspond to each evaluated category.

Discussion

9. This section is in general very unspecific, because the results are very general. Main findings are expecting, according with the model used by the individual studies.

10. Recommendations are very general, and omit the existence of scientific community accepted recommendations for the costs-effectiveness analysis of communicable disease

Tables.

11. The authors report a lot of tables. Many of these data could be presented in a graphic way, or omitted because does not correspond to the main objective of the study.

Minor Essential Revisions

Abstract

12. For conclusion highlight that results apply only for high-income countries

Figures

13. Figure 1 and text do not coincide in number of articles for full-text read (90 in text and 92 in the figure). Report in the fire the number and reason for exclusion in each step.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests