Author's response to reviews

Title: Systematic review of models assessing the economic value of routine varicella and herpes zoster vaccination in high-income countries

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We thank the reviewers for their detailed comments and suggestions. In the following we address the reviewers’ comments (major compulsory revisions).

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<th>Reviewer</th>
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<td>Reviewer 2</td>
<td>In my opinion, the number of provided tables is still too high. Tables 1 and 4 could be collapsed with the corresponding tables 2/3 and 5/6. Data such as country, model type, time horizon and funding source should be provided in the same table as type of economic evaluation, perspective, and other model characteristics. Data such as impact of varicella vaccination on HZ incidence and herd protection should be included in the same table as vaccine characteristics. Some data are presented twice in different tables. For example, age at varicella vaccination is provided in Tables 2 and 7. Further, age at vaccination, dose schedule, and comparator are included in the table on economic results. But these are characteristics of the underlying models. Therefore, I would suggest including it in tables on general study characteristics or model characteristics. The cost-effectiveness results have been inflated to 2010 values, which is still outdated. Those values should be updated.</td>
<td>We reduced the number of tables from eight to six. Table 1 was merged with Table 3 and Table 4 was merged with Table 6. Now Tables 1 and 3 include information on the general modelling framework (e.g. country, model type, time horizon) and economic methods (e.g. type of economic evaluation, perspective, discount rate). Table 1 also includes information on important epidemiological model features (impact of varicella vaccination on HZ incidence and accounting for herd-immunity) because these aspects are closely connected to the general modelling approach. Tables 2 and 4 present vaccine characteristics (including vaccination costs). Tables 5 and 6 summarise the results of the included studies. Since most of the studies evaluated different scenarios information on age at vaccination, dose schedule and comparator are crucial to understand the results and are therefore (also) included in the results tables. We inflated the costs in all studies to 2010 values to make them directly comparable. The year 2010 was selected as this was the year of the newest analysis. Our motivation was to adjust the costs only as much as needed to make them comparable. Our purpose is not to provide the current costs based on extrapolation. For this reason, we would like to maintain the analysis at the price level of 2010 (i.e. price year of the latest study identified in our review).</td>
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<td>Reviewer 4</td>
<td>I think that the authors did a very exhaustive effort to consider in depth all the reviewer comments. The new version of the manuscript is a pretty best version, with a clear objective, shorter and specific introduction, and with a results and discussion sections presented in a more clear way. Data are scientifically sound, and methods are appropriated to respond the research question. In this version, the authors presented a methods and results sections according with a very specific research question, and the results presentations and evidence synthesis is adequate with the available data.</td>
<td>We thank the reviewer for his positive appraisal.</td>
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