Reviewer’s report

Title: Pneumococcal serotype evolution in Western Europe

Version: 0 Date: 16 Aug 2015

Reviewer: Huang Huang

Reviewer's report:

Pneumococcal disease can cause many types of illnesses, some of which can be life-threatening. Even worse, there are more than 90 types of pneumococcal bacteria, which makes it very hard to eradicate by a single vaccination. This manuscript did a comprehensive review of epidemiological studies of the pneumococcal serotype evolution after different PCV usage in Western European countries. It may provide insight into future new vaccine development. In all, the manuscript is very well written. The data are well presented except some minor comments as listed below. I will recommend acceptance with minor revision.

Minor comments:

1. It will be easier for reader to capture the main conclusion if the authors could list more datasets as a table or figure. For example, the overall incidence rate of IPD is supposedly a very important parameter. Could the authors add a table or figure for it?

2. The authors mainly listed the PCV13 serotype change in table 1 and 2. Could the authors also list PCV7 serotype change pre and post-PCV7 introduction as another table?

3. It is not clear what the criteria are to include a county in the table. Some countries discussed in the main text are not listed in either table.

4. Is it possible to summarize all the data from countries with similar vaccine usage and thus have an overall glimpse of the serotype change?

5. On page7, line160, "non-PCV13 serotype" supposes to be "PCV13 serotype"?

6. On page7, line166, IPD cases ? due to serotypes 23B and 15A increased?

7. On page9, line204, children < 2 years of age. But in the table, the children age for UK is <5.

8. Could the authors explain or discuss why in older populations, there is less change of the most prevalent serotypes after PCV13 usage?
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Unable to assess

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

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