Reviewer's report

Title: New expectations in the prevention of pneumococcal diseases

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Reviewer: Orsolya Dobay

Reviewer's report:

The authors of this manuscript have reviewed the effects of the conjugate pneumococcal vaccine PCV7. It addresses a very important and up-to-date issue all over the world, as the wide-spread use of PCV7 has caused many considerable changes in disease spectrum and serotype distribution. The review is taking every aspect into consideration. It is built up to a very logical order, it discusses the important effected infections (invasive diseases, pneumonia, acute otitis media), and finally also the public health benefits of vaccination. The manuscript is based on an overwhelming number of references, so provides a firm background to all statements.

The final conclusion of the manuscript is that there is a strong need for higher valency vaccines. Well, these vaccines are already available for a couple of years, but the data analysed in this review derive from a period up until 2010, so can only see the effects of PCV7. However, it might take some more time to see the effect of the higher valency vaccines, and as a PCV7 review, it is an excellent manuscript.

The manuscript is very well written, it is acceptable for publication also regarding its English.

I suggest the manuscript for a definite publication, with only very small changes suggested, as seen below.

My detailed comments, according to the instructed categories, are the following:

1) Major Compulsory Revisions: none.

2) Minor Essential Revisions:

- Haemophilus influenzae is incorrectly typed, without the „e” at the end (for example in the Abstract, Discussion / line 11; or in the main text / AOM section, page 12). Similarly, on page 13, line 15: S. pneumoniae is misspelt. These must be changed.

- The Hungarian situation, regarding the vaccination situation, is not absolutely correctly indicated. First, on page 6, “Serotype coverage of higher valency PCV vaccines” section, Hungary should be added to the list of the countries where higher valency vaccines have been recently introduced, as also in Hungary, PCV13 replaced PCV7 in August 2010. Second, in Table 2, the date given for Hungary (Apr 2008) is incorrect: PCV7 was made free for children <2 years old in
October 2008, and PCV7 was adopted in the NIP as a recommended vaccine in April 2009 (and this is still the situation).

3) Discretionary Revisions:

- page 9, the “Aetiology of childhood CAP” section is probably beyond the subject of this manuscript, I suggest it should be summarised instead in just 1-2 sentences.

- in Table 4, the title says: “Pneumococcal serotype distribution in children <5 years old” – but many data cited derive from children <15 years. This might change the meaning of the results a bit, as older children might have different serotypes, as they were mostly not vaccinated yet.

only very small, mostly typing mistakes:

- page 4, Background section: in the case of references [5, 6] and [8, 9], there is a dot (‘.”) instead of a comma (‘,”).

- page 6, paragraph 2: provide an abbreviation here for the German National Reference Center for Streptococci (GNRCS), as it will be used later, without definition.

- same place: at the end of the last sentence, there should be a dot.

- page 7, line 11: “children aged < 2 years of age” should be changed.

- page 7, par. 2, line 3: serotypes 1, 3 and 7 – maybe 7F should be here?

- page 7, par. 2, line 8: “as the” stands twice.

- page 8, par. 2, sentence 3: more commas should be used for a better understanding.

- page 10, line 4: no comma should be here: “between, 1997”.

- page 10, par. 3, line 7: previously it was used as “all-cause pneumonia” (with hyphen), so use it consequently here as well.

- page 11, new section, line 4: “in those from 2-5 years of age”.

- page 11, new section, line 5: “and to approximately…” – “to” should be inserted.

- page 11, new section, line 12: “underestimated” should be written in one word.

- page 12, line 8: microbiological

- page 12, new section, line 6: “serious”(the “i” was left out)

- page 12, new section, line 7: the abbreviations “SOM” and “CSOM” are unnecessary, as they are not used elsewhere.

- page 13, line 5: “etiology”, or “aetiology” earlier – use it uniformly!

- page 14, line 11: instead of “compared to control”, it should be “versus”, as “comparing” stands already earlier in the same sentence.

- page 15, new section, line 1: “The PCV7 vaccine, is licensed” – no comma is needed here.
- page 15, new section, line 12/13: “than before” – something is missing here.
- page 16, line 1: “have a strong effects” – no “a” is needed here.
- page 16, line 3: “in the US, the..”
- page 16, par. 3, line 4/5: “sequellae” or „sequellae” – use it uniformly.
- Figure 2: everywhere throughout the manuscript PCV is used, but here Prevenar. Maybe this could be changed.

Level of interest: An article of outstanding merit and interest in its field

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.