Reviewer's report

Title: New expectations in the prevention of pneumococcal diseases

Version: 3 Date: 22 June 2012

Reviewer: Jo MC Jefferies

Reviewer's report:

This is a well written review of current literature and unpublished evidence regarding pneumococcal disease in the post-PCV7 era, as it stated in the closing paragraph of the introduction.

However, the title of the article does not accurately reflect the content and may confuse potential readers – the words new expectations convey the idea that this article will discuss future pneumococcal vaccines, for instance those serotype independent vaccines that are currently in clinical trials.

Major Revisions

Title

I suggest the title is changed to better reflect the content of the article and to reflect the fact that data included in the review is largely taken form developed countries with a strong European perspective.

Abstract

The abstract should also state that the review is based on presentations made at ESPID

Page 9, line 15

The authors state that S. pneumoniae was identified in” 47 of them”. Is this 47 of 292 patients? If so how does this correlate with 45 PCR identifications plus 11 culture identifications when 45+11 = 56? Please clarify numbers of patients, samples and tests here.

Minor Revisions

Main Text

Page 6, Line 1

Reference 13 is not the primary source of data regarding changes in vaccine type and non-vaccine type IPD, the article cited is a review and this should be made clear.

Page 7, Lines 6-8

The section on AOM sits uncomfortable in the middle of discussion of invasive disease. I suggest this paragraph be moved to the AOM section. The source of the data on sever AOM is unclear, is this also from Germany? As in many settings the majority of AOM cases have no pathogen identified, it would be informative if the country, number of AOM cases making up the denominator for
the percentages presented and the percentage of AOM cases that yield serotype information were presented in order to provide information regarding the validity of these estimates.

Page 9, line 7
It is not clear what clinical specimens were used in the PCR to confirm pneumococcal CAP – was this sputum? If so a brief discussion of the potential contamination of this sample with URT flora, including pneumococci should be inserted.

Page 12, line 19
Please provide a reference for the statements “Recurrent cases are increasingly likely to involve NTHi” and “Some of these cases respond to treatment, but others become chronic with increasing likelihood of NTHi involvement”

Page 13, line 1
What data was the “expected rate” based on?

Page 13, line 4
Use of the word “because” implies causality – suggest, “Presumably because of”

Page 13, line 14
Why not cite the Hall-Stoodley paper (ref 49) in this section, as it provides stronger evidence of the role of biofilms in AOM than reference to other otorhinolaryngological infections.

Page 13, line 24
Please cite a reference for the statement that PCV vaccination reduces pneumococcal carriage

Summary
Please include a statement in the summary that highlights the facts that the majority of the data is European and that findings may therefore not be generalizable to less developed settings.

Discretionary Revisions
Page 12, line 24
Some would argue that children with AOM do not “require” tympanocentesis – suggest this is replaced with “underwent”

Page 16, line 3-10
It would be useful to discuss that the use of life years saved does not take into account quality of life, which may well be reduced following serious pneumococcal infection, particularly if sequelae were suffered

**Level of interest:** An article of importance 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 have received consulting fees from GSK and have received financial assistance from pneumococcal vaccine manufacturers to attend conferences. All honoraria were paid into University accounts and I have received no personal payments.