Reviewer’s report

Title: Nasopharyngeal carriage, serotype distribution and antimicrobial resistance of Streptococcus pneumoniae among children from Brazil before the introduction of the 10-valent conjugate vaccine

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Reviewer: Yin-Bun Cheung

Reviewer’s report:

This reports the carriage and characteristics of Streptococcus pneumonia in children recruited from a day care center and the emergency medicine department of a paediatric hospital in a Brazilian metropolitan area. This provides useful background information to understand the epidemiology and potential impact of pneumococcal conjugate vaccine.

Major compulsory revisions

1. The participants were recruited between March and June 2010. PCV10 was included in the Brazilian Immunization Program in May 2010. The authors need to explain the timing of the introduction in this metropolitan. Otherwise the title “before the introduction of the 10-valent conjugate vaccine” is not understandable.

2. The statistical inference is based on unjustifiable assumption of independence between subjects. This is clearly wrong in the present setting of carriage in day care center. Previous researchers used e.g. robust standard error to allow for clustering (e.g. Hill et al. CID 2006, 2008). Since the study only included one day care center and one paediatric emergency medicine department, it is difficult to see how a valid statistical inference can be made (without replicates of day care center and paediatric emergency med depart). I would suggest the authors to remove all the p-values and confidence interval and provide a purely descriptive report of their findings from the two sites.

3. The “Estimated Risk” in Table 1 is a wrong column title. What is presented is actually the odds ratio. The p=0.030 on page 7 about having young siblings as a risk factor disagrees with the p=0.003 in Table 1.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
No competing interest