Reviewer's report

Title: Penicillin resistance and serotype distribution of Streptococcus pneumoniae in Ghanaian children less than six years

Version: 2 Date: 1 August 2013

Reviewer: Susan Morpeth

Reviewer's report:

Thanks for sending the revised manuscript and cover letter.
My further comments are:

Abstract and Results

1. Some of the percentages given have a decimal place and others do not. I suggest rounding them all off to the same number of decimal places for consistency, and would personally use no decimal places.

Methods, Results & Discussion

2. The authors have explained in their cover letter that the population includes urban and slum-dwelling children, but this has not been well explained in the methods of the manuscript. Some mention of the generalizability of the study population to that of all children under the age of 6 years in Ghana needs to be added, as readers will not be familiar with the socio-economic population structure or rural/urban divide of Ghana. The discussion could be expanded to further discuss the generalizability of the results to the general Ghanian population of <6 year-olds, referring back to the methods.

3. In addition, the fact that the study population contains mostly 2-6 year old children should be added to the methods, or pointed out clearly early in the text of the results, so that the reader is clear in their mind about the study population as they go on to read the results and discussion. The fact that very few children under the age of 2 years are included is too important to only mention in the discussion. The discussion of the carriage prevalence found, could also refer to the limitation of the lack of <2 year-olds in the study population; the carriage prevalence would have been higher if the younger age group was better represented.

Discussion

3. I agree with the other reviewer that the increase in penicillin resistance is not entirely clear, with differing results due to different study populations and methods, and would suggest toning this down in the discussion. For instance I would call it a possible increase.
(Discretionary revision)

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

**Quality of written English:** Needs some language corrections before being published

**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