Reviewer's report

**Title:** A prospective study of urinary pneumococcal antigen detection in healthy Karen mothers with high rates of pneumococcal nasopharyngeal carriage

**Version:** 1  **Date:** 2 March 2011

**Reviewer:** yanan zha

**Reviewer's report:**

Minor Essential Revisions

The prospective study reported by Paul Turner et al. provides some interesting insights of using the BinaxNOW S. pneumoniae urinary antigen test in adults with higher pneumococcal colonization rate instead of pneumonia patients. It is an interesting way to look at the false positivity caused by the nasopharyngeal colonization, however, it also creates problem of comparing results with studies performed in patients with pneumonia. Because of the different choice of study population, the diagnostic test parameters have different meanings. For instance, the specificity in this study means the possibility of getting a true negative diagnosis on person who is neither having pneumonia nor colonized with S. pneumonia. The same term might mean differently, as the possibility of obtaining the negative diagnosis when the person does not have pneumonia but is possibly colonized with S. pneumonia, in another study performed in pneumonia patients. Thus, be cautious about this difference posed by the study population difference. Where such comparison is made (eg: page 7, the second last line), please make the transition by using the correct calculation or state the difference to avoid the implicit.

1. Unlike other studies on evaluation of the BinaxNOW S. pneumonia urinary antigen test, this study was assessing the performance of this commercial kit in healthy adults with higher S. pneumoniae colonization rate instead of pneumonia patients. It is an interesting way to look at the false positivity caused by the nasopharyngeal colonization, however, it also creates problem of comparing results with studies performed in patients with pneumonia. Because of the different choice of study population, the diagnostic test parameters have different meanings. For instance, the specificity in this study means the possibility of getting a true negative diagnosis on person who is neither having pneumonia nor colonized with S. pneumonia. The same term might mean differently, as the possibility of obtaining the negative diagnosis when the person does not have pneumonia but is possibly colonized with S. pneumonia, in another study performed in pneumonia patients. Thus, be cautious about this difference posed by the study population difference. Where such comparison is made (eg: page 7, the second last line), please make the transition by using the correct calculation or state the difference to avoid the implicit.

2. The number of positive BinaxNOW test in this study is really low largely due to the specific study population. Such a small number might explain that authors did not observe any significant association between colonization and positive urine antigen test. As the postulation of this study is sensitive to the sample size, please explain how the sample size was determined.

3. I would suggest authors to modify this manuscript as a note instead of a full article due to the abundance of the data. Or else, more substantial data should be included, such as the association between colonization density and the false positivity of the BinaxNOW test.

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