Reviewer's report

**Title:** Cost-Effectiveness of 2+1 Dosing of 13-Valent and 10-Valent Pneumococcal Conjugate Vaccines in Canada

**Version:** 1  **Date:** 16 February 2012

**Reviewer:** Kristina Bryant

**Reviewer's report:**

**Major Compulsory Revisions**

Earnshaw and colleagues compare the cost-effectiveness of a 2+1 dosing schedule of PCV13 to PCV10. This sort of analysis is important and can help inform vaccine policy decisions.

However, when all of the authors are employed by or paid the pharmaceutical company that owns the product favored by the analysis, is important to avoid even the hint of bias.

On page 11, the authors state that PCV10 is less immunogenic than PCV across the 7 common serotypes. In fact, using WHO defined criteria, PCV10 was non-inferior to PCV7 for serotypes 4, 9V, 14, 18C and 19F. Lower antibody responses were seen for serotypes 6B and 23F. This misrepresentation detracts from the manuscript and the important conclusions it draws.

There is also a tendency to emphasize potential disadvantages of PCV10, such as inconsistent effects on pneumococcal carriage, while conversely emphasizing potential advantages of PCV13. The authors make generous assumptions in estimating the indirect effects of PCV13 that may be valid but are not sufficiently supported by the data provided. The authors do acknowledge in the limitations that indirect effects of PCV13 have not been proved.

The authors acknowledge that their results are somewhat different than those reported by investigators who based their analysis on pneumococcal epidemiology from Alberta. One is left to wonder if Quebec data was used because it supported the hypothesis that PCV13 is always dominant vs PCV10. Given regional differences in the epidemiology of pneumococcal vaccine, it should be noted that this analysis is may or may overestimate or underestimate cost-effectiveness for the nation as a whole.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

Disclosures: I served as a clinical investigator on clinical trials of PCV13 funded by Pfizer (formerly Wyeth). In the past, I served as a consultant to Wyeth. I have served as clinical investigator on clinical trials funded by GSK (although not of PCV10) and I have served as a consultant to GSK.