Reviewer’s report

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

Version: 1 Date: 4 March 2012

Reviewer: Paolo Bonanni

Reviewer’s report:

The manuscript deals with a very interesting and up-to-date subject. The methods are well described, and the discussion and conclusions sound reasonable. Most limitations are recognized, and the overall writing of the article is very good.

Discretionary Revisions

A clear limitation regards the fact that the data on serotype coverage for IPD for PCV10 and PCV13 were obtained by a personal communication. Since the Authors report that such communication was made on March 21, 2011, it is difficult to understand why such data are still unpublished, at least in some official document if not in a scientific journal. Correctly, the Authors also used other sources of data for serotype coverage, but since the baseline results make reference to such personal communication, the possibility to cite a published source would be beneficial for the article. Were those data finally published?

Minor Essential Revisions

Another point to clarify regards what is illustrated also in Figure 2, i.e. the data (reported at page 18) on the possibility that ‘…Assuming a total per-dose cost of PCV10 of $94.10 (acquisition and administration) and considering a threshold incremental cost per QALY of $50,000, the cost per dose for PCV13 could be as high as $737.11 for PCV13 to remain cost-effective, when both direct and indirect effects were considered’. Since these data seem to me to be contradictory with what reported in the Discussion section (page 23) where it is stated that ‘…When including indirect effects, our model was not sensitive to PCV13 price variation; PCV13 remained a cost-saving option even if PCV13 was twice the price of PCV10’, I would ask the Authors to explain better this apparent contradiction.

Other two points, always regarding the pricing issue, would make the manuscript look more balanced. The first is a further sensitivity analysis where the price of PCV10 might be made lower than that fixed as invariable ($94.10), vis-à-vis the lower coverage afforded by the 10-valent versus the 13-valent vaccine (and the consequent possibility that the producer of PCV10 might decide to offer it at a lower price). The other point regards the possibility that, given the fact that indirect effects of the new conjugate vaccines are not demonstrated in a
definitive way, it would be better, in my opinion, to draw a baseline scenario where neither PCV13 nor PCV10 have an indirect effect, leaving all the other possibilities presented in the manuscript as sensitivity analyses.

Table 6 seems very long and crowded. If possible, an alternative way of presenting these crucial data for the article should be explored.

Given these minor but necessary points to amend, I believe that the article is well worth being published in BMC Infectious Diseases.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I have received grants for researches and participated in international and national Italian boards and meetings sponsored by different vaccine producers, including the sponsor of the present research.

I have no other conflict of interest in addition to the one declared above.