Reviewer’s report

Title: Cost Effectiveness of Option B Plus for Prevention of Mother-to-Child Transmission of HIV in Resource-Limited Countries: Evidence from Kumasi, Ghana

Version: 2 Date: 5 January 2015

Reviewer: Heidi Reynolds

Reviewer’s report:

Minor essential revisions:

1. Page 4, Line 7: Seems important to include stigma and discrimination as an import factor hindering PMTCT.

2. Page 4, line 12: After “rates of MTCT”, suggest being more precise about the time frame (e.g., during pregnancy, delivery and through 6 months(?) post partum and breastfeeding).

3. Page 4, line 14: add “living with HIV” after “64% of pregnant women…”

4. Page 4, line 15: clarify if this is any ART or certain regimens.

5. Starting on page 4, line 19. It is not clear in the paper whether the analysis takes in to account the % of women in the Option B scenario who are eligible for lifetime ART (<350).

6. Page 5, line 2: Clarify what “its” refers to in the phrase “despite its higher cost”

7. How does the analysis deal with the fact that some HIV+ women are on ART prior to their first pregnancy?

8. Page 7, Lines 13 & >: The text and Figure 1 should indicate that these are states for an HIV+ woman.

9. Regarding the chart abstraction, were there any notable problems with completeness of charts or data quality?

10. Page 9, lines 4-15. These are the estimates for transmission under ideal conditions. Suggest reiterating in this paragraph the range of values considered in sensitivity analyses, because adherence in real life is such a problem, particularly following the pregnancy.

11. Page 9, line 21. The cost presented in an annual figure but in the Figure 3 costs are 3 months costs. Suggest to also presenting the 3 month value on Page 9 to avoid confusion.

12. Page 11, lines 17-19: Is the reference for all these statistic from the reference number 26? If so, I suggest noting the reference in the text, since it is easy to confuse these data with what came from the medical charts.

13. Page. 11, lines 19-24: Are the estimates of the average rate of MTCT of 10.19% and 1% based on data that are observed in Ghana? (Which is how it reads.). The Option B+ transmission rate of 1% is assumes ideal adherence.
Suggest restating the phrase: “if all women in Ghana were instead offered Option B+...” Because “offer” does not imply use. Suggest rewording to say that if all HIV+ pregnant women in Ghana were offered Option B+ and had perfect adherence, then 146 infections would occur.

14. Discussion/Conclusion: The analysis is useful to make a policy case for Option B+ over Option B. However, there will be costs associated with strengthening the health system to ensure better access to ART and better adherence over the life course. This should be mentioned in the discussion/conclusion.

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

**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