Reviewer's report

Title: High seroprevalence of syphilis infection among pregnant women in Yiregalem Hospital Southern Ethiopia.

Version: 0 Date: 05 Nov 2017

Reviewer: Melanie Taylor

Reviewer's report:

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This paper represents an important discovery of high syphilis seroprevalence rates in ANC women in Southern Ethiopia and concerning co-infection rates with HIV. It is known that syphilis screening is recommended during ANC is almost all countries but is not implemented at the high levels of HIV screening. Despite curative therapy with a single shot of penicillin to prevent stillbirth and other adverse birth outcomes due to syphilis, many countries fail to achieve high rates of syphilis screening in pregnant women. Ethiopia is one of these countries. This paper demonstrates the urgent need to integrate syphilis screening onto current HIV testing platforms in Ethiopia.

Specific edits:
1. Abstract line 2 remove "an" and replace with "the"
2. Introduction line 38. Remove "Apart from being a serious disease" and start with Syphilis "is"
3. Line 41 remove "on the other hand"
4. Line 45 remove "as compared to women screened and treated in the 3rd trimester"
5. Line 43 change to "control of vertical transmission of syphilis and associated birth complications"
6. Introduction, please describe and provide citation for the current country recommendations or policy for syphilis screening in pregnancy/ANC

7. Introduction or discussion, Please provide and cite the current country recommendations for syphilis treatment in pregnancy

8. Introduction, please describe the current ANC syphilis screening recommendations and practices at the study hospital. Please include estimated syphilis screening coverage.

9. Line 64, should this be "women are offered screening for HIV and syphilis"?

10. Line 59 remove "far"

11. Line 79 "chart"

12. Line 102 "A letter of support was…"

13. Line 105 "Please describe the treatment for pregnant women with syphilis. Was this consistent with WHO treatment guidelines?"

14. Line 112 "thirds" and "residents"

15. Line 117 494 women "who" attended

16. Line 119 The majority of "these women attending ANC late"

17. Line 122 sub heading "Seroprevalence (spelling) of syphilis and HIV"

18. Line 127 68.6% "knew of their HIV status"

19. Line 131 Syphilis prevalence "increased"

20. Line 130 associated factors, please designate those associated factors with significant ORs (95%CI) and p values

21. Line 144 add Gondar, Ethiopia"

22. Line 147, would remove Bangladesh and Brazil citations as limited relevance

23. 160 Tanzania spelled wrong

24. Line 160 would remove China citation as limited relevance

25. Line 161 define "round"

26. Line 163 "that" were urban residents

27. Lines 165-171 would delete this paragraph

28. Line 178 "This" calls for

29. Line 179 "integration" no "s"
30. Line 180 "implementation of rapid dual HIV/syphilis screening test in ANC clinics in Ethiopia to improve syphilis and HIV screening coverage, early detection, and maternal treatment to prevent infant infection"

31. Line 183 "control of adverse pregnancy outcomes due to congenital syphilis" delete "syphilis in pregnancy….

32. Line 192 "once" not one

33. Line 194 "strengthen the existing ANC to include rapid point-of-care syphilis testing with on-site treatment to reduce mother to child transmission of syphilis

34. Recommend adding addition citations and discussion of global efforts to eliminate mother to child transmission of HIV and syphilis through improved ANC, and improved HIV and syphilis testing and treatment coverage. Rapid dual tests and program integration are important tool for countries to consider as they work to achieve elimination goals:


35. Line 198, add "sample size limited our ability to show significance for many demographic variables". We did not evaluate birth outcomes of mothers treated for syphilis". We did not
evaluate or report on syphilis screening and treatment coverage within pregnant women seen at this facility overall.

36. Line 203 "the seroprevalence of syphilis "among pregnant women in this hospital in Southern Ethiopia was considerably higher"

37. Line 206 "delayed ANC in Ethiopia"

38. Table 4 define COR

39. Was a multivariate analysis performed?

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.
Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.
Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.
Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

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Please indicate the quality of language in the manuscript:
Needs some language corrections before being published

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