Reviewer’s report

Title: Syphilis-attributable adverse pregnancy outcomes in China: a retrospective cohort analysis of 1187 pregnant women with different syphilis treatment

Version: 2 Date: 19 Aug 2018

Reviewer: Claire Bristow

Reviewer's report:

Review of: Syphilis-attributable adverse pregnancy outcomes in China: a retrospective cohort analysis of 1187 pregnant women with different syphilis treatment

This paper describes an analysis of programmatic data from China. In Guangzhou 1391 pregnant women tested positive for syphilis during pregnancy during the time period of data analysis. This was sufficient sample size to look at specific adverse outcomes of pregnancy and how timing of syphilis treatment and RPR titer can impact adverse pregnancy outcomes. This paper describes important results and should be published after minor revisions are made.

Abstract
- The described purpose of the study doesn't capture all of the aims of your analysis. You also showed how time of treatment and titer impacted adverse pregnancy outcomes and your conclusion doesn't speak to the purpose you state.

Background
- Line 55 (reference 9): Did those 15,884 cases test positive during delivery or at any point during pregnancy?
- Line 61: "...accurately captures data describing linking adverse.." I think there is an error in this sentence and it doesn't really read correctly as written. Please correct.
- Line 61: It would be clearer if worded: "The city of Guangzhou has all medical...."
- Line 62-63: "...compared to other cities." Are you saying that other cities don't have this? Please clarify.
- The described purpose of the study doesn't capture all of the aims of your analysis. You also showed how time of treatment and titer impacted adverse pregnancy outcomes.

Methods
- Line 75: You put a comma instead of a period.
- Line 77: 1391 women were diagnosed with syphilis during this time period - were they diagnosed during pregnancy or at delivery or both?
- Line 98 and line 106: I don't understand the need for 2 courses of treatment. Does the second course
begin immediately following the first course? Why is this called two courses and not just one course that includes weekly benzathine penicillin for 6 weeks?

Line 123: Please reword for clarity to "We chose not to include congenital infection in this…" because some people include all adverse outcomes of syphilis in pregnancy to be "congenital syphilis".

Results
-Line 166: why was <1:16 the cutoff rather than 1:8?
-Were you able to look at differences in the proportion of adverse pregnancy outcomes between the different treatments (also adjusting for covariates such as time of treatment).
-Are you able to compare the rates of adverse pregnancy outcomes of the syphilis infected with syphilis non-infected?

Figure 2 could use some further clarification in the axis titles - specifically include information on what the adjusted RR shows and state what the comparison group was. "Adjusted RR of…"

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:

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