Author’s response to reviews

Title: Inadequate prenatal care and its association with adverse pregnancy outcomes: A comparison of indices

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Author’s response to reviews:

Dear Dr. da-Silva,

We appreciate the thoughtful comments and suggestions submitted by the reviewers. The following revisions have been made to the manuscript based on the reviewers’ suggestions:

- We eliminated the Kessner and GINDEX indices from the analyses, and now only compare the two indices in current use (R-GINDEX and APNCU).
- We revised the objective re gestational age bias to read, “assess whether or not and to what extent gestational age bias exists” (both in the Abstract and in the body of the paper).
- We removed the suggestion to discontinue use of the indices for studying the association with preterm birth and LBW; instead stated that the indices should be used with caution because of gestational age bias. We expanded our discussion of alternative methods for using the indices to study the association with preterm birth and LBW.
- Because little research has been published using Canadian data to assess prenatal care utilization, we think it is important to present the data for each of the ten years and to conduct a trend analysis to determine if there have been any changes in utilization over time. We therefore retained Table 1, but removed the former Figure 1 (comparing trends in rates over time).
- Because of the two-stage method we used to determine prenatal care utilization, we were not able to distinguish whether a lack of information meant missing data or no prenatal care, and therefore all cases with no visits determined using either method were categorized as having no care. A statement has been added to the limitations to this effect.
- The section on analysis of agreement between the various indices has been removed from the methods and the results, and we have deleted the former Table 2.
- The reference group for the logistic regression consists of women with all other categories of prenatal care utilization (i.e., we combined the intermediate, adequate and intensive groups as the reference group.) A statement has been added to the paper to clarify this, and a footnote added to the table. Our statistician advised against using only those women with adequate care as the reference group, because the indices categorize women with adequate care differently. This would result in unequal sample sizes in the reference group between the two indices and we would not be comparing the same women. Our goal was to determine if inadequate/no prenatal care utilization results in poorer outcomes compared to the remainder of the population.

- Unfortunately, race and ethnicity are not recorded in the Manitoba Health administrative databases, so we could not adjust for these characteristics in the analyses. This has been noted as a limitation of the study.

- The pages are now numbered. My apologies for this oversight.

- We added a statement at the end of the Results section of the abstract to clarify what we mean by gestational age bias.

- We have provided the population for Winnipeg in 1996 instead of 2001 (census data are only available every 5 years, so 1996 data fall within the time frame of the study).

- We replaced the word “all” with “most” as suggested.

- In Table 1, we added the total sample size for each year.

- The former Table 2 has been removed.

- Description of the categories and the reference group for all the covariates have been added as a footnote to the applicable tables.

- As requested by BMC, the paper is prepared using Reference Manager. I selected the bibliographic style entitled “Biomed Central” and cannot control how the references or formatted or how journal titles such as JAMA get presented unless I remove the field codes. If the editor has additional suggestions for formatting the reference list more effectively using Reference Manager, I would be happy to make those changes.

I hope these revisions are acceptable, and look forward to hearing from you.

Sincerely,

Maureen Heaman, RN, PhD