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Title	Antenatal care by family physician, obstetrician or midwife and associated gestational weight gain: a retrospective cohort study
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Reviewer 1	Yan Yuan
Institution	University of Alberta, School of Public Health, Edmonton, Alta.
General comments (author response in bold)	<p>Major issues:</p> <p>The authors estimated 18 absolute risk differences and standardized difference between all possible pairs. The authors should address the multiple comparison issue. An Chi-squared test could be used to test the null hypothesis of no difference in GWG categories by providers. In addition, the estimated absolute risk difference between providers is a crude risk difference that does not account for maternal characteristics. For example, OB and MW provide care to slightly different population of women: the population of women MWs cared for has a higher percentage of normal BMI and lower percentage of pre-existing diabetes / hypertension than the population of women OBs cared for (Table 1). These are potential confounding factors for the primary GWG outcome. Can the authors comment on this?</p> <p>With regard to statistical penalties for multiple comparisons across groups, within observational studies, there is much debate. In the current study, we did not adopt a statistical penalty for significance while calculating absolute risk differences. We have added a line to the methods sections to state that we are not correcting for multiple comparisons. In addition, the covariates are accounted for in the generation of the relative risks (example figure 3) but the absolute risk differences are not based on any model but a natural expression of the risk differences between providers. As shown in supplementary table 4, the inclusion of covariates, such as maternal age, and pre-pregnancy BMI, do not materially alter the relative risks. Hence, we think that the current presentation of unadjusted risk differences is meaningful. We have switched the absolute risk difference and the adjusted relative risk columns in the forest plot so that the order is more logical to the reader.</p> <p>According to the method section, the multivariable Poisson model for PTB include gestational age at birth as an explanatory variable. This is not right as the outcome PTB is defined by gestational age at birth.</p> <p>We agree with the reviewer and re-ran the model, excluding gestational age as a co-variate for preterm birth, small for gestational age and large for gestational age. This is reflected in the methods section. (Pg 7)</p> <p>The results did not vary significantly from what was previously reported in the manuscript. Please see changes in the results section. (Pg. 8-9). We have also attached updated figures with these new results.</p> <p>The gestational age at birth (GA) is also listed as an explanatory variable for SGA and LGA, which is puzzling. Per my understanding, the SGA and LGA is defined considering gestational age, thus GA has been adjusted for already and should not be in the list of explanatory variables.</p> <p>We agree with the reviewer and re-ran the model, excluding gestational age as a co-variate for preterm birth, small for gestational age and large for gestational age. This is reflected in the methods section. (Pg 7)</p> <p>The results did not vary significantly from what was previously reported in the manuscript. Please see changes on in the results section. (Pg. 8-9). We have also attached updated figures with these new results.</p> <p>The font in Figures 3 and 4 is too small to read. I was unable to evaluate these results. A landscape layout may allow the font size to increase.</p> <p>These figures have been updated with our new results and have been attached with our revisions. We have also attached the figures as png files that allow them to be easily viewed.</p> <p>When modelling the 2nd outcome adverse birth outcome, the GWG category (the primary outcome) is used as the main exposure while the hypothesized main exposure health care provider type is used to stratify the population. As there is no prior hypothesis of effect modification, the stratified analysis could use some justification.</p> <p>We felt that the stratification by health care provider would provide some clinical relevance and that it would certainly be of interest among health professionals. We know within our interprofessional research team that there are always discussions of how one profession approaches certain aspects of care and that providers would want to see how their own outcomes compare to others. Further, the links between GWG and adverse outcomes have been demonstrated in other studies, but the comparison by professional groups was a novel contribution.</p> <p>Clarification: The authors indicated the final cohort consisted of 231,697 women. Do you mean 231,697 pregnancies? Since the GWG corresponds to pregnancy, and currently the numbers in each GWG category adds up to 231,697 in Table 1. As the author mentioned, there are women had more than one pregnancy in this data set, in which case the numbers of total GWG may not necessary add up to the number of women. Figure 1 also suggests that counts of pregnancy is used. Please clarify.</p> <p>We are referring to pregnancies. We have updated the results section to reflect this. (Pg. 8)</p> <p>The point of stratified analysis is to elucidate effect modification (i.e. interaction), i.e. the effect of an exposure differs across strata. There is no evidence of effect modification in the current study. Thus I'd suggest that authors focus on describing the overall exposure effect.</p> <p>We agree that the focus of the paper should be on overall exposure effect and have attempted to modify this in the manuscript.</p> <p>"2012-201"6 in the abstract should be "2014-2016".</p> <p>2012 has been changed to 2014. (Pg. 3)</p> <p>27. Row percentages in Table 1 under different care providers would be more useful than the column percentages presented.</p> <p>Table 1 has been updated to reflect this suggestion. We submitted an editable figure file for Table 1 with this update when we submitted our other tables and figures as editable files.</p>
Reviewer 2	Cheryce Harrison
Institution	Division of Monash Applied Research Stream, Monash University, Victoria, Australia
General comments (author response in bold)	<p>Your results hinge on two main factors: GWG and the type of HCP, yet neither are well explained. How was GWG captured? How often was it captured?</p> <p>Additional information about the types of HCP and the choice to select one or the other has been added to the manuscript. Further information about GWG assessment in pregnancy has been described.</p>

Does the frequency of monitoring change according to HCP in standard care?

This is discussed in the background section. The frequency of antenatal visits for low risk women is common to all providers in Ontario based on the (14).

Are women provided with information about GWG across these care types?

Additional information about this has been added to the background section. (Pg. 4)

While the majority of health care providers reported counseling women on appropriate gestational weight gain, 30-40% of women reported that they did not receive counseling (7,9,10), and only about a quarter reported being informed about risks associated with inappropriate gestational weight gain (11).

Similarly with respect to HCP, the authors allude to time restraints in the introduction, however an important consideration is training and knowledge of GWG guidelines and the ability to counsel women and the differences, or lack there of, may be due to one or a combination of time and knowledge of HCP - for example women seeing an obstetrician may not receive GWG guidance due to time restraints, compared to women seeing a family GP who may be provided with more time, but may have received less training on GWG guidance. Also, do women visit each HCP at the same frequency across pregnancy as this alters the amount of contact provided between providers and may impact GWG? If these are not known, this could be considered a limitation.

We have included additional information in the background of the paper about the similarities and differences in the models of care for across provider groups.

The authors mention women are able to select their care type, however is this the case for all risk profiles? Are lower risk women more likely to see one type of care provider compared to higher risk women for example?

Family physicians, midwives and obstetricians all provide primary maternity care to low risk women in Ontario. Patients are able to choose and self-refer to their preferred antenatal health care provider. This may result in a selection bias based on patient beliefs or preferences regarding the approach to care of each profession.

Define plausible BMI

This definition has been further described in the methods section.

Line 120-121, p5 does not contain sufficient information – please expand on what kind of data you were able to obtain.

This is the standard description of the BIS that BORN requires all researchers to include in manuscripts. (pg. 5)

Line 204, pg 7 shared care not 'shared cared'

This change has been made. (pg. 8)