Author’s response to reviews

Title: Gestational exposure to endocrine disrupting chemicals in relation to infant birth weight: A Bayesian analysis of the HOME Study

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Response to Reviewers for manuscript ENHE-D-17-00050 “Gestational exposure to endocrine disrupting chemicals in relation to infant birth weight: A Bayesian analysis of the HOME Study”

We would like to thank the editor and both reviewers for their insightful comments. These were instrumental in guiding the revision process for this manuscript.

Response to Editor

You have improved the paper substantially, a few minor comments of reviewer 2 still need to be addressed.

Thank you for your suggestions and revisions on earlier drafts of this manuscript. We have taken Reviewer 2’s comment into account when drafting this revision of the manuscript.

Response to Reviewer 1

I think the authors made a good effort to address the issues raised by both reviewers as a consequence the paper has improved considerably. I have no further comments.

Thank you for your time and insightful comments on the earlier draft of this manuscript. They were extremely helpful during the revision process.
Response to Reviewer 2

The authors have responded to all my comments properly. I have just minor suggestions:

In the introduction, the authors should mention that the paper of Birks et al (2016) estimates EDCs exposure through a job exposure matrix and results can differ from those studies using biomarkers of exposure. Also, please delete "while" in the sentence: "For example, Birks et al. (2016) in a meta-analysis of European birth cohorts, found that pregnant women exposed to more than 1 EDC class were more likely to have a low birth weight infant [21]."

Thank you for that clarification. The sentence regarding the Birks et al. (2016) study has been rewritten as "Using a job exposure matrix, which can differ from exposure measurement, Birks et al. (2016) examined occupational EDC exposures in a meta-analysis of European birth cohorts and found that pregnant women exposed to more than 1 EDC class were more likely to have a low birth weight infant [15]." (p4.ln2).

Thanks for providing the DAG. In future studies it would be nice if the DAG follows a temporal pattern: maternal race should be placed before gestational EDC exposure for example. I think other variables should be included in the DAG such as gestational age and parity.

The DAG in the revised manuscript was reorganized to follow a temporal pattern and the additional variables suggested were added. The revised DAG is included in the Supplementary Material of the submission.

I do not understand this comment: "The LODs for PBCs and PBDEs varied depending on the sample volume provided by each participant". My suggestion of including the LOD in Table 2 was to know the sensitivity of the analytical methods used.

We revisited this during the revision process and have added the mean LODs for the EDC urine and blood sample concentrations in Table 2 to provide information regarding analytic specificity.