Author’s response to reviews

Title: Paradox Lost on the U.S.-Mexico Border: U.S. Latinas and Cesarean Rates

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Dear Dr. Hundley,

Thank you for the opportunity to revise our manuscript “Paradox Lost on the U.S.-Mexico Border: U.S. Latinas and Cesarean Rates” for possible publication in BMC: Pregnancy and Childbirth. We appreciate the detailed comments and suggestions provided by the two reviewers. We addressed each suggestion and comment and feel the manuscript is much stronger for having done so. As requested, we used Microsoft Word’s track-changes function so that you can see the changes we made. Below we list the specific changes we made to the manuscript.

Reviewer 1: How is the “border region” defined for this analysis/study? In terms of distance from the border?

Authors' Response: This information was included in the original manuscript in footnote 5. We use the La Paz Agreement, which defines the border as 100 kilometers on either side of the
inland and maritime boundaries between the United States and Mexico. This definition is also used by the Centers for Disease Control. We have addressed the reviewer’s question by moving the definition to the main text (pp. 4-5).

Reviewer 1: A reference of the survey/methods would be useful for the reader to better understand the methodology of the survey.

Authors' Response: We have added this citation, which is now source 30 and have added more information about the survey (p. 4).

Reviewer 1: The survey was only completed by “women who could complete the survey in English.” This could represent an important bias for a survey that attempts to analyze and draw conclusions on Latino women with compounded disadvantage. I think this needs to be explained and its limitations included in the Discussion.

Authors' Response: We have added more information about the survey (p. 4). We have also added this as a limitation, included in the Discussion (pp. 16-17).

Reviewer 1: Authors explain that Childbirth Connection’s Listening to Mothers III survey was followed by a follow-up survey in 2013. Is this follow-up survey part of the same first overall survey or was it an independent survey?

Authors' Response: The post-partum survey is a separate survey. We made this clearer (p.4).
Reviewer 1: About 45% of the women who were re-contacted responded. Do authors have some information about the characteristics of the other 55% who did not respond? Can we assume that the 45% are not a selected particular group? Is it valid to draw conclusions on the basis of the 45%? I think it needs to be included in the discussion.

Authors' Response: We added information on this issue on page 4 of the manuscript. Although a weight is included in the data set to make the data representative of the national population of English speaking women aged 18-45 who gave birth to a singleton in a hospital in 2011 and 2012, we did not use the weight because we had to delete 138 women from the dataset because they did not provide the hospital, city, and/or state of the birth. We also list this as a limitation in the discussion section our inability to generalize our results (p. 17).

Reviewers 1 and 2: The discussion needs to be strengthened. Strengths and limitations, for example, are not discussed.

Authors' Response: We have rewritten the discussion section to include a discussion of strengths and limitations (pp. 15-17).

Reviewer 1: Update WHO statement to April 2015 statement.

Authors' Response: We have updated our manuscript with the more recent WHO statement (p. 2).

Reviewer 2: Basic medical and pregnancy factors such as maternal age, parity, previous CS, gestation age at delivery, presentation of the fetus, number of fetuses should be included in Table 1.
Authors' Response: LTMIII is limited to singleton pregnancies. We have included maternal age, parity, gestational age at delivery, and previous cesarean in Table 1. We also included CS indication for malpresentation as a proxy for fetal presentation.

Reviewer 2: The exponentiated coefficients should be converted into odds ratios and then presented in Table 2, with the description in the Results section changed accordingly.

Authors' Response: The exponentiated coefficients included in the initial version of the paper are the odds ratios from our logistic regression (not the raw coefficients which are not odds ratios). To reduce confusion among readers, we have used the term “odds ratios” in the title for Table 2.

Reviewer 2: I am confused whether the authors also used logistic regression for these models, bearing in mind that for model 2, the sample size was 52. Or did the authors use univariate analysis? i.e. The authors just looked at the effect of compounded disadvantage on the non-border sample?

Authors' Response: We used three models in our multivariate analysis, one for the full sample (Model 1), one for the non-border sample (Model 2), and one for the border sample (Model 3). Models 2 and 3 use an interaction term which is the function of three variables. Logistic regression was used for all three models, to enable the interpretation of odds ratios. Language has been added to the revision of the paper to clarify the analytical methods.

Reviewer 2: Given that no pregnancy or medical characteristics of the women were considered in the quantitative analysis, the authors asserting that the likelihood of CS is influenced by intersecting identities in a particular geographic context is a stretch.
Authors' Response: We have revised our discussion point as follows:

A strength of our study lies in our use of Intersectional Theory, which informed our creation of a “compounded disadvantage” variable. Using this variable, our analysis shows that intersecting statuses affect cesarean rates in particular geographic contexts for particular women. Research on variations in cesarean have found differences by hospital and geographic regions, that cannot be fully explained by medical or pregnancy characteristics of women. Our analysis goes further to demonstrate that Latinas who are multiply disadvantaged in terms of education and health insurance status have greater risks of cesarean if they give birth in border hospitals. Future studies that examine drivers for disparities in mode of birth could apply similar methods and theories to better understand reasons for variation in or overuse of cesareans (p. 16)

We also carefully read the manuscript to weed out any typographical errors and to improve its flow and readability.

Thank you for the opportunity to revise our manuscript. We look forward to hearing from you.