NOTICE: This document contains correspondence generated during peer review and subsequent revisions but before transmittal to production for composition and copyediting:

- Comments from the reviewers and editors (email to author requesting revisions)
- Response from the author (cover letter submitted with revised manuscript)*

*The corresponding author has opted to make this information publicly available.

Personal or nonessential information may be redacted at the editor’s discretion.

Questions about these materials may be directed to the Obstetrics & Gynecology editorial office: obgyn@greenjournal.org.
RE: Manuscript Number ONG-20-128

Among College Educated Women Racial/Ethnic Disparities in Maternal and Neonatal Adverse Outcomes

Dear Dr. Tanner:

Your manuscript has been reviewed by the Editorial Board and by special expert referees. Although it is judged not acceptable for publication in Obstetrics & Gynecology in its present form, we would be willing to give further consideration to a revised version.

If you wish to consider revising your manuscript, you will first need to study carefully the enclosed reports submitted by the referees and editors. Each point raised requires a response, by either revising your manuscript or making a clear and convincing argument as to why no revision is needed. To facilitate our review, we prefer that the cover letter include the comments made by the reviewers and the editor followed by your response. The revised manuscript should indicate the position of all changes made. We suggest that you use the “track changes” feature in your word processing software to do so (rather than strikethrough or underline formatting).

Your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Mar 13, 2020, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

REVIEWER #1:

Overall Comments: The authors utilize a large national database in order to perform a retrospective cohort study to estimate the composite maternal and neonatal adverse event (AE) outcomes of women of different racial and ethnic groups with a baseline educational level of at least a bachelor degree. All data was from using the information obtained from the birth certificate by the Centers for Disease Control and Prevention. Reasonable maternal and neonatal outcomes were studied and it was found that maternal education, a surrogate for SES, alone does not explain the disparity in maternal and neonatal outcomes. Overall the paper is well written.

Specific Comments:

Title: To this reviewer, does not read smoothly, perhaps, "Racial/Ethnic Disparities in Maternal and Neonatal Adverse Outcomes in College Educated Women"

Short title: ok

Précis: ok

Abstract: ok

Introduction: ok

Materials and Methods: no issues

Results: well written

Discussion: Do the authors think that amount, timing or quality of PNC may be an issue? Although interestingly, the impact on non Hispanic black babies before 34 weeks was not an issue. A hypothesis regarding decreased impact in the Latina population is presented. Is there any such hypothesis for the African American population where intrinsic factors may be in play?

Tables/Figures good
REVIEWER #2:

The morbidity and mortality disparity among different racial/ethnic groups giving birth in the US stands out and the root causes need to be elucidated. Examination of data as in this study is much needed.

The authors hypothesize that the racial/ethnic disparity seen in maternal and neonatal outcomes will not be erased by increasing socio-economic status as expressed by level of higher education, i.e. a bachelor degree or higher.

The study us retrospective exam of composite maternal and neonatal adverse outcomes in women with at least a bachelor's degree and who delivered singletons without anomalies in 2011-2013. The data used were collated from birth-infant data files The basis was the 2003 revised birth certificate. As not all states used this version in the study period, the study included 83% (in 2011) to 90% in 2013.

The summary of the findings are presented in an (mostly) easily understandable format in tables

- Are the examined outcomes different in the states that were excluded/had not adopted the revised birth certificate?

The tables give much information. It is remarkable that in Table 1 for non-Hispanic Blacks the "unknown" consistently is higher than for the other groups. Whether nulliparous or not is "unknown" 4 times as often in Black women as in Whites, and data for BMI missing in twice as many cases.
- Maybe the authors could comment on this.

Table 1. It could be interesting to see how the distribution of the three groups is in the general population of women delivering.

190-197. To apply the "Hispanic Paradox" to the study group would be easier to make sense of if we knew how many of the total group of Hispanic women delivering in that period had higher education. Could the explanation be that Hispanic women with advanced degrees are markers of not-recent immigrants with socio-economic stability, i.e. selection bias?

The last entry of table 1: the distribution of number of cases by year and group. The <0.001 refers to what?

172-176. Why did you decide to eliminate maternal transfusion (rather than other factors) in the sensitivity analysis?

REVIEWER #3:

In the manuscript under review, the authors report a retrospective cohort study of 2.2 million live births using the Period Linked Birth-Infant Death Files of the US. Vital Statistics 2011-2013. The objective of their study was to compare composite maternal and neonatal adverse outcomes of women with at least a bachelor's degree. They hypothesized that the racial/ethnic disparities in outcome will persist even among women with a college education. This is an important study and is well written, but is somewhat limited by the data used to examine this question.

Specific comments include the following:

1) What about women who reported two or more races?

2) Outcomes: from birth certificate, this is a real limitation as admission to ICU, transfusion, hysterectomy, or unplanned operating room procedure are all very varied and of a very different level of significance pending associated situation. I know that one of the limitations of this data is that it is not linked to discharge codes, but an incorporation of the more standard CDC definition of SMM would be very useful: https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm. Even using the Kilpatrick definition of SMM adapted by ACOG: https://www.acog.org/Clinical-Guidance-and-Publications/Obstetric-Care-Consensus-Series/Severe-Maternal-Morbidity-Screening-and-Review?IsMobileSet=false 4 or more units of blood is used as a definition which would be hard to differentiate in birth certificate data.

The authors did perform a sensitivity analysis excluding transfusion, but I believe this should be their main reported outcome given the difficulty of using "transfusion" as an outcome as it could mean anything.

3) It would be wonderful if the authors could report very AMA as this is know to be associated with SMM (age >40 or >45)

4) I appreciate the inclusion of BMI categories. Does the birth certificate data include weight gain in pregnancy using to IOM standards?

5) How did the authors separate pre-pregnancy hypertensive disorders from pregnancy associated hypertension?

6) What is an unplanned operative procedure?

7) With the neonatal outcomes how did the authors
8) Why did the authors stratify by gestational age of delivery in the maternal models versus control for it?

9) I am concerned with the limitations of birth certificate data with potential confounders: income/insurance status in particular

STATISTICAL EDITOR’S COMMENTS:

1. General: Is there no information re: insurance status of mothers, level of hospital care in the delivering hospital, whether public or private and hospital volume? Those would seem to be important covariates to consider for maternal and neonatal mortality.

2. Table 1: Need units for maternal age, BMI.

3. Table 2: The stats test indicates to what extent the adverse outcome incidence rates deviate from a random distribution across the three cohorts, but does not show whether the non-hispanic black or the hispanic groups differ statistically from the non-hispanic white referent. Should indicate the comparison of those pairwise stats vs the referent group.

4. Table 3: There are 20 comparisons in this Table, with no adjustment for multiple hypothesis testing, so some of the associations may be spurious. Also, the subset analysis for GA 24-27 has relatively modest counts of adverse outcomes, so those RRs and aRRs may be over fitted. Should also cite the absolute differences in incidence rates to put the RRs and aRRs in context.

5. Table 4: Same comments as in Table 3 re: need for adjustment for multiple hypothesis testing and need to add context by citing the absolute differences in incidence rates.

6. Table 5: Same comments as in Tables 3, 4 and again the counts for GA 24-27 are likely too few to allow for multiple adjustment for 11 covariates.

Associate Editor’s Comments:

We would be happy to consider a revised version if at least 3 of the following 4 covariates were included in the analysis: insurance status of mothers, level of hospital care in the delivering hospital, whether public or private hospital, and hospital volume.

If you are unable to do this, because the only modestly increased risks might easily be due to residual confounding, we must decline to publish your work.

EDITORIAL OFFICE COMMENTS:

1. The Editors of Obstetrics & Gynecology are seeking to increase transparency around its peer-review process, in line with efforts to do so in international biomedical peer review publishing. If your article is accepted, we will be posting this revision letter as supplemental digital content to the published article online. Additionally, unless you choose to opt out, we will also be including your point-by-point response to the revision letter. If you opt out of including your response, only the revision letter will be posted. Please reply to this letter with one of two responses:
   A. OPT-IN: Yes, please publish my point-by-point response letter.
   B. OPT-OUT: No, please do not publish my point-by-point response letter.

2. As of December 17, 2018, Obstetrics & Gynecology has implemented an "electronic Copyright Transfer Agreement" (eCTA) and will no longer be collecting author agreement forms. When you are ready to revise your manuscript, you will be prompted in Editorial Manager (EM) to click on "Revise Submission." Doing so will launch the resubmission process, and you will be walked through the various questions that comprise the eCTA. Each of your coauthors will receive an email from the system requesting that they review and electronically sign the eCTA.

   Please check with your coauthors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the manuscript's title page.

3. In order for an administrative database study to be considered for publication in Obstetrics & Gynecology, the database used must be shown to be reliable and validated. In your response, please tell us who entered the data and how the accuracy of the database was validated. This same information should be included in the Materials and Methods section of the manuscript.

4. All submissions that are considered for potential publication are run through CrossCheck for originality. The following lines of text match too closely to previously published works. Variance is needed in the following sections:
   a. Please add some variance to the methods section. We understand that there will be overlap with previous publications, but the majority of this section is verbatim from your June 2019 article in the journal.
5. Standard obstetric and gynecology data definitions have been developed through the reVITALize initiative, which was convened by the American College of Obstetricians and Gynecologists and the members of the Women’s Health Registry Alliance. Obstetrics & Gynecology has adopted the use of the reVITALize definitions. Please access the obstetric and gynecology data definitions at https://www.acog.org/About-ACOG/ACOG-Departments/Patient-Safety-and-Quality-Improvement/reVITALize. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

6. Because of space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Original Research reports should not exceed 22 typed, double-spaced pages (5,500 words). Stated page limits include all numbered pages in a manuscript (i.e., title page, précis, abstract, text, references, tables, boxes, figure legends, and print appendixes) but exclude references.

7. Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:

* All financial support of the study must be acknowledged.
* Any and all manuscript preparation assistance, including but not limited to topic development, data collection, analysis, writing, or editorial assistance, must be disclosed in the acknowledgments. Such acknowledgments must identify the entities that provided and paid for this assistance, whether directly or indirectly.
* All persons who contributed to the work reported in the manuscript, but not sufficiently to be authors, must be acknowledged. Written permission must be obtained from all individuals named in the acknowledgments, as readers may infer their endorsement of the data and conclusions. Please note that your response in the journal's electronic author form verifies that permission has been obtained from all named persons.
* If all or part of the paper was presented at the Annual Clinical and Scientific Meeting of the American College of Obstetricians and Gynecologists or at any other organizational meeting, that presentation should be noted (include the exact dates and location of the meeting).

8. Provide a short title of no more than 45 characters (40 characters for case reports), including spaces, for use as a running foot.

9. The most common deficiency in revised manuscripts involves the abstract. Be sure there are no inconsistencies between the Abstract and the manuscript, and that the Abstract has a clear conclusion statement based on the results found in the paper. Make sure that the abstract does not contain information that does not appear in the body text. If you submit a revision, please check the abstract carefully.

In addition, the abstract length should follow journal guidelines. The word limits for different article types are as follows:
Original Research articles, 300 words. Please provide a word count.

10. Only standard abbreviations and acronyms are allowed. A selected list is available online at http://edmgr.ovid.com/ong/accounts/abbreviations.pdf. Abbreviations and acronyms cannot be used in the title or précis. Abbreviations and acronyms must be spelled out the first time they are used in the abstract and again in the body of the manuscript.

11. The journal does not use the virgule symbol (/) in sentences with words. Please rephrase your text to avoid using "and/or," or similar constructions throughout the text. You may retain this symbol if you are using it to express data or a measurement.

12. In your Abstract, manuscript Results sections, and tables, the preferred citation should be in terms of an effect size, such as odds ratio or relative risk or the mean difference of a variable between two groups, expressed with appropriate confidence intervals. When such syntax is used, the P value has only secondary importance and often can be omitted or noted as footnotes in a Table format. Putting the results in the form of an effect size makes the result of the statistical test more clinically relevant and gives better context than citing P values alone.

If appropriate, please include number needed to treat for benefits (NNTb) or harm (NNTh). When comparing two procedures, please express the outcome of the comparison in U.S. dollar amounts.

Please standardize the presentation of your data throughout the manuscript submission. For P values, do not exceed three decimal places (for example, “P = .001”). For percentages, do not exceed one decimal place (for example, 11.1%”).

13. Please review the journal’s Table Checklist to make sure that your tables conform to journal style. The Table Checklist is available online here: http://edmgr.ovid.com/ong/accounts/table_checklist.pdf.

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Please note that if your article is accepted, you will receive an email from the editorial office asking you to choose a publication route (traditional or open access). Please keep an eye out for that future email and be sure to respond to it...
promptly.

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If you choose to revise your manuscript, please submit your revision through Editorial Manager at http://ong.editorialmanager.com. Your manuscript should be uploaded in a word processing format such as Microsoft Word. Your revision’s cover letter should include the following:
  * A confirmation that you have read the Instructions for Authors (http://edmgr.ovid.com/ong/accounts/authors.pdf),
  and
  * A point-by-point response to each of the received comments in this letter.

If you submit a revision, we will assume that it has been developed in consultation with your co-authors and that each author has given approval to the final form of the revision.

Again, your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Mar 13, 2020, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

The Editors of Obstetrics & Gynecology

2018 IMPACT FACTOR: 4.965
2018 IMPACT FACTOR RANKING: 7th out of 83 ob/gyn journals

In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Use the following URL: https://www.editorialmanager.com/ong/login.asp?a=r). Please contact the publication office if you have any questions.
March 9, 2019

The Editor
Obstetrics & Gynecology
409 12th Street, SW
Washington, DC 20024-2188

RE: Manuscript Number ONG-20-128
Racial and Ethnic Disparities in Maternal and Neonatal Adverse Outcomes in College Educated Women

Dear Dr. Rouse:

Thank you kindly for considering the above-mentioned manuscript for publication in Obstet Gynecol. We truly appreciate the opportunity to revise the manuscript and resubmit.

Per your instructions, we have:

1. Responded to the three reviewers’ comments, the statistical editor’s comment, and the associate editor’s comments (please see below and note that the line numbers mentioned refer to the “red ink” manuscript and not the clean copy).
2. Attached a red ink manuscript highlighting the multitude of revisions
3. Attached a clean copy of the revised manuscript

All the authors have reviewed the revisions.

We look forward to hearing from you and your staff.

Sincerely,

Lisette D. Tanner, MD, MPH.
The University of Texas Health Science Center at Houston
Department of Obstetrics, Gynecology and Reproductive Sciences
REVIEWER COMMENTS:

REVIEWER #1:

Overall Comments: The authors utilize a large national database in order to perform a retrospective cohort study to estimate the composite maternal and neonatal adverse event (AE) outcomes of women of different racial and ethnic groups with a baseline educational level of at least a bachelor degree. All data was from using the information obtained from the birth certificate by the Centers for Disease Control and Prevention. Reasonable maternal and neonatal outcomes were studied and it was found that maternal education, a surrogate for SES, alone does not explain the disparity in maternal and neonatal outcomes. Overall the paper is well written.

Specific Comments:

Title: To this reviewer, does not read smoothly, perhaps, "Racial/Ethnic Disparities in Maternal and Neonatal Adverse Outcomes in College Educated Women"

We appreciate the reviewer’s suggestion and we have revised the title as suggested. (Lines 1-2)

Short title: ok

Précis: ok

Abstract: ok

Introduction: ok

Materials and Methods: no issues

Results: well written

Discussion: Do the authors think that amount, timing or quality of PNC may be an issue? Although interestingly, the impact on non Hispanic black babies before 34 weeks was not an issue. A hypothesis regarding decreased impact in the Latina population is presented. Is there any such hypothesis for the African American population where intrinsic factors may be in play?

We appreciate the suggestion by reviewer that PNC may contribute to the adverse outcomes. While quality and quantity of PNC may certainly play a role in the risk of adverse maternal and neonatal outcomes, unfortunately these data are not available in the Vital Statistics database. We acknowledge this in the Discussion portion (line 233).

Analogous to the so-called “Hispanic Paradox”, though less pronounced in magnitude, studies have shown that foreign-born Black women are less likely to experience adverse perinatal
outcomes than native-born Black women. We have added this information to the discussion (lines 200-203).

Tables/Figures good

We appreciate the reviewer’s compliment about out Tables/Figures.

REVIEWER #2:

The morbidity and mortality disparity among different racial/ethnic groups giving birth in the US stands out and the root causes need to be elucidated. Examination of data as in this study is much needed.

We truly appreciate the acknowledgement by the reviewer that the examination of data is “much needed.”

The authors hypothesize that the racial/ethnic disparity seen in maternal and neonatal outcomes will not be erased by increasing socio-economic status as expressed by level of higher education, i.e. a bachelor degree or higher.

The study us retrospective exam of composite maternal and neonatal adverse outcomes in women with at least a bachelor’s degree and who delivered singletons without anomalies in 2011-2013. The data used were collated from birth-infant data files. The basis was the 2003 revised birth certificate. As not all states used this version in the study period, the study included 83% (in 2011) to 90% in 2013.

The summary of the findings are presented in an (mostly) easily understandable format in tables

- Are the examined outcomes different in the states that were excluded/had not adopted the revised birth certificate?

Part of the 2003 revision was providing a maternal morbidity question. Prior to the 2003 revision there was no national system of data collection for these variables. Thus, it would not be possible to analyze the rates of these outcomes among states who did not adopt the revised birth certificate.

The tables give much information. It is remarkable that in Table 1 for non-Hispanic Blacks the "unknown" consistently is higher than for the other groups. Whether nulliparous or not is "unknown" 4 times as often in Black women as in Whites, and data for BMI missing in twice as many cases.

- Maybe the authors could comment on this.
The reviewer has a thoughtful inquiry about the “unknown” and how it varied. We acknowledge that the rate of nonresponse or unknown response is higher among non-Hispanic Blacks. This is consistent with other literature showing that nonresponse rates on national surveys are higher among minorities, especially Blacks. While non-response could create a non-response bias, the overall rate of non-response was low. Publication suggest that surveys with response rates above 65% are unlikely to have appreciable changes in point estimates or data quality.

We have included this point in the discussion (lines 224-231).

Table 1. It could be interesting to see how the distribution of the three groups is in the general population of women delivering.

190-197. To apply the "Hispanic Paradox" to the study group would be easier to make sense of if we knew how many of the total group of Hispanic women delivering in that period had higher education. Could the explanation be that Hispanic women with advanced degrees are markers of not-recent immigrants with socio-economic stability, i.e. selection bias?

The reviewer has an excellent point about selection bias. Unfortunately, immigration status is not available in the Vital Statistics database. While the Hispanic Paradox is one offered postulate for the difference in outcomes between the two minority groups, Non-Hispanic Black and Hispanic, this should be explored in future studies.

The last entry of table 1: the distribution of number of cases by year and group. The <0.001 refers to what?

The reviewer requests clarification about the number of deliveries per year (Table 1). As this is a categorical variable, a chi-square test was used to determine statistical difference between groups (“<0.001”) indicates a statistically significant difference in the number of records reported in a given year between racial/ethnic categories. In the methods section, we state that “Differences in the maternal characteristics stratified by maternal race and ethnicity were examined using the chi-square test for categorical variables.”

172-176. Why did you decide to eliminate maternal transfusion (rather than other factors) in the sensitivity analysis?

The reviewer requests clarification about the reason for doing sensitivity analysis without transfusion, and not other components of morbidity. Maternal transfusion was one of the most frequent adverse outcomes while also being one of the least severe. We removed maternal transfusion to see if the differences among racial ethnic categories was maintained when only evaluating the more severe adverse outcomes.

REVIEWER #3:

In the manuscript under review, the authors report a retrospective cohort study of 2.2 million
live births using the Period Linked Birth-Infant Death Files of the US. Vital Statistics 2011-2013. The objective of their study was to compare composite maternal and neonatal adverse outcomes of women with at least a bachelor's degree. They hypothesized that the racial/ethnic disparities in outcome will persist even among women with a college education. This is an important study and is well written, but is somewhat limited by the data used to examine this question.

Specific comments include the following:

1) What about women who reported two or more races?

The reviewer has an interesting inquiry: What if the women self-report indicates she is biracial. While women who reported two or more races is an important demographic, when trying to understand the effect of race on adverse maternal and neonatal outcomes we chose to study those with a single self-reported race/ethnicity, in order to have a more straightforward analysis. Multiple races and unknown admix of the genetic variation therein would significantly complicate any understanding of our results.

2) Outcomes: from birth certificate, this is a real limitation as admission to ICU, transfusion, hysterectomy, or unplanned operating room procedure are all very varied and of a very different level of significance pending associated situation. I know that one of the limitations of this data is that it is not linked to discharge codes, but an incorporation of the more standard CDC definition of SMM would be very useful: https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm. Even using the Kilpatrick definition of SMM adapted by ACOG: https://www.acog.org/Clinical-Guidance-and-Publications/Obstetric-Care-Consensus-Series/Severe-Maternal-Morbidity-Screening-and-Review?IsMobileSet=false 4 or more units of blood is used as a definition which would be hard to differentiate in birth certificate data.

The authors did perform a sensitivity analysis excluding transfusion, but I believe this should be their main reported outcome given the difficulty of using "transfusion" as an outcome as it could mean anything.

We appreciate the reviewer’s concern with admixture of adverse outcomes. While a more granular evaluation of maternal morbidity would be ideal, these data are not available in the vital statistics database. Given the results of this large dataset, further study investigating more specific areas of severe maternal morbidity is warranted. Additionally, we feel that transfusion, while one of the least severe adverse outcomes, still is an important outcome to study as it is not without risk and can infer serious complications.

3) It would be wonderful if the authors could report very AMA as this is know to be associated with SMM (age >40 or >45)
The reviewer’s request of further sub-categorizing the maternal age is reasonable. In Table 1, for maternal age, we add categories of younger AMA (35-44 years), and very AMA (45 years and above).

4) I appreciate the inclusion of BMI categories. Does the birth certificate data include weight gain in pregnancy using to IOM standards?

The request by the reviewer of gestational weight gain is intriguing. While the Vital Statistics database does have data fields that allow for evaluation of gestational weight gain, this data is variable in its accuracy. In fact, in 2009 the National Academies of Sciences/Institute of Medicine (IOM) expressed concerns about the validity of its self-reported weight data. Also, prior research (Voerman et al, JAMA) suggests that prepregnancy BMI was more strongly associated with adverse maternal and infant outcomes than the amount of gestational weight gain. Given these factors, we have chosen not to include this data in our analysis.

5) How did the authors separate pre-pregnancy hypertensive disorders from pregnancy associated hypertension?

The reviewer request for clarification regarding hypertension during pregnancy is understandable. We chose to combine pre-pregnancy and pregnancy associated hypertension given the potential for reporting bias. Previous studies have shown poor sensitivity of the “gestational hypertension” data field in birth certificate data. Thus, we grouped all hypertensive disorders to avoid this bias.

6) What is an unplanned operative procedure?

This is defined in the dataset as “Any transfer of the mother back to a surgical area for an operative procedure that was not planned prior to the admission for delivery. Excludes postpartum tubal ligations.”

7) With the neonatal outcomes how did the authors

We are unable to answer this question, as it appears to be truncated.

8) Why did the authors stratify by gestational age of delivery in the maternal models versus control for it?

The reviewer’s inquiry on why we stratified by gestational age is understandable. Some prior studies suggest that the “normal” gestational length of black women may be shorter than that of white women. Since gestational weeks may be in the causal pathway, we chose not to adjust for it, but to examine in GA subgroups.
9) I am concerned with the limitations of birth certificate data with potential confounders: income/insurance status in particular

We acknowledged that insurance status is an important potential confounder and have now included insurance status in the analysis.

STATISTICAL EDITOR’S COMMENTS:
1. General: Is there no information re: insurance status of mothers, level of hospital care in the delivering hospital, whether public or private and hospital volume? Those would seem to be important covariates to consider for maternal and neonatal mortality.

In this revision, we further adjusted for insurance status of mothers in Tables 3-5. However, birth certificate does not have data on level of hospital care, public or private and hospital volume.

2. Table 1: Need units for maternal age, BMI.

We have added the units for maternal age and BMI in Table 1.

3. Table 2: The stats test indicates to what extent the adverse outcome incidence rates deviate from a random distribution across the three cohorts, but does not show whether the non-hispanic black or the hispanic groups differ statistically from the non-hispanic white referent. Should indicate the comparison of those pairwise stats vs the referent group.

In the revised Table 2, we have included two p-values to indicate the comparison of those pairwise stats vs the referent group (i.e., non-hispanic black or hispanic groups vs. non-hispanic white referent). We also revised the results section accordingly.

4. Table 3: There are 20 comparisons in this Table, with no adjustment for multiple hypothesis testing, so some of the associations may be spurious. Also, the subset analysis for GA 24-27 has relatively modest counts of adverse outcomes, so those RR and aRRs may be over fitted. Should also cite the absolute differences in incidence rates to put the RR and aRRs in context.

In Table 3, we examined the association between race/ethnicity and the primary outcome, composite maternal adverse outcome. Race/ethnicity was a dummy variable with 3 categories, which was pre-defined in the protocol. This is not a case of multiple comparisons (which perform a large number of statistical tests), therefore, a change in inference threshold is not necessary.

In the subgroup analysis, we revised and reduced the subgroups to two groups (i.e., GA 24-36 and GA 37-40) to increase the event numbers. To correct for multiple comparisons, we used Bonferroni correction, which changed the inference threshold from 0.05 to 0.025 (i.e., 0.05/2), with adjusted RR and 97.5% CIs. We also revised the abstract and results sections accordingly.
We applied the same approach for Table 4 and Table 5.

5. Table 4: Same comments as in Table 3 re: need for adjustment for multiple hypothesis testing and need to add context by citing the absolute differences in incidence rates.

Please see response for Table 3.

6. Table 5: Same comments as in Tables 3, 4 and again the counts for GA 24-27 are likely too few to allow for multiple adjustment for 11 covariates.

Please see response for Table 3.

Associate Editor’s Comments:

We would be happy to consider a revised version is at least 3 of the following 4 covariates were included in the analysis: insurance status of mothers, level of hospital care in the delivering hospital, whether public or private hospital, and hospital volume.

If you are unable to do this, because the only modestly increased risks might easily be due to residual confounding, we must decline to publish your work.

We do appreciate the Associate Editor’s request to have 3 of 4 covariates. Unfortunately, the birth certificate data provides data on only one covariate—insurance status—and we have added that in the revised analysis. Per our telephone conversation, I hope this is acceptable.

EDITORIAL OFFICE COMMENTS:

1. The Editors of Obstetrics & Gynecology are seeking to increase transparency around its peer-review process, in line with efforts to do so in international biomedical peer review publishing. If your article is accepted, we will be posting this revision letter as supplemental digital content to the published article online. Additionally, unless you choose to opt out, we will also be including your point-by-point response to the revision letter. If you opt out of including your response, only the revision letter will be posted. Please reply to this letter with one of two responses:
   A. OPT-IN: Yes, please publish my point-by-point response letter.
   B. OPT-OUT: No, please do not publish my point-by-point response letter.

We will OPT-IN.

2. As of December 17, 2018, Obstetrics & Gynecology has implemented an "electronic Copyright Transfer Agreement" (eCTA) and will no longer be collecting author agreement forms. When you are ready to revise your manuscript, you will be prompted in Editorial
Manager (EM) to click on "Revise Submission." Doing so will launch the resubmission process, and you will be walked through the various questions that comprise the eCTA. Each of your coauthors will receive an email from the system requesting that they review and electronically sign the eCTA.

Please check with your coauthors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the manuscript's title page.

3. In order for an administrative database study to be considered for publication in Obstetrics & Gynecology, the database used must be shown to be reliable and validated. In your response, please tell us who entered the data and how the accuracy of the database was validated. This same information should be included in the Materials and Methods section of the manuscript.

Studies evaluating birth certificate data have consistently shown that the demographic and selected medical and health items (i.e., method of delivery, birth weight, and plurality) are collected with a high degree of completeness and accuracy. A recent validation study suggests that data from the 2003 birth certificate revision are a reliable source for a variety of health-related data elements, but some items may be underreported, and some items were not validated. Thus, additional validity studies will be necessary to assess the quality of less frequently occurring events (e.g., maternal morbidities) on the birth certificate.

This information has been added to the materials section of the manuscript (Lines 94-98).

4. All submissions that are considered for potential publication are run through CrossCheck for originality. The following lines of text match too closely to previously published works. Variance is needed in the following sections:
   a. Please add some variance to the methods section. We understand that there will be overlap with previous publications, but the majority of this section is verbatim from you June 2019 article in the journal.

   The text has been rewritten (Lines 89-114).

5. Standard obstetric and gynecology data definitions have been developed through the reVITALize initiative, which was convened by the American College of Obstetricians and Gynecologists and the members of the Women's Health Registry Alliance. Obstetrics & Gynecology has adopted the use of the reVITALize definitions. Please access the obstetric and gynecology data definitions at https://www.acog.org/About-ACOG/ACOG-Departments/Patient-Safety-and-Quality-Improvement/reVITALize. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

6. Because of space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Original Research reports should not exceed 22 typed, double-spaced pages (5,500 words). Stated page limits include all numbered pages in
a manuscript (i.e., title page, précis, abstract, text, references, tables, boxes, figure legends, and print appendixes) but exclude references.

7. Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:

* All financial support of the study must be acknowledged.
* Any and all manuscript preparation assistance, including but not limited to topic development, data collection, analysis, writing, or editorial assistance, must be disclosed in the acknowledgments. Such acknowledgments must identify the entities that provided and paid for this assistance, whether directly or indirectly.
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* If all or part of the paper was presented at the Annual Clinical and Scientific Meeting of the American College of Obstetricians and Gynecologists or at any other organizational meeting, that presentation should be noted (include the exact dates and location of the meeting).

8. Provide a short title of no more than 45 characters (40 characters for case reports), including spaces, for use as a running foot.

9. The most common deficiency in revised manuscripts involves the abstract. Be sure there are no inconsistencies between the Abstract and the manuscript, and that the Abstract has a clear conclusion statement based on the results found in the paper. Make sure that the abstract does not contain information that does not appear in the body text. If you submit a revision, please check the abstract carefully.

In addition, the abstract length should follow journal guidelines. The word limits for different article types are as follows: Original Research articles, 300 words. Please provide a word count.

10. Only standard abbreviations and acronyms are allowed. A selected list is available online at http://edmgr.ovid.com/ong/accounts/abbreviations.pdf. Abbreviations and acronyms cannot be used in the title or précis. Abbreviations and acronyms must be spelled out the first time they are used in the abstract and again in the body of the manuscript.

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12. In your Abstract, manuscript Results sections, and tables, the preferred citation should be in terms of an effect size, such as odds ratio or relative risk or the mean difference of a variable between two groups, expressed with appropriate confidence intervals. When such syntax is
used, the P value has only secondary importance and often can be omitted or noted as footnotes in a Table format. Putting the results in the form of an effect size makes the result of the statistical test more clinically relevant and gives better context than citing P values alone.

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Please standardize the presentation of your data throughout the manuscript submission. For P values, do not exceed three decimal places (for example, "P = .001"). For percentages, do not exceed one decimal place (for example, 11.1%)

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The Editors of Obstetrics & Gynecology

2018 IMPACT FACTOR: 4.965
2018 IMPACT FACTOR RANKING: 7th out of 83 ob/gyn journals

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