

OBSTETRICS & GYNECOLOGY



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

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obgyn@greenjournal.org.

Date: Jun 24, 2022
To: "Michal Fishel Bartal" [REDACTED]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-22-910

RE: Manuscript Number ONG-22-910

Primary Cesarean Birth and Adverse Outcomes Among Low-Risk Nulliparous: The Racial and Ethnic Variation

Dear Dr. Fishel Bartal:

Thank you for sending us your work for consideration for publication in Obstetrics & Gynecology. Your manuscript has been reviewed by the Editorial Board and by special expert referees. The Editors would like to invite you to submit a revised version for further consideration.

If you wish to revise your manuscript, please read the following comments submitted by the reviewers and Editors. Each point raised requires a response, by either revising your manuscript or making a clear argument as to why no revision is needed in the cover letter.

To facilitate our review, we prefer that the cover letter you submit with your revised manuscript include each reviewer and Editor comment below, followed by your response. That is, a point-by-point response is required to each of the EDITOR COMMENTS (if applicable), REVIEWER COMMENTS, STATISTICAL EDITOR COMMENTS (if applicable), and EDITORIAL OFFICE COMMENTS below. Your manuscript will be returned to you if a point-by-point response to each of these sections is not included.

The revised manuscript should indicate the position of all changes made. Please use the "track changes" feature in your document (do not use strikethrough or underline formatting).

Your submission will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Jul 15, 2022, we will assume you wish to withdraw the manuscript from further consideration.

EDITOR COMMENTS:

Please pay particular attention to revising the discussion--as currently written, it reiterates the results without interpreting them, placing them in the context of prior literature, or applying them.

REVIEWER COMMENTS:

Reviewer #1: Primary Cesarean Birth and Adverse Outcomes Among Low-Risk Nulliparous: The Racial and Ethnic Variation

General Comments:

This is a population-based, retrospective cohort study with a primary objective to compare the risk of primary cesarean delivery among low-risk pregnancies with different race and ethnic groups during a 5-year period. The secondary objective was to compare the composite adverse outcomes in the cohorts who underwent a primary cesarean delivery. Multiple analysis, some unknown to this reader, were performed to produce the results. However, the "discussion" reiterates the results instead of providing a discussion and understanding/implication of the results.

- 1) Line 27-32. "Increased risk of CD was found in non-Hispanic black and Hispanic compared to White. Compared to Non- Hispanic Whites composite neonatal morbidity was lower in Hispanic individuals in all newborns. Would like commentary regarding this in the discussion
- 2) Line 226: With just the exclusion of transfusion, why is the risk of the composite maternal adverse outcome similar? Would be interesting to have commentary from the author in the discussion.
- 3) Line 232: I would continue to use non-Hispanic Black and Hispanic instead of changing to use "individuals of color" for consistency in the article. Also, this term may be interpreted as offensive.

- 4) Line 260: What do the author's mean by "and there is putative biological plausibility".

Reviewer #2: A population based study, retrospective cohort from 2015-2019- using U.S. Vital Statistics period-linked birth-infant death data. The primary objective of the study was to compare the risk of primary cesarean delivery among low-risk pregnancies with different race and ethnic groups throughout a 5-year period; the secondary objective was to compare the composite adverse outcomes in the cohorts who underwent a primary CD.

1. The objective in the Abstract and the Objective in the Introduction are different to my read. The primary outcome reads the same. However the secondary outcome reads differently to me. In the Abstract it is a comparison of maternal and neonatal composite outcomes between all groups whereas in the Introduction it is a comparison of composite cohorts who underwent a primary cesarean- should align completely. Since you did both I would state exactly what you did.

2. Discussion Section could be broader and more organized/ Your findings of lower maternal composite adverse outcomes in non Hispanic Black seems contradictory to the increase in minority maternal mortality- This needs to be part of the discussion- How could this be? Is maternal mortality typically older, parous with multiple comorbidities and these women were not studied. Please discuss.

3. Discussion Can you expand on putative biological differences- I do not understand what you are trying to state? what is the cause?

4 Discussion. Can you explain the Hispanic paradox please discuss

5. Discussion the neonatal and maternal composite adverse outcomes were opposite and perhaps unexpected? This should be discussed. How do you make sense of a higher primary cesarean rate, a higher neonatal composite adverse outcomes and decreased maternal composite adverse outcomes in the non hispanic black group

6. Discussion: Why did you choose Infant mortality (up to one year) as part of the composite comorbidity? when we are centered on cesarean delivery and intra partum risk

7. Discussion: In the end I was confused about the composite maternal and neonatal adverse outcomes as to whether they were clinically important differences. Help the reader interpret the findings not just restate them

Reviewer #3: Very large sample size. Commendable findings that do add to the literature.

I do have comments as follows:

1. Was cord pH looked at?
2. Would recommend there be a chart of indications for cesareans performed.
3. I would elaborate on "external social forces" in line 45.
4. There are scattered typos that need to be fixed.

STATISTICAL EDITOR COMMENTS:

lines 146-151: The stats tests used in this table did not allow for conclusions about individual strata of characteristics, unless they were a binary variable. So, conclusions re: education level, age, marital status, insurance provider, BMI etc are not corroborated from the stats available in Table 1. Should either provide more stats results or modify the text to reflect that only those distributions were compared, else provide pair-wise stats test results.

Table 2: Should incorporate into Abstract the crude rates/1,000 along with the RRs, to put the RRs in context.

Appendix Table 1: Were the annual rates of change in CD rates different among the three groups? Likewise for the annual rates of change for composite maternal adverse outcomes?

Appendix Table 2 and Abstract: Suggest organizing results in Abstracts to first report the primary outcome (in crude rates, aRRs and temporal trends) across the three racial/ethnic groups, then to contrast those changes with the maternal and neonatal adverse outcomes among Non-Hispanic Black and then among Hispanics.

Fig 1: Need to provide more detail for exclusion for unknown parity, for unknown race/ethnicity (both as N and as a % of final sample). What is the meaning of "no labor" exclusion? Then need to include potential influence of unknown or missing data on precision and bias of the estimates.

EDITORIAL OFFICE COMMENTS:

1. If your article is accepted, the journal will publish a copy of this revision letter and your point-by-point responses as supplemental digital content to the published article online. You may opt out by writing separately to the Editorial Office at em@greenjournal.org, and only the revision letter will be posted.

2. When you submit your revised manuscript, please make the following edits to ensure your submission contains the required information that was previously omitted for the initial double-blind peer review:

- * Funding information (ie, grant numbers or industry support statements) should be disclosed on the title page and at the end of the abstract. For industry-sponsored studies, describe on the title page how the funder was or was not involved in the study.
- * Include clinical trial registration numbers, PROSPERO registration numbers, or URLs at the end of the abstract (if applicable).
- * Name the IRB or Ethics Committee institution in the Methods section (if applicable).
- * Add any information about the specific location of the study (ie, city, state, or country), if necessary for context.

3. Obstetrics & Gynecology's Copyright Transfer Agreement (CTA) must be completed by all authors. When you uploaded your manuscript, each coauthor received an email with the subject, "Please verify your authorship for a submission to Obstetrics & Gynecology." Please ask your coauthor(s) to complete this form, and confirm the disclosures listed in their CTA are included on the manuscript's title page. If they did not receive the email, they should check their spam/junk folder. Requests to resend the CTA may be sent to em@greenjournal.org.

4. If your study is based on data obtained from the National Center for Health Statistics, please review the Data Use Agreement (DUA) for Vital Statistics Data Files that you or one of your coauthors signed. If your manuscript is accepted for publication and it is subsequently found to have violated any of the terms of the DUA, the journal will retract your article. The National Center for Health Statistics may also terminate your access to any future vital statistics data.

5. For studies that report on the topic of race or include it as a variable, authors must provide an explanation in the manuscript of who classified individuals' race, ethnicity, or both, the classifications used, and whether the options were defined by the investigator or the participant. In addition, describe the reasons that race and ethnicity were assessed in the Methods section and/or in table footnotes. Race and ethnicity must have been collected in a formal or validated way. If it was not, it should be omitted. Authors must enumerate all missing data regarding race and ethnicity as in some cases missing data may comprise a high enough proportion that it compromises statistical precision and bias of analyses by race.

Use "Black" and "White" (capitalized) when used to refer to racial categories.

List racial and ethnic categories in tables in alphabetic order. Do not use "Other" as a category; use "None of the above" instead.

Please refer to "Reporting Race and Ethnicity in Obstetrics & Gynecology" at https://edmgr.ovid.com/ong/accounts/Race_and_Ethnicity.pdf.

6. ACOG uses person-first language. Please review your submission to make sure to center the person before anything else. Examples include: "People with disabilities" or "women with disabilities" instead of "disabled people" or "disabled women"; "patients with HIV" or "women with HIV" instead of "HIV-positive patients" or "HIV-positive women"; and "people who are blind" or "women who are blind" instead of "blind people" or "blind women."

7. The journal follows ACOG's Statement of Policy on Inclusive Language (<https://www.acog.org/clinical-information/policy-and-position-statements-of-policy/2022/inclusive-language>). When possible, please avoid using gendered descriptors in your manuscript. Instead of "women" and "females," consider using the following: "individuals;" "patients;" "participants;" "people" (not "persons"); "women and transgender men;" "women and gender-expansive patients;" or "women and all those seeking gynecologic care."

8. Responsible reporting of research studies, which includes a complete, transparent, accurate and timely account of what was done and what was found during a research study, is an integral part of good research and publication practice and

not an optional extra. Obstetrics & Gynecology supports initiatives aimed at improving the reporting of health research, and we ask authors to follow specific guidelines:

STROBE: observational studies

Include the appropriate checklist for your manuscript type upon submission, if applicable, and indicate in your cover letter which guideline you have followed. Please write or insert the page numbers where each item appears in the margin of the checklist. Further information and links to the checklists are available at www.equator-network.org/.

9. 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 data definitions at <https://www.acog.org/practice-management/health-it-and-clinical-informatics/revitalize-obstetrics-data-definitions> and the gynecology data definitions at <https://www.acog.org/practice-management/health-it-and-clinical-informatics/revitalize-gynecology-data-definitions>. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

10. Make sure your manuscript meets the following word limit. The word limit includes the manuscript body text only (for example, the Introduction through the Discussion in Original Research manuscripts), and excludes the title page, précis, abstract, tables, boxes, and figure legends, reference list, and supplemental digital content. Figures are not included in the word count.

Original Research: 3,000 words

11. For your title, please note the following style points and make edits as needed:

- * Do not structure the title as a declarative statement or a question.
- * Introductory phrases such as "A study of..." or "Comprehensive investigations into..." or "A discussion of..." should be avoided in titles.
- * Abbreviations, jargon, trade names, formulas, and obsolete terminology should not be used.
- * Titles should include "A Randomized Controlled Trial," "A Meta-Analysis," "A Systematic Review," or "A Cost-Effectiveness Analysis" as appropriate, in the subtitle. If your manuscript is not one of these four types, do not specify the type of manuscript in the title.

12. Specific rules govern the use of acknowledgments in the journal. Please review the following guidelines and edit your title page as needed:

- * 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 or indicate whether the meeting was held virtually).
- * If your manuscript was uploaded to a preprint server prior to submitting your manuscript to Obstetrics & Gynecology, add the following statement to your title page: "Before submission to Obstetrics & Gynecology, this article was posted to a preprint server at: [URL]."
- * Do not use only authors' initials in the acknowledgement or Financial Disclosure; spell out their names the way they appear in the byline.

13. Provide a short title of no more than 45 characters, including spaces, for use as a running foot. Do not start the running title with an abbreviation.

14. Be sure that each statement and any data in the abstract are also stated in the body of your manuscript, tables, or figures. Statements and data that appear in the abstract must also appear in the body text for consistency. Make 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 manuscript.

In addition, the abstract length should follow journal guidelines. Please provide a word count.

Original Research: 300 words

15. 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.

16. 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.

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

Express all percentages to one decimal place (for example, 11.1%). Do not use whole numbers for percentages.

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

18. Please review examples of our current reference style at https://edmgr.ovid.com/ong/accounts/ifa_suppl_refstyle.pdf. Include the digital object identifier (DOI) with any journal article references and an accessed date with website references.

Unpublished data, in-press items, personal communications, letters to the editor, theses, package inserts, submissions, meeting presentations, and abstracts may be included in the text but not in the formal reference list. Please cite them on the line in parentheses.

If you cite ACOG documents in your manuscript, be sure the references you are citing are still current and available. Check the Clinical Guidance page at <https://www.acog.org/clinical> (click on "Clinical Guidance" at the top). If the reference is still available on the site and isn't listed as "Withdrawn," it's still a current document. In most cases, if an ACOG document has been withdrawn, it should not be referenced in your manuscript.

Please make sure your references are numbered in order of appearance in the text.

19. Figures

Figure 1: Are the exclusion items not mutually exclusive? (second box)

Figures 2-3: Please add tick marks along the x-axes.

Figure 4: A figure 4 is cited in the manuscript, should this be removed?

20. Authors whose manuscripts have been accepted for publication have the option to pay an article processing charge and publish open access. With this choice, articles are made freely available online immediately upon publication. An information sheet is available at <http://links.lww.com/LWW-ES/A48>. The cost for publishing an article as open access can be found at <https://wkauthorservices.editage.com/open-access/hybrid.html>.

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.

If you choose to revise your manuscript, please submit your revision through Editorial Manager at <http://ong.editorialmanager.com>. Your manuscript should be uploaded as a Microsoft Word document. Your revision's cover letter should include a point-by-point response to each of the received comments in this letter. Do not omit your responses to the EDITOR COMMENTS (if applicable), the REVIEWER COMMENTS, the STATISTICAL EDITOR COMMENTS (if applicable), or the EDITORIAL OFFICE COMMENTS.

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

Again, your manuscript will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Jul 15, 2022, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

Ebony B. Carter, MD, MPH
Associate Editor, Equity

2020 IMPACT FACTOR: 7.661
2020 IMPACT FACTOR RANKING: 3rd out of 83 ob/gyn journals

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EDITOR COMMENTS:

Please pay particular attention to revising the discussion--as currently written, it reiterates the results without interpreting them, placing them in the context of prior literature, or applying them.

Response: we have made major changes to the discussion as requested by the reviewers, please see below.

REVIEWER COMMENTS:

Reviewer #1: Primary Cesarean Birth and Adverse Outcomes Among Low-Risk Nulliparous: The Racial and Ethnic Variation

General Comments:

This is a population-based, retrospective cohort study with a primary objective to compare the risk of primary cesarean delivery among low-risk pregnancies with different race and ethnic groups during a 5-year period. The secondary objective was to compare the composite adverse outcomes in the cohorts who underwent a primary cesarean delivery. Multiple analysis, some unknown to this reader, were performed to produce the results. However, the "discussion" reiterates the results instead of providing a discussion and understanding/implication of the results.

1) Line 27-32. "Increased risk of CD was found in non-Hispanic black and Hispanic compared to White. Compared to Non- Hispanic Whites composite neonatal morbidity was lower in Hispanic individuals in all newborns. Would like commentary regarding this in the discussion

The reviewer astutely inquired about the significantly low composite neonatal adverse outcomes among Hispanic low-risk pregnancies than White individuals. In lines 332 to 342 we have added the following: “Hispanic paradox, described in mid-1980’s by Markides and Coreil, is the observation that inspite social and economic disadvantages, Hispanics have significantly improved neonatal outcomes than other racial and ethnic groups, including White. While previous publications focused on all pregnancies, nativity, antepartum complications, or mortality,³¹⁻³³ our cohorts consisted of low-risk nulliparous and several neonatal morbidities. The potential explanations for the paradoxical outcomes with composite neonatal outcomes include variable rates of infection and inflammatory response, support from social network or the hypothesis that migrants are healthy, and health protective behavior (e.g. among the three groups, the lowest rate of smoking was among the Hispanic).³³ Enhanced understanding of the etiologies of the disparity ought to permit interventions to mitigate it.”

2) Line 226: With just the exclusion of transfusion, why is the risk of the composite maternal adverse outcome similar? Would be interesting to have commentary from the author in the discussion.

We appreciate the reviewer's request to comment on the composite maternal morbidity with and without transfusion. In response to this request, we have added the following sentences (lines 325-331): "As we noted in low-risk pregnancies, other investigators have reported that among individuals with hypertensive disorder of pregnancy, once the transfusion is excluded, the rate of adverse outcomes is similar among different race and ethnic groups.³¹ The risk factors for postpartum hemorrhage are acknowledged³² and differential rate for these factors or other unmeasured variables could explain why transfusion rate varies among the different races. "

3) Line 232: I would continue to use non-Hispanic Black and Hispanic instead of changing to use "individuals of color" for consistency in the article. Also, this term may be interpreted as offensive.

Thank you for your comment. The change was made.

4) Line 260: What do the author's mean by "and there is putative biological plausibility".

We are happy to elaborate on our word choice of "putative biological plausibility." Whenever feasible, the results of epidemiological analysis should be supported with biological plausibility (Savitz DA. Epidemiology and biological plausibility in assessing causality. Environ Epidemiol. 2021;5:e177). Thus, we described the potential reasons for the dissimilar rate of primary cesarean delivery (i.e. differential myometrial function, connective tissue elasticity, and cervical compliance) in the three groups. These reasons presumably (or

putatively) support for our findings of analysis.

Reviewer #2: A population based study, retrospective cohort from 2015-2019- using U.S. Vital Statistics period-linked birth-infant death data. The primary objective of the study was to compare the risk of primary cesarean delivery among low-risk pregnancies with different race and ethnic groups throughout a 5-year period; the secondary objective was to compare the composite adverse outcomes in the cohorts who underwent a primary CD.

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Response: Thank you for your comment.

We have adjusted the introduction section accordingly: “The primary objective of the study was to compare the risk of primary cesarean delivery and composite adverse outcomes among low-risk pregnancies of different races and ethnic groups throughout a 5-year period; the secondary objective was to compare the composite adverse outcomes in the cohorts who underwent a primary CD.”

2. Discussion Section could be broader and more organized/ Your findings of lower maternal composite adverse outcomes in non Hispanic Black seems contradictory to the increase in minority maternal mortality- This needs to be part of the discussion- How

could this be? Is maternal mortality typically older, parous with multiple comorbidities and these women were not studied. Please discuss.

Response: We appreciate the reviewer's request to opine on the disconnect between higher rate of maternal mortality among non-Hispanic Black, but a lower rate of composite maternal morbidity. In response, in lines 452 to 460, we have added: "The data does not permit us to opine on the rate of maternal mortality among the three groups examined. The finding of a significantly lower composite maternal morbidity among Non-Hispanic Black compared to the other two groups is counterintuitive considering that the maternal mortality is highest among this ethnic group. The potential explanation for the contradiction is that leading causes of death among the Non-Hispanic Black (e.g. cardiomyopathy, embolism, or eclampsia) are more likely in high-risk parturient ³⁷ which were excluded in our analysis. Nonetheless, delineation of which group of parturient have disproportioned higher morbidity and mortality have potential to focus intervention trials and influence policies."

3. Discussion Can you expand on putative biological differences- I do not understand what you are trying to state? what is the cause?

We appreciate the opportunity to expand on the putative biological differences for the significantly different rate of primary cesarean delivery. Please see the response to question number 4 by the first reviewer.

4. Discussion. Can you explain the Hispanic paradox please discuss

Response: We appreciate the opportunity to explain the Hispanic paradox. We have addressed this in response to the first question by reviewer #1.

5. Discussion the neonatal and maternal composite adverse outcomes were opposite and perhaps unexpected? This should be discussed. How do you make sense of a higher primary cesarean rate, a higher neonatal composite adverse outcomes and decreased maternal composite adverse outcomes in the non hispanic black group.

Response: We appreciate the reviewer’s inquiry about the lack of unidirectionality with the rate of cesarean delivery and composite maternal morbidity. To address this, in lines 495 to 500, we have added the following: “Lastly, we acknowledge that some of our findings are not unidirectional. For example, compared to non-Hispanic White, the primary cesarean rate is significantly higher in non-Hispanic black and yet the composite maternal morbidity is significantly lower. The explanations for such incongruous findings include the underlying reasons for cesarean delivery, and the morbidity examined, as well as the possibility of “false association”.³⁸”

6. Discussion: Why did you choose Infant mortality (up to one year) as part of the composite comorbidity? when we are centered on cesarean delivery and intra partum risk

Response: Thank you for your comment. Infant death was not part of the composite adverse neonatal outcomes, it was another secondary outcome. In the composite we only included neonatal death (death within 27 days of birth).

7. Discussion: In the end I was confused about the composite maternal and neonatal adverse outcomes as to whether they were clinically important differences. Help the reader interpret the findings not just restate them.

Response: We appreciate the reviewer’s request to interpret the findings and not just restate them. In our opinion, we think we have succinctly summarized the

implications of the findings in the very last sentence (“Interventional trials to mitigate the differential rate are warranted, though they may be challenging due to the underlying etiologies for the disparity and relatively low rate of adverse outcomes in this population”). From a clinicians and trialist point of view, we call for “interventional trials,” while acknowledging the challenges of such a trial due to “low rate of adverse outcomes.”

Reviewer #3: Very large sample size. Commendable findings that do add to the literature.

I do have comments as follows:

1. Was cord pH looked at?

Response: Thank you for your comment. Unfortunately, we did not have cord PH available in this database.

2. Would recommend there be a chart of indications for cesareans performed.

Response: Thank you for your comment. Unfortunately, we did not have indications for CD available in this database.

3. I would elaborate on "external social forces" in line 45.

Response: Thank you for your comment. We added the information to the manuscript: “Suspected causes for the rise in primary cesarean birth may involve increased maternal age, obesity and co-morbidities, underutilization of operative vaginal delivery and trial of labor after cesarean, and external social forces such as training, education, patient expectations and the medical-legal system. ³⁻⁷”

4. There are scattered typos that need to be fixed.

Thank you for your comment. Multiple corrections were done throughout the manuscript.

STATISTICAL EDITOR COMMENTS:

lines 146-151: The stats tests used in this table did not allow for conclusions about individual strata of characteristics, unless they were a binary variable. So, conclusions re: education level, age, marital status, insurance provider, BMI etc are not corroborated from the stats available in Table 1. Should either provide more stats results or modify the text to reflect that only those distributions were compared, else provide pair-wise stats test results.

Response: In the revision, we included additional p-value for Non-Hispanic White vs Black, and Non-Hispanic White vs. Hispanic in Table 1. The results remain the same.

Table 2: Should incorporate into Abstract the crude rates/1,000 along with the RRs, to put the RRs in context.

Response: In this revision, we incorporate the crude rates/1,000 into Abstract as suggested.

Appendix Table 1: Were the annual rates of change in CD rates different among the three groups? Likewise for the annual rates of change for composite maternal adverse outcomes?

Response: We revised Appendix Table 1 and included annual percent change (APC) in rates of outcomes. There was a significant APC for composite maternal adverse outcome in Hispanic (APC=11.2, 3.3-19.8). There was a significant APC for primary cesarean delivery in non-Hispanic White (APC=0.7, 0.1-1.3) and non-Hispanic Black (APC=0.9, 0.4-1.3).

		APC	95% CI	
Composite maternal adverse outcome	Non-Hispanic White	8.0	-1.9	18.8
	Non-Hispanic Black	6.8	-3.9	18.6
	Hispanic	11.2	3.3	19.8
Primary Cesarean Delivery	Non-Hispanic White	0.7	0.1	1.3
	Non-Hispanic Black	0.9	0.4	1.3
	Hispanic	0.9	-1.0	2.9

Appendix Table 2 and Abstract: Suggest organizing results in Abstracts to first report the primary outcome (in crude rates, aRRs and temporal trends) across the three racial/ethnic groups, then to contrast those changes with the maternal and neonatal adverse outcomes among Non-Hispanic Black and then among Hispanics.

Response: In Appendix Table 2 and Abstract, we recognize the results to first report the primary outcomes as suggested.

Fig 1: Need to provide more detail for exclusion for unknown parity, for unknown race/ethnicity (both as N and as a % of final sample). What is the meaning of "no labor" exclusion? Then need to include potential influence of unknown or missing data on precision and bias of the estimates. (1)

Response:

We excluded Multiparous or unknown parity: 12,125,481, 62.6%

Multiparous or unknown parity	12,125,481, 62.6%
Multiparous	11,406,161, 58.8%
unknown parity	719,320, 3.7%

We excluded Other or unknown race/ethnicity: 2,004,060, 10.3%

Other or unknown race/ethnicity	2,004,060, 10.3%
Other race/ethnicity	1,832,141, 9.5%
unknown race/ethnicity	171,919, 0.9%

All the excluded items were not mutually exclusive.

A person with “unknown parity” can also met other exclusion criteria (had preterm birth, had diabetes, had hypertensive disorder, etc.), which means that she could be excluded due to many other reasons.

A person with “unknown race/ethnicity” can also met other exclusion criteria (be multiparous, had preterm birth, had diabetes, etc.), which means that she could be excluded due to many other reasons.

In the original population, 3.7% were “unknown parity”. However, majority of these people also met other exclusion criteria. After excluding all other exclusion criteria, the remaining “unknown parity” was only 0.15%. Similarly, the remaining “unknown race/ethnicity” was only 0.2%.

	unknown parity	unknown race/ethnicity
Original population	719,320 (3.7%)	171,919 (0.9%)
After excluding all other exclusion criteria, the remaining unknown cases	29,343 (0.15%)	42,264 (0.2%)

Thus, potential influence of unknown parity (0.15%) or unknown race/ethnicity (0.2%) are very small.

(2) “Had labor” means vaginal births or cesarean after trial of births. “No labor” means cesarean without trial of births.

EDITORIAL OFFICE COMMENTS:

1. If your article is accepted, the journal will publish a copy of this revision letter and

your point-by-point responses as supplemental digital content to the published article online. You may opt out by writing separately to the Editorial Office at em@greenjournal.org, and only the revision letter will be posted.

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19. Figures

Figure 1: Are the exclusion items not mutually exclusive? (second box)

Response: The exclusion items are not mutually exclusive.

Figures 2-3: Please add tick marks along the x-axes.

Response: In this revision, we add tick marks along the x-axes in Figure 2-3.

Figure 4: A figure 4 is cited in the manuscript, should this be removed?

Response: We have change it to Figure 3.

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