

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)*

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

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Questions about these materials may be directed to the *Obstetrics & Gynecology* editorial office:
obgyn@greenjournal.org.

Date: Jan 07, 2022
To: "Alexander M Friedman" [REDACTED]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-21-2380

RE: Manuscript Number ONG-21-2380

Teen Deliveries and Risk for Adverse Pregnancy Outcomes

Dear Dr. Friedman:

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).

Please be sure to address the Editor comments (see "EDITOR COMMENTS" below) in your point-by-point response.

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 Jan 28, 2022, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1:

Summary: Repeated cross-sectional analysis of NIS dataset 2000-2018 to assess proportion of pregnancies occurring to teens, comorbid underlying conditions, and maternal morbidity, over time. Used weighting of raw data to adjust for differences between sample (20% inpatient data) and US population. Correlated ICD-9 and ICD-10 codes.

Overall impression: Well-conducted study with importance to patient care and resource utilization for best supporting teen pregnancies in both a medical and social context.

Comments:

Lines 81-90: I would include a discussion of the NIS database weaknesses, including incomplete state data for different years, so that year to year comparisons are made of slightly different populations. The overall large dataset and breadth of states make this a weakness that can be overcome, but should be addressed more directly.

Line 187-188: This is an important finding. Consider making Supplemental Figure 1 a published figure instead. Look at included data and be sure that there are no biases in state reporting that might affect this. (Were the largest 5 cities included for all years of analysis? 10 largest cities? If not, address this.)

Lines 194-197: These diagnoses have known increases with increasing age. I want to see whether the proportion of teens with these comorbidities increases or decreases with time.

Line 207: I believe the study data ended in 2018, not 2019.

Limitations section of discussion: Include discussion of non-reporting areas over time.

Reviewer #2:

Summary:

Researchers used the National Inpatient Sample to analyze temporal trends in hospitalizations for teenaged patients. The Annual Percent Change of hospitalization deliveries to teenage patients decreased in the study time period of 2000 to 2018. The researchers interpret that maternal morbidity increased over time for teen patients, including a composite called "severe maternal morbidity," hypertensive disorders of pregnancy, and postpartum hemorrhage.

Major Revisions:

In Khera et al. (2017, citation included here), there are several methodology practices recommended for National Inpatient Sample, and it is not clear that these were adhered to in this paper. These methodology practices could be specifically addressed prior to publication. Furthermore, it is not clear that the authors' conclusion that "teen deliveries are associated with increasing comorbidity and risk for adverse outcomes" is the only conclusion that could be obtained from the findings. A less biased conclusion would cite statements that assume worse social factors than other populations, and would take into account the finding that Cesarean delivery risk (compared to all deliveries) was lower among deliveries to teenage patients, and patients aged 15-19 were less likely to have "severe morbidity."

Khera R, Angraal S, Couch T, et al. Adherence to Methodological Standards in Research Using the National Inpatient Sample. *JAMA*. 2017;318(20):2011-2018. doi:10.1001/jama.2017.17653

Line notes:

33. A more balanced precis statement may take into account the finding that Cesarean delivery risk (compared to all deliveries) was lower among deliveries to teenage patients, and patients aged 15-19 were less likely to have "severe morbidity."

40. No doubt the term "women" was selected purposefully, and the term "girls" can be fraught with connotations. However, this reviewer finds it problematic to use the term "women" to encompass these important non-adult developmental stage(s), especially in the case of children aged 11 to 14. Consider using the term "patients."

53. The years of the analysis overlap 2011, in which Khera et al. (2017) describe that there was a major shift in the data obtained in National Inpatient Sample ("sampling changed from 100% of discharges from 20% of hospitals in the US to a national 20% sample of patients" <https://jamanetwork.com/journals/jama/fullarticle/2664461>). Consider addressing how the methodology accounted for this.

64-69. 7 out of 15 of the references used to create this section are 10 or more years old, and the last 10 years have been eventful in the milieu of insurance, political landscape, availability of LARC, social determinants of health, and more. Consider rewriting the introduction to avoid dependence on older data.

109. Please consistently denote that what is being studied are hospitalizations (a crucial distinction for this dataset).

118. Please address whether these codes are secondary codes and relate the relevance/importance of this to the methodology and discussion sections.

126. The exclusion of transfusion is well-justified here and makes good clinical sense.

188. An interesting finding that could be further developed in the discussion section, especially as rural/urban location may relate to home visitation.

231. Please clarify this statement to distinguish between this and the statement made in line 196.

235. Consider including the rates of Cesarean section in the main findings.

247. Was there any information about the role of LARC in this population over this timeframe?

261. Consider stating "...for a patient population with unique social factors..." rather than "...more likely to have complicating..." Or, please cite and develop this assertion more fully.

274. Please better support this conclusion. Consider providing a more nuanced approach that integrates the better outcomes on some of the variables studied.

285. Based on this statement, please denote elsewhere in the paper which diagnoses are secondary.

304. Consider stating, "... risk for some adverse outcomes..." to avoid bias. Or, please cite and develop this assertion more fully.

Reviewer #3:

The authors used the National Inpatient Sample to describe trends in teen deliveries as well as comorbidities and obstetric morbidities in this population. The methods are well described, particularly use of population weights. Given the overall small odds ratios found, I would prefer more acknowledgment of possibility of confounding in the discussion.

Abstract and methods: I have a concern about the control group including births to people greater than 40 years old (you compare to 20-54 years). This is a higher risk group and thus may mute some of your findings. It may be more appropriate to make your comparison group 20-39 or 25-35. Your numbers are large enough that this would be doable. If redoing this analysis is prohibitive, it is worth at least mentioning this limitation in the discussion.

Methods, lines 103-104: Why was this stratification performed? Is this a known inflection point or was this simply dividing the age range in half?

Methods, lines 119-129: include in this objective your goal of comparing teen deliveries to older deliveries.

Methods, lines 133-138: how were race and ethnicity determined? Whether this is self described or not is important for disparities analysis.

Methods, lines 162-170: describe if you also assessed these trends in older deliveries. Also, explicitly state the comparison for which you are performing regression and determining odds ratios.

Methods, lines 166-168: How did you determine which variables to include? The way it is written it sounds like you included all variables, which would lead to an overfit model.

Results: When you describe the trends of teen delivery prevalence you report both the AAPC and the absolute prevalence at both time points. This is useful for context. Can you add the absolute prevalence for comorbid conditions and obstetric morbidity as well?

Discussion, lines 254-256: You describe one explanation for disparities and morbidity associated with teen pregnancy.

Might this finding also be due to common social determinants of health (systemic racism, access to care) being risk factors for both teen pregnancy and obstetric morbidity? Is this biology (immature reproductive system in early teens leading to increased obstetric morbidity) or socially determined (racism, oppression)? Given the significant difference in racial and ethnic populations in your various age groups, this is worth discussion.

Discussion, lines 265-267: I'm curious to know more - what defines adolescent-specific prenatal care? An additional sentence describing this would be welcome.

Discussion: It is worth acknowledging that your overall aORs are small (1.54, 1.83, 1.39, etc.). Clinical meaning may be limited.

Table 2: Severe maternal morbidity is decreased (albeit minimally) in deliveries to 15-19 year olds in both unadjusted and adjusted models. This should be noted in the text.

Figure 3: This figure emphasized the importance of listing the absolute prevalence in text to put the change into context (each morbidity remains rare). Also, in 2006-2007 the WHO redefined obesity for ages 5-19 and encouraged its diagnosis. This may explain the sudden increase in diagnosis of obesity at that time point.

STATISTICS EDITOR COMMENTS:

Figure 1 should be expanded to show the unweighted and weighted counts for the 11-14 yo and for the 15-19 yo cohorts.

Supplemental Tables 2 and 4 should be in main text to illustrate the impact of Figure 1.

General: The use of a referent group age 20-54 contrasts the teenage cohort with a cohort having a wide spectrum of risk factors for complications due to pregnancy. It would be more informative to compare the teenage cohorts vs relevant age categories to give better context for the rates of complications among teenagers vs other ages. I would strongly urge the Authors to analyze from that perspective, I think that it would be more informative for our readers, than simply comparing teenagers to all older ages.

Editor: Please as suggested by reviewer #4 make comparisons between teens, and say 20-29,30-39, 40-49, 50+ age groupings (or even 5 year groupings but that could be too much)

Also, please sprinkle in some absolute % increases in addition to the relative % increases you provide

EDITORIAL OFFICE COMMENTS:

1. The Editors of Obstetrics & Gynecology have increased 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. 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:

- * Include your title page information in the main manuscript file. The title page should appear as the first page of the document. Add any previously omitted Acknowledgements (ie, meeting presentations, preprint DOIs, assistance from non-byline authors).
- * Funding information (ie, grant numbers or industry support statements) should be disclosed on the title page and in the body text. For industry-sponsored studies, the Role of the Funding Source section should be included in the body text of the manuscript.
- * 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 uses an "electronic Copyright Transfer Agreement" (eCTA), which must be completed by all authors. When you uploaded your manuscript, each co-author received an email with the subject, "Please verify your authorship for a submission to Obstetrics & Gynecology." Please check with your coauthors to confirm that they received and completed this form, and that the disclosures listed in their eCTA are included on the manuscript's title page.

4. Our journal requires that all evidence-based research submissions be accompanied by a transparency declaration statement from the manuscript's lead author. The statement is as follows: "The lead author* affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained."
*The manuscript's guarantor.

If you are the lead author, please include this statement in your cover letter. If the lead author is a different person, please ask him/her to submit the signed transparency declaration to you. This document may be uploaded with your submission in Editorial Manager.

5. 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.

6. 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, the reasons that race/ethnicity were assessed in the study also should be described (eg, in the Methods section and/or in table footnotes). Race/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. The nonspecific category of "Other" is a convenience grouping/label that should be avoided, unless it was a prespecified formal category in a database or research instrument. If you use "Other" in your study, please add detail to the manuscript to describe which patients were included in that category.

7. Your study uses ICD-10 data, please make sure you do the following:

- a. State which ICD-10-CM/PCS codes or algorithms were used as Supplemental Digital Content.
- b. Use both the diagnosis and procedure codes.

- c. Verify the selected codes apply for all years of the study.
- d. Conduct sensitivity analyses using definitions based on alternative codes.
- e. For studies incorporating both ICD-9 and ICD-10-CM/PCS codes, the Discussion section should acknowledge there may be disruptions in observed rates related to the coding transition and that coding errors could contribute to limitations of the study. The limitations section should include the implications of using data not created or collected to answer a specific research question, including possible unmeasured confounding, misclassification bias, missing data, and changing participant eligibility over time.
- f. The journal does not require that the title include the name of the database, geographic region or dates, or use of database linkage, but this data should be included in the abstract.
- g. Include RECORD items 6.3 and 7.1, which relate to transparency about which codes, validation method, and linkage were used to identify participants and variables collected.

8. 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.

9. 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 5,500 words. Stated word limits include the title page, précis, abstract, text, tables, boxes, and figure legends, but exclude references.

10. 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).
- * 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]."

11. 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 limit for Original Research articles is 300 words; Reviews is 300 words; Case Reports is 125 words; Current Commentary articles is 250 words; Executive Summaries, Consensus Statements, and Guidelines are 250 words; Clinical Practice and Quality is 300 words; Procedures and Instruments is 200 words. Please provide a word count.

12. 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.

13. 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.

14. ACOG avoids using "provider." Please replace "provider" throughout your paper with either a specific term that defines the group to which are referring (for example, "physicians," "nurses," etc.), or use "health care professional" if a specific term is not applicable.

15. 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%).

16. 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.

17. Please review examples of our current reference style at <http://ong.editorialmanager.com> (click on the Home button in the Menu bar and then "Reference Formatting Instructions" document under "Files and Resources"). 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 reference list.

In addition, the American College of Obstetricians and Gynecologists' (ACOG) documents are frequently updated. These documents may be withdrawn and replaced with newer, revised versions. 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.

If the reference you are citing has been updated and replaced by a newer version, please ensure that the new version supports whatever statement you are making in your manuscript and then update your reference list accordingly (exceptions could include manuscripts that address items of historical interest). If the reference you are citing has been withdrawn with no clear replacement, please contact the editorial office for assistance (obgyn@greenjournal.org). In most cases, if an ACOG document has been withdrawn, it should not be referenced in your manuscript.

18. When you submit your revision, art saved in a digital format should accompany it. If your figure was created in Microsoft Word, Microsoft Excel, or Microsoft PowerPoint formats, please submit your original source file. Image files should not be copied and pasted into Microsoft Word or Microsoft PowerPoint.

When you submit your revision, art saved in a digital format should accompany it. Please upload each figure as a separate file to Editorial Manager (do not embed the figure in your manuscript file).

If the figures were created using a statistical program (eg, STATA, SPSS, SAS), please submit PDF or EPS files generated directly from the statistical program.

Figures should be saved as high-resolution TIFF files. The minimum requirements for resolution are 300 dpi for color or black and white photographs, and 600 dpi for images containing a photograph with text labeling or thin lines.

Art that is low resolution, digitized, adapted from slides, or downloaded from the Internet may not reproduce.

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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 as a Microsoft Word document. 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. Do not omit your responses to the Editorial Office or Editors' comments.

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 Jan 28, 2022, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

Dwight J. Rouse, MD
Deputy Editor, Obstetrics

2020 IMPACT FACTOR: 7.661
2020 IMPACT FACTOR RANKING: 3rd 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.



18 January 2022

Dear Dr. Wright,

Thank you for the positive response to our manuscript, “Teen Deliveries and Risk for Adverse Pregnancy Outcomes.” We appreciate the thoughtful response by the reviewers. We have revised the manuscript per the recommendations of the reviewers and believe that as a result the manuscript is substantially improved.

The main/primary study findings have not been published elsewhere and everyone included on the author list contributed in a meaningful way to the manuscript. This analysis followed STROBE guidelines. The lead author affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained. Thank you for your consideration. Please contact me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'A Friedman'.

Alexander Friedman, MD, MPH
Associate Professor of Obstetrics and Gynecology
Department of Obstetrics and Gynecology, College of Physicians and Surgeons

**Response to reviewer and editor comments for:
Teen Deliveries and Risk for Adverse Pregnancy Outcomes**

Reviewer 1

Reviewer 1/Comment 1

Summary: Repeated cross-sectional analysis of NIS dataset 2000-2018 to assess proportion of pregnancies occurring to teens, comorbid underlying conditions, and maternal morbidity, over time. Used weighting of raw data to adjust for differences between sample (20% inpatient data) and US population. Correlated ICD-9 and ICD-10 codes.

Overall impression: Well-conducted study with importance to patient care and resource utilization for best supporting teen pregnancies in both a medical and social context.

Comments:

Lines 81-90: I would include a discussion of the NIS database weaknesses, including incomplete state data for different years, so that year to year comparisons are made of slightly different populations. The overall large dataset and breadth of states make this a weakness that can be overcome, but should be addressed more directly.

Response

We now include this limitation in the discussion section. Please see page 16, paragraph 1.

'Fifth, the NIS went through an import design change in 2012 when the sampling approach switched to proportionate ascertainment from hospitals. It is possible that this change (and other smaller sampling differences during the study) could have affected some of the trends in our analysis and we are dependent on HCUP methodologic approaches for ensuring accurate estimates of trends. Estimates could be affected if specific locales with differential trends in risk were ascertained preferentially by the NIS. As of 2018, 47 states and the District of Columbia contributed data to the NIS meaning that three states were not included.'

Reviewer 1/Comment 2

Line 187-188: This is an important finding. Consider making Supplemental Figure 1 a published figure instead. Look at included data and be sure that there are no biases in state reporting that might affect this. (Were the largest 5 cities included for all years of analysis? 10 largest cities? If not, address this.)

Response

Because of the large number of figures and tables we have kept Supplemental Figure 1 as an appendix. We now acknowledge this limitation in the revised manuscript. Please see page 16, paragraph 1:

'Fifth, the NIS went through an import design change in 2012 when the sampling approach switched to proportionate ascertainment from hospitals. It is possible that this change (and other smaller sampling differences during the study) could have affected some of the trends in our analysis and we are dependent

on HCUP methodologic approaches for ensuring accurate estimates of trends. Estimates could be affected if specific locales with differential trends in risk were ascertained preferentially by the NIS. As of 2018, 47 states and the District of Columbia contributed data to the NIS meaning that three states were not included.'

Reviewer 1/Comment 3

Lines 194-197: These diagnoses have known increases with increasing age. I want to see whether the proportion of teens with these comorbidities increases or decreases with time.

Response

Thank you – this information is currently included in **Figure 3**.

Reviewer 1/Comment 4

Line 207: I believe the study data ended in 2018, not 2019.

Response

Thank you – we have corrected this typo.

Reviewer 1/Comment 5

Limitations section of discussion: Include discussion of non-reporting areas over time.

Response

Thank you – we now include discussion of this limitation. Please see page 16, paragraph 1:

'Fifth, the NIS went through an import design change in 2012 when the sampling approach switched to proportionate ascertainment from hospitals. It is possible that this change (and other smaller sampling differences during the study) could have affected some of the trends in our analysis and we are dependent on HCUP methodologic approaches for ensuring accurate estimates of trends. Estimates could be affected if specific locales with differential trends in risk were ascertained preferentially by the NIS. As of 2018, 47 states and the District of Columbia contributed data to the NIS meaning that three states were not included.'

Reviewer 2

Reviewer 2/Comment 1

Summary:

Researchers used the National Inpatient Sample to analyze temporal trends in hospitalizations for teenaged patients. The Annual Percent Change of hospitalization deliveries to teenage patients decreased in the study time period of 2000 to 2018. The researchers interpret that maternal morbidity increased over time for teen patients, including a composite called "severe maternal morbidity," hypertensive disorders of pregnancy, and postpartum hemorrhage.

Major Revisions:

In Khera et al. (2017, citation included here), there are several methodology practices recommended for National Inpatient Sample, and it is not clear that these were adhered to in this paper. These methodology

practices could be specifically addressed prior to publication. Furthermore, it is not clear that the authors' conclusion that "teen deliveries are associated with increasing comorbidity and risk for adverse outcomes" is the only conclusion that could be obtained from the findings. A less biased conclusion would cite statements that assume worse social factors than other populations, and would take into account the finding that Cesarean delivery risk (compared to all deliveries) was lower among deliveries to teenage patients, and patients aged 15-19 were less likely to have "severe morbidity."

Khera R, Angraal S, Couch T, et al. Adherence to Methodological Standards in Research Using the National Inpatient Sample. JAMA. 2017;318(20):2011-2018. doi:10.1001/jama.2017.17653

Response

Thank you for these helpful comments.

First, the manuscript the reviewer cites lists seven 'required research practices' for the NIS:

1 Identifying observations as hospitalization events rather than unique patients

We have reviewed the manuscript to ensure that we describe hospitalization as the unit of measurement.

2 Not performing state-level analyses

We do not perform state level analyses.

3 Limiting hospital-level analyses to data from years 1988–2011

We do not perform hospital-level analyses.

4 Not performing physician-level analyses

We do not perform physician-level analyses

5 Not using non-specific secondary diagnosis codes to infer in-hospital events

We do not use non-specific secondary diagnoses codes to infer in-hospital events. However, we acknowledge in the revised manuscript that some complications could occur prior to admission.

6 Using survey-specific analysis methods that account for clustering, stratification and weighting

We specify in the manuscript that we use survey adjusted models.

7 Accounting for data changes in trend analyses spanning major transition periods in the dataset (1997–1998 and 2011–2012)

We specify that we use the trend weights provided by the NIS for this purpose in the revised manuscript. Please see page 5, paragraph 1:

'HCUP recommends survey adjustment and weighting raw data to create national estimates for trends analysis. In this study both unweighted and weighted data are presented with trends data presented based on weighted estimates. Specific NIS weights for trends were applied in this study.'

Second, we agree with the reviewer regarding other reasonable inferences from study analysis. However, we believe that the trends and findings of most public health and epidemiological significance are the overall trends in comorbidity and risk for adverse outcomes.

Reviewer 2/Comment 2

Line notes:

33. A more balanced precis statement may take into account the finding that Cesarean delivery risk (compared to all deliveries) was lower among deliveries to teenage patients, and patients aged 15-19 were less likely to have "severe morbidity."

Response

We agree with the reviewer, however the word limit of the precis precludes including this information.

Reviewer 2/Comment 3

40. No doubt the term "women" was selected purposefully, and the term "girls" can be fraught with connotations. However, this reviewer finds it problematic to use the term "women" to encompass these important non-adult developmental stage(s), especially in the case of children aged 11 to 14. Consider using the term "patients."

Response

We agree with the reviewer and have changed the usage of women to patients.

Reviewer 2/Comment 4

53. The years of the analysis overlap 2011, in which Khera et al. (2017) describe that there was a major shift in the data obtained in National Inpatient Sample ("sampling changed from 100% of discharges from 20% of hospitals in the US to a national 20% sample of patients" <https://jamanetwork.com/journals/jama/fullarticle/2664461>). Consider addressing how the methodology accounted for this.

Response

Thank you – we now specify that the trend weights used to address this change provided by the NIS were used for the analysis. Please see page 5, paragraph 1:

‘HCUP recommends survey adjustment and weighting raw data to create national estimates for trends analysis. In this study both unweighted and weighted data are presented with trends data presented based on weighted estimates. Specific NIS weights for trends were applied in this study.’

Reviewer 2/Comment 5

64-69. 7 out of 15 of the references used to create this section are 10 or more years old, and the last 10 years have been eventful in the milieu of insurance, political landscape, availability of LARC, social determinants of health, and more. Consider rewriting the introduction to avoid dependence on older data.

Response

Thank you – we have added some newer citations.

Reviewer 2/Comment 6

109. Please consistently denote that what is being studied are hospitalizations (a crucial distinction for this dataset).

Response

Thank you – we have reviewed the to ensure it is clear we are analyzing teen delivery hospitalizations.

Reviewer 2/Comment 7

118. Please address whether these codes are secondary codes and relate the relevance/importance of this to the methodology and discussion sections.

Response

Thank you – we expanded discussion of these important points. Please see page 15, paragraph 1.

‘It is likely that for delivery hospitalizations, where the birth is the primary billing code, that many conditions may have been under-ascertained. If secondary billing codes were ascertained differentially over the study period, trends estimates could have been effected.’

Reviewer 2/Comment 8

126. The exclusion of transfusion is well-justified here and makes good clinical sense.

Response

Thank you.

Reviewer 2/Comment 9

188. An interesting finding that could be further developed in the discussion section, especially as rural/urban location may relate to home visitation.

Response

Thank you – we expanded discussion of these important points. Please see page 14, paragraph 1:

‘That teen births occurred more commonly in rural settings may represent an additional challenge to services and social support including home visitation.’

Page 12, paragraph 1:

‘This decrease occurred in both rural and urban settings, although teen births in rural settings were more common.’

Reviewer 2/Comment 10

231. *Please clarify this statement to distinguish between this and the statement made in line 196.*

Response

We have clarified the differences between these two statements. Please see page 12, paragraph 1:

‘Second, we found that among teen deliveries prevalences for a range of comorbid conditions increased including obesity, asthma, gestational and pre-gestational diabetes, substance use disorder, and mental health conditions although overall risk for teens was lower for obesity, asthma, gestational and pre-gestational diabetes, substance use disorder, and mental health conditions than for older women.’

Reviewer 2/Comment 11

235. *Consider including the rates of Cesarean section in the main findings.*

Response

We have made the change per the recommendation of the reviewer. Please see page 12, paragraph 1:

‘Third, we found that deliveries to 11–14-year-olds were associated with increased risk of several adverse outcomes including severe maternal morbidity although risk for cesarean delivery was lower.’

Reviewer 2/Comment 12

247. *Was there any information about the role of LARC in this population over this timeframe?*

Response

We believe that using a payer database to analyze LARC use would be preferable compared to this database. We make this recommendation in the revised discussion. Please see page 16, paragraph 1:

‘Sixth, we could not evaluate the role of long-acting reversible contraception in this population. The role of long-acting reversible contraception could be explored using payer databases.’

Reviewer 2/Comment 13

261. *Consider stating "...for a patient population with unique social factors..." rather than "...more likely to have complicating..." Or, please cite and develop this assertion more fully.*

Response

We have made the change per the recommendation of the reviewer.

Reviewer 2/Comment 14

274. *Please better support this conclusion. Consider providing a more nuanced approach that integrates the better outcomes on some of the variables studied.*

Response

We have expanded discussion of this conclusion. Please see page 14, paragraph 1:

'Our study demonstrates that to optimize teen pregnancy outcomes prenatal care will likely need to provide increasingly complex clinical management in addition to addressing the social support needs and outreach challenges of this population; optimal management of pregnancies complicated by obesity, substance use disorder, mental health conditions, and gestational diabetes may require coordination of additional maternal services, fetal surveillance, or both to reduce risk for adverse outcomes.'

Reviewer 2/Comment 15

285. *Based on this statement, please denote elsewhere in the paper which diagnoses are secondary.*

Response

Thank you we now include the follow statement (page 14, paragraph 1):

It is likely that for delivery hospitalizations, where the birth is the primary billing code, that many conditions may have been under-ascertained. If secondary billing codes were ascertained differentially over the study period, trends estimates could have been affected.

Reviewer 2/Comment 16

304. *Consider stating, "... risk for some adverse outcomes..." to avoid bias. Or, please cite and develop this assertion more fully.*

Response

We have made this change.

Reviewer 3

Reviewer 3/Comment 1

The authors used the National Inpatient Sample to describe trends in teen deliveries as well as comorbidities and obstetric morbidities in this population. The methods are well described, particularly use of population weights. Given the overall small odds ratios found, I would prefer more acknowledgment of possibility of confounding in the discussion.

Response

We have included further discussion of possibility of confounding in the discussion. Please see page 16, paragraph 1:

'It is likely that for delivery hospitalizations, where the birth is the primary billing code, that many conditions may have been under-ascertained. If secondary billing codes were ascertained differentially over the study period, trends estimates could have been affected. It is possible that the small effect sizes for several adverse outcomes could be accounted for by unmeasured confounding if risk adjustment is not complete.'

Reviewer 3/Comment 2

Abstract and methods: I have a concern about the control group including births to people greater than 40 years old (you compare to 20-54 years). This is a higher risk group and thus may mute some of your findings.

It may be more appropriate to make your comparison group 20-39 or 25-35. Your numbers are large enough that this would be doable. If redoing this analysis is prohibitive, it is worth at least mentioning this limitation in the discussion.

Response

We have repeated the analyses evaluating multiple age groups.

Reviewer 3/Comment 3

Methods, lines 103-104: Why was this stratification performed? Is this a known inflection point or was this simply dividing the age range in half?

Response

Thank you for this important question. We now add discussion of why this cutoff was chosen which is that it has been a conventional set of categories used in reporting epidemiologic trends. Please see page 5, final paragraph.

‘This categorization has been used in prior analyses.’

Reviewer 3/Comment 4

Methods, lines 119-129: include in this objective your goal of comparing teen deliveries to older deliveries.

Response

Thank you we have included this information in the revised manuscript. Please see page 6, final paragraph:

‘Risks for these adverse outcomes was compared to older women.’

Reviewer 3/Comment 5

Methods, lines 133-138: how were race and ethnicity determined? Whether this is self described or not is important for disparities analysis.

Response

Thank you - we have included this information.

Reviewer 3/Comment 6

Methods, lines 162-170: describe if you also assessed these trends in older deliveries. Also, explicitly state the comparison for which you are performing regression and determining odds ratios.

Response

Thank you - we have included this information in the revised manuscript. Please see page 8, final paragraph:

‘ Similar trends analysis was performed for women aged 20-54.;

And page 9, paragraph 1:

'We additionally performed unadjusted and adjusted survey logistic regression models for adverse the four outcomes including the aforementioned demographic, clinical, and hospital factors given that they were statistically significant, thought to be clinically significant, or both. The primary exposure of interest was maternal age of 11-14 and 15-19 with maternal age 20 to 29 years the reference.'

Reviewer 3/Comment 7

Methods, lines 166-168: How did you determine which variables to include? The way it is written it sounds like you included all variables, which would lead to an overfit model.

Response

We now include discussion of this information in the revised manuscript. In general, because of the large number of outcomes relative to the number of independent variables included we are less concerned about overfitting rather than incomplete adjustment. Please see page 8, paragraph 1:

'We additionally performed unadjusted and adjusted survey logistic regression models including the aforementioned demographic, clinical, and hospital factors given that they were statistically significant, thought to be clinically significant, or both.'

Reviewer 3/Comment 8

Results: When you describe the trends of teen delivery prevalence you report both the AAPC and the absolute prevalence at both time points. This is useful for context. Can you add the absolute prevalence for comorbid conditions and obstetric morbidity as well?

Response

We have added this information to page 10, paragraph 3

'Comorbidities among deliveries to patients 11 to 19 years of age increased over the study period including obesity (increase from to 0.2% in 2000 to 7.2% in 2018, AAPC 19.9%, 95% CI 17.1%, 22.8%), mental health conditions (increase from to 0.5% in 2000 to 7.1% in 2018, AAPC 15.3%, 95% CI 13.3%, 17.2%), and asthma (increase from 1.6% to 7.0% from 2000 to 2018, AAPC 8.7%, 95% CI 7.6%, 9.8%) as well gestational and pre-gestational diabetes and substance use disorder (**Supplemental Table 3**).'

And page 10, paragraph 4:

'Over the 2000 to 2018 study period, severe maternal morbidity (from 0.5% to 0.7%, AAPC 2.4%, 95% CI 1.6%, 3.1%), postpartum hemorrhage (from 2.9% to 4.7%, AAPC 2.4%, 95% CI 1.4%, 3.4%), cesarean delivery (from 15.2% to 19.5%, AAPC 1.3%, 95% CI 0.9%, 1.7%), and hypertensive disorders of pregnancy (from 7.5% to 13.7%, AAPC 3.3%, 95% CI 2.8%, 3.8%) all increased significantly among teen deliveries (**Figure 4, Supplemental Figure 3**).'

Reviewer 3/Comment 9

Discussion, lines 254-256: You describe one explanation for disparities and morbidity associated with teen

pregnancy. Might this finding also be due to common social determinants of health (systemic racism, access to care) being risk factors for both teen pregnancy and obstetric morbidity? Is this biology (immature reproductive system in early teens leading to increased obstetric morbidity) or socially determined (racism, oppression)? Given the significant difference in racial and ethnic populations in your various age groups, this is worth discussion.

Response

Thank you – it is the opinion of the senior author that the mechanisms responsible for maternal racial disparities are not well understood, adjusting for medical risk factors and SDH only accounts for a modest proportion of the variance in outcomes, and that this is an important knowledge gap that needs to be investigated. Please see page 13, paragraph 1:

‘The increased risk for adverse outcomes among teen pregnancies may represent a contributor to overall differentials for a range of adverse outcomes among non-Hispanic Black women 46-51 the etiologies of which are poorly understood, continue to be investigated, and are hypothesized to include individual-, community-, and system-levels factors.^{48,52-56.}’

Reviewer 3/Comment 10

Discussion, lines 265-267: I'm curious to know more - what defines adolescent-specific prenatal care? An additional sentence describing this would be welcome.

Discussion: It is worth acknowledging that your overall aORs are small (1.54, 1.83, 1.39, etc.). Clinical meaning may be limited.

Response

Thank you we now acknowledge limited clinical effects. We have included more explanation of adolescent-specific prenatal care. Please see page 14, paragraph 1:

‘A systematic review of twenty-three studies found that adolescent-specific prenatal care (including adolescent-specific social support, nutritional rehabilitation, or multiple services as part of comprehensive prenatal care for pregnant adolescents) can increase prenatal attendance and reduce the risk of preterm birth and low birth weight.’

Reviewer 3/Comment 11

Table 2: Severe maternal morbidity is decreased (albeit minimally) in deliveries to 15-19 year olds in both unadjusted and adjusted models. This should be noted in the text.

Response

Thank you – in the updated analysis SMM is higher than reference group for 15-19 year olds.

Reviewer 3/Comment 12

Figure 3: This figure emphasized the importance of listing the absolute prevalence in text to put the change into context (each morbidity remains rare). Also, in 2006-2007 the WHO redefined obesity for ages 5-19 and encouraged its diagnosis. This may explain the sudden increase in diagnosis of obesity at that time point.

Response

Thank you – we now include this important point in the revised manuscript.

STATISTICS EDITOR

Statistics Editor/Comment 1

Figure 1 should be expanded to show the unweighted and weighted counts for the 11-14 yo and for the 15-19 yo cohorts.

Response

We have made these changes.

Statistics Editor/Comment 2

Supplemental Tables 2 and 4 should be in main text to illustrate the impact of Figure 1.

Response

We have made this change per the recommendation of the reviewer.

Statistics Editor/Comment 3

General: The use of a referent group age 20-54 contrasts the teenage cohort with a cohort having a wide spectrum of risk factors for complications due to pregnancy. It would be more informative to compare the teenage cohorts vs relevant age categories to give better context for the rates of complications among teenagers vs other ages. I would strongly urge the Authors to analyze from that perspective, I think that it would be more informative for our readers, than simply comparing teenagers to all older ages.

Response

We made the comparator group women age 20-29 in revised manuscript– we felt that using this lowest group was useful in estimating risk relative to other age groups.

EDITOR

Please as suggested by reviewer #4 make comparisons between teens, and say 20-29,30-39, 40-49, 50+ age groupings (or even 5 year groupings but that could be too much)

Also, please sprinkle in some absolute % increases in addition to the relative % increases you provide

Response

We have added this information in the revised manuscript. Please see page 11, paragraph 1:

‘Compared to women aged 20-29, risk for patients age 11-14 was 0.4% higher for severe maternal morbidity, 3.6% higher for hypertensive disorders of pregnancy, 0.9% higher for postpartum hemorrhage, and 9.4% lower for cesarean delivery. Compared to women aged 20-29, risk for patients age 15-19 the same for severe maternal morbidity, 1.3% higher for hypertensive disorders of pregnancy, 0.3% higher for postpartum hemorrhage, and 7.9% lower for cesarean delivery.’

EDITORIAL OFFICE COMMENTS:

1. *The Editors of Obstetrics & Gynecology have increased 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.*

Response

We OPT-IN.

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:*

- * *Include your title page information in the main manuscript file. The title page should appear as the first page of the document. Add any previously omitted Acknowledgements (ie, meeting presentations, preprint DOIs, assistance from non-byline authors).*
- * *Funding information (ie, grant numbers or industry support statements) should be disclosed on the title page and in the body text. For industry-sponsored studies, the Role of the Funding Source section should be included in the body text of the manuscript.*
- * *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.*

Response

We have included this information.

3. *Obstetrics & Gynecology uses an "electronic Copyright Transfer Agreement" (eCTA), which must be completed by all authors. When you uploaded your manuscript, each co-author received an email with the subject, "Please verify your authorship for a submission to Obstetrics & Gynecology." Please check with your coauthors to confirm that they received and completed this form, and that the disclosures listed in their eCTA are included on the manuscript's title page.*

Response

We have checked with the others and that the disclosures are included on the manuscript's title page.

4. *Our journal requires that all evidence-based research submissions be accompanied by a transparency declaration statement from the manuscript's lead author. The statement is as follows: "The lead author* affirms that this manuscript is an honest, accurate, and transparent account of the study being reported;*

*that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained." *The manuscript's guarantor.*

If you are the lead author, please include this statement in your cover letter. If the lead author is a different person, please ask him/her to submit the signed transparency declaration to you. This document may be uploaded with your submission in Editorial Manager.

Response

We have included this statement in the cover letter.

5. 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.

Response

We did not use data from the NCHS.

6. 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, the reasons that race/ethnicity were assessed in the study also should be described (eg, in the Methods section and/or in table footnotes). Race/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. The nonspecific category of "Other" is a convenience grouping/label that should be avoided, unless it was a prespecified formal category in a database or research instrument. If you use "Other" in your study, please add detail to the manuscript to describe which patients were included in that category.

Response

We have included this information/formatting in the revised manuscript.

7. Your study uses ICD-10 data, please make sure you do the following:

- a. State which ICD-10-CM/PCS codes or algorithms were used as Supplemental Digital Content.*
- b. Use both the diagnosis and procedure codes.*
- c. Verify the selected codes apply for all years of the study.*
- d. Conduct sensitivity analyses using definitions based on alternative codes.*
- e. For studies incorporating both ICD-9 and ICD-10-CM/PCS codes, the Discussion section should acknowledge there may be disruptions in observed rates related to the coding transition and that coding errors could contribute to limitations of the study. The limitations section should include the implications of*

using data not created or collected to answer a specific research question, including possible unmeasured confounding, misclassification bias, missing data, and changing participant eligibility over time.

f. The journal does not require that the title include the name of the database, geographic region or dates, or use of database linkage, but this data should be included in the abstract.

g. Include RECORD items 6.3 and 7.1, which relate to transparency about which codes, validation method, and linkage were used to identify participants and variables collected.

Response

We have included this information in the revised manuscript.

8. 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.

Response

We believe our manuscript conforms to definitions in the reVITALize initiative.

9. 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 5,500 words. Stated word limits include the title page, précis, abstract, text, tables, boxes, and figure legends, but exclude references.

Response

We believe our manuscript adheres to these limitations.

10. 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).

** 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]."*

Response

We have acknowledged this information in the manuscript.

11. 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 limit for Original Research articles is 300 words; Reviews is 300 words; Case Reports is 125 words; Current Commentary articles is 250 words; Executive Summaries, Consensus Statements, and Guidelines are 250 words; Clinical Practice and Quality is 300 words; Procedures and Instruments is 200 words. Please provide a word count.

Response

We have reviewed the abstract. The word count is 297.

12. Only standard abbreviations and acronyms are allowed. A selected list is available online at <http://edmqr.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.

Response

We believe that standard abbreviations and acronyms are used.

13. 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.

Response

We do not use this symbol in the manuscript.

14. ACOG avoids using "provider." Please replace "provider" throughout your paper with either a specific term that defines the group to which are referring (for example, "physicians," "nurses," etc.), or use "health care professional" if a specific term is not applicable.

Response

We do not use the term 'provider' in lieu of specific terms such as 'physicians' and 'nurses.'

15. 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 (NNT_h). 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%).

Response

We believe that we generally report effect sizes and meaningful differences rather than p values in the manuscript.

16. 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://edmqr.ovid.com/ong/accounts/table_checklist.pdf.

Response

We believe the manuscript conforms to journal style.

17. Please review examples of our current reference style at <http://ong.editorialmanager.com> (click on the Home button in the Menu bar and then "Reference Formatting Instructions" document under "Files and Resources"). 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 reference list.

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Response

We believe all ACOG documents are up to date.

18. When you submit your revision, art saved in a digital format should accompany it. If your figure was created in Microsoft Word, Microsoft Excel, or Microsoft PowerPoint formats, please submit your original source file. Image files should not be copied and pasted into Microsoft Word or Microsoft PowerPoint.

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Figures should be saved as high-resolution TIFF files. The minimum requirements for resolution are 300 dpi for color or black and white photographs, and 600 dpi for images containing a photograph with text labeling or thin lines.

Art that is low resolution, digitized, adapted from slides, or downloaded from the Internet may not reproduce.

Response

We believe our figures are appropriately formatted.

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Response

We decline open access.