OBSTETRICS & GYNECOLOGY

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

Date: Feb 21, 2019
To: "Sarah C Haight" [redacted]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-19-9

RE: Manuscript Number ONG-19-9

Rising Rates of Depressive Disorder at Obstetric Delivery in the United States, 2000–2015

Dear Dr. Haight:

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

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

Your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Mar 14, 2019, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1: Overall Comment: Data were analyzed from the National Inpatient Sample and the State Inpatient Databases, 2000-2015 for women with ICD-9-CM depressive disorders at the time of hospitalization for obstetric delivery. National and state-specific prevalence rates of depressive disorders per 1,000 delivery hospitalizations per each year 2000-2015. This information is of interest as depression during pregnancy is associated with poor maternal self-care, obstetric complications, substance abuse, among other morbidities and if a diagnosis is made earlier, perhaps interventions can be done to help prevent these morbidities. Some specific comments and queries below.

Specific Comments

1. Title: The only consideration is of potentially removing "Rising" and just having, Rates of Depressive Disorder at….

Short Title: Good

Précis: OK

2. Abstract: Good overall; is there any information with regard to the measure used to assess depression.
Introduction: Could be shortened a bit.

3. Materials and Methods: Please provide measures used to assess depression if available; what was the most common depression diagnosis encountered? Could you provide the specific diagnoses associated with the ICD-9 codes? Was there data regarding the parity of patients? Was there any thought to look at differences in age-matched women with and without depression in this database?

4. Results: Was there any attempt to control for parity, age or type of delivery which could impact depression.

5. Discussion: Line 138, American "Congress". Limitations of the study are well presented.

Tables/Figures: Good.

Reviewer #2: Overall, this is an appropriately done epidemiology study that utilizes administrative databases to explore trends in diagnoses of depression during pregnancy. Given that only temporal trends are explored there are limited inferences that can be drawn from the analysis.

Introduction

1. The introduction is well written. Many of the concerns addressed regarding care related to perinatal depression are appropriate. The problem is that this background does very little to establish the importance of the analysis because the issues brought up in the introduction are not evaluable with this analysis.

That is, while perinatal depression is important and a cause of significant morbidity and care may be suboptimal, it is is unclear how the analysis addresses any of concerns given that it is only focusing on trends.

Methods
2. I get that evaluating SID databases provides an additional level of granularity.

However, the analysis would be more interesting if there was a specific hypothesis that was being tested. Did the authors hypothesize that depression rates would rise differentially in individual states? If so, why? Can readmissions for psychiatric indications be captured in the SID? If so that would represent a means of demonstrating that psychiatric disease is truly increasing as opposed to this simply being enhanced ascertainment.

Results
3. Was there the thought of specifically looking at Medicare receipt and what proportion of women with depression that resulted in?

4. Was there the thought of looking to see which demographic factors were associated with the largest proportion increase in depression or whether there were differentials in risk factors by state?

5. Was there the thought of looking at medical comorbidities and other behavioral diagnoses as well as substance abuse in terms of association with depression?

Discussion

6. Line 130 "Furthermore, consistent with the literature, women receiving public insurance during pregnancy showed the highest rates of depression diagnoses at delivery. This is consistent with the United States Preventive Services Task Force's acknowledgement of lower socioeconomic status as a risk factor for depression"

Is this the case though? Did you disaggregate Medicare from Medicaid? If these differentials are being driven by high a priori rates of depression and disability in the Medicare population it may be that the magnitude of risk associated with Medicaid may be much lower and SES would be less likely to be blamed. Can you analyze based on income ZIP code quartile? I believe that is available in NIS. Maybe run adjusted analysis?

7. Line 135-152 This all may be true but it doesn't appear that the study findings have any bearing on these issues. Insofar that larger issues regarding management of depression are discussed, they should have some relation to inferences that can be drawn from the data.

Reviewer #3: This manuscript provides an analysis of administrative hospital data, both a nationally representative sample and state-based samples. They delineate the epidemiology of depression diagnoses within states and across the US over a 15 year span from 2000-2015. Though the data they present are observational in nature and therefore essentially hypothesis-generating, this is an important topic and these data could be incredibly useful in efforts on state and national levels to improve perinatal mental health care.

The authors' efforts are to be commended. I have the following comments and points of clarification:

1) The abstract is concise and provides an appropriate assessment of findings.

2) The introduction feels somewhat disjointed to this reviewer. The first section deftly lays out the scope of the problem and its importance for both children/infants and mothers for long term health and maternal mortality. The second paragraph seems to focus on barriers to screening and disclosure, which, while real, do not seem to really motivate this inquiry. I'd like to see this paragraph better describe what we do not know that this paper can address, and why it is important to know it. I would like to feel at the end of the introduction that the study has been motivated by a perceived need or gap in the literature that this study can fill.

3) The methods are pleasantly concise. However, a little additional information on joinpoint analyses for those in the audience unfamiliar with this method would be helpful. It is a relatively standard methodology in the cancer epidemiology literature in order to track changing rates over time. Details that would be helpful for greater understanding (and replicability) would include the type of model (log linear, poisson, etc), and the minimum and maximum specified join points.

4) Methods - Weighting and other complex survey methods are mentioned for the NIS which allow for the transformation of a 20% sample to a representative estimate. Is there weighting associated with the SID? Or is it a complete cohort in each state? Are there differences between states regarding collection and submission to the database?

5) Results - it would be helpful to delineate which data (NIS vs SID) contributed to which statistics. This reviewer assumes that the sociodemographic rates (by insurance payor, race/ethnicity, etc.) are from the NIS rather than SID, but that is not made clear. It would improve the results greatly to state from which data each set of results is derived.

6) Results - If the sociodemographic rates are derived from the NIS, is there not an associated confidence interval given the weighting strategy?

7) Results - Figure 3 is nice, but can be difficult to really understand all that is being conveyed. The groups with the highest rates of change between 2000 vs 2015 might be easier to identify if the font color for that bracket with the highest rate were different from the others. It's challenging sometimes to distinguish the ranking of the rates of change from the ranking of the absolute prevalence values in 2015 (which is how the columns are ordered).

8) Discussion - I understand the use of delivery discharge data for this study, because the authors are utilizing the inpatient sample. However, I feel the discussion could be strengthened by addressing the validity of using these data for this question. Is there any data in the literature to suggest how often or whether diagnoses such as depression, anxiety, etc., are included in discharge summaries for "unrelated" problems? In other words, is there any data, even from other fields (e.g., surgery admissions, admissions for acute medical illness) in which the rates or reasons for including mental health diagnoses in discharges are explored? If available, it would provide context for understanding the degree of (likely) under-reporting of mental health diagnoses at discharge.

9) Discussion - I feel that in general, the discussion does not identify the important gaps that this study fills and leaves this reviewer somewhat confused as to what the main idea of the discussion is. There is significant real estate afforded to the idea of screening, diagnosis, and treatment, none of which can really be addressed by this information. I feel the discussion would be stronger by describing the ways in which this information can be useful - to state and hospital policy makers, for resource allocation and understanding the likely under-reported burden of disease, and to hypothesis generation. I would love the authors to spend some time in the Discussion offering us what they think the next steps could be to delineate whether these changes over time are due to increased ascertainment or true increase in depression rates, etc.

10) In general, this paper offers interesting information about depression diagnoses for delivery admissions. An introduction that better motivates the study and a Discussion that really highlights the usefulness of these data for policy and future research will overall improve the paper.

STATISTICAL EDITOR'S COMMENTS:

1. Table 1: In a larger, on-line supplement, should include the actual annual counts and CIs for each estimate of prevalence.

2. Fig 1: Need to clarify that the CIs are based on the actual NIS sample size and not the extrapolated sample size.

3. Fig 2: Need to include CIs.

4. Figs 2, 3: These are useful, but may be misinterpreted by some readers. These show relative increases in rates per 1,000 L&D hospitalizations. Should include a separate figure showing the average annual change in rate per 1000 as absolute, not relative changes.

EDITORIAL OFFICE COMMENTS

1. The Editors of Obstetrics & Gynecology are seeking to increase transparency around its peer-review process, in line with efforts to do so in international biomedical peer review publishing. If your article is accepted, we will be posting this revision letter as supplemental digital content to the published article online. Additionally, unless you choose to opt out, we will also be including your point-by-point response to the revision letter, as well as subsequent author queries. 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:
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2. As of December 17, 2018, Obstetrics & Gynecology has implemented an "electronic Copyright Transfer Agreement" (eCTA) and will no longer be collecting author agreement forms. When you are ready to revise your manuscript, you will be prompted in Editorial Manager (EM) to click on "Revise Submission." Doing so will launch the resubmission process, and you will be walked through the various questions that comprise the eCTA. Each of your coauthors will receive an email from the system requesting that they review and electronically sign the eCTA.

Any author agreement forms previously submitted will be superseded by the eCTA. During the resubmission process, you are welcome to remove these PDFs from EM. However, if you prefer, we can remove them for you after submission.

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

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

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6. 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).

7. 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.

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

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If you choose to revise your manuscript, please submit your revision via Editorial Manager for Obstetrics & Gynecology at http://ong.editorialmanager.com. It is essential that your cover letter list point-by-point the changes made in response to each criticism. Also, please save and submit your manuscript in a word processing format such as Microsoft Word.

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

Again, your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Mar 14, 2019, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

The Editors of Obstetrics & Gynecology

2017 IMPACT FACTOR: 4.982
2017 IMPACT FACTOR RANKING: 5th out of 82 ob/gyn journals

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