

OBSTETRICS & GYNECOLOGY



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obgyn@greenjournal.org.

Date: Mar 15, 2021
To: "Jason D. Wright" [REDACTED]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-21-267

RE: Manuscript Number ONG-21-267

Disparities in Access to High-Volume Surgeons Within High-Volume Hospitals for Hysterectomy

Dear Dr. Wright:

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 Apr 05, 2021, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1:

This is a retrospective study using the New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS) and comparing perioperative morbidity and mortality between high- and low-volume surgeons at high-volume hospitals. Key findings included that women treated by low-volume surgeons at high-volume hospitals were more likely to be black and Medicare recipients, and that low-volume surgeons were also more likely to perform emergent/urgent procedures and abdominal as opposed to minimally invasive hysterectomy.

I commend the authors for their interest and work in this area. Their finding that socioeconomic disparities exist even within high-volume hospitals is novel and quite interesting. My comments about the manuscript are as follows:

1. In the introduction (line 105), it would be helpful to include information about socioeconomic status and insurance type in access to high-volume care. Consider including the following NCDB study: Nabi et al. "Access Denied: The relationship between insurance status and access to high-volume hospitals." *Cancer*, 2/15/2021 (epub 10/21/2020).
2. In the methods (line 120), please indicate that SPARCS is an all-payer database.
3. On line 150, was reoperation only counted if it occurred during the index admission? Please clarify, as many patients who have undergone minimally invasive hysterectomy might have been discharged and readmitted for reoperation.
4. On line 146, it is stated that "perioperative mortality" was one of the outcomes of interest, but then this was not defined. Instead, on lines 153-154, it is noted that inpatient mortality was defined as death during the index admission. Perioperative mortality is then reported on lines 213-215. In your prior publication (Wright, et al. "Comparative Effectiveness of Minimally Invasive Hysterectomy for Endometrial Cancer." *Journal of Clinical Oncology*, April 2016), perioperative mortality is defined as death within 30 days of the procedure, so I wonder if this is the metric you meant to report. Please clarify which you are referring to, and define perioperative mortality in the methods if that is the metric you are using.
5. On lines 146-148, you define perioperative morbidity for this manuscript. In this, you state that occurrences of surgical site complications (including abscess) were only reported during the index admission. This may miss a significant proportion of infections given their natural history. Please clarify.
6. On line 193-194, it would be helpful to indicate whether risk adjustment was performed for operative morbidity. For example, did patients with high complexity procedures in addition to their hysterectomies (such as splenectomy, bowel resection, hepatic resection, etc.) have different outcomes from ones with simple benign hysterectomies? On lines 301-302 in the discussion you state that you lacked data on "surgical history and complexity." Please clarify whether or not risk adjustment was possible given the data from the SPARCS database.
7. On line 195-196, information regarding insurance status was provided, including that 77.4% of patients had private insurance. In the discussion (line 305-306), I would suggest including a statement about the generalizability of these

results given that information.

8. On lines 203-204 the authors report that lower-volume surgeons were more likely to perform surgery on patients with greater comorbidity. I would suggest addressing possible reasons for this in the discussion. Could one reason be the fact that low-volume surgeons performed significantly more surgery on patients in the highest two age brackets as illustrated in Table 2?

9. One additional limitation of this study may be that within the years between 2000-2014 there was a significant shift away from abdominal hysterectomy and towards minimally invasive approaches. In the patients who received disproportionately more abdominal-approach hysterectomies, were these skewed towards the earlier years of the time period?

10. In the discussion (lines 283-285 or 292-296), it may be helpful to include possible solutions and future directions for research in this area. For example, use of a validated tool to ensure quality care in hysterectomy (such as outlined in Driessen et al. "A dynamic quality assessment tool for laparoscopic hysterectomy to measure surgical outcomes," *AJOG* 2016) or use of guideline-adherent care as briefly discussed in your manuscript (Wright et al. "Patterns of Specialty-Based Referral and Perioperative Outcomes for Women With Endometrial Cancer Undergoing Hysterectomy," *Obstetrics & Gynecology*, 2017).

Reviewer #2:

The authors used a large New York State database to examine outcomes from hysterectomy at high-volume hospitals, stratified by surgeon volume. Patients treated by low-volume surgeons were more likely to be Black and less likely to receive minimally invasive surgery. Low volume was associated with higher morbidity and mortality.

The study is concise, appropriately designed, and well-written. It is easy to follow and relevant to clinical practice. As with all database studies, some granularity is exchanged for volume, but the authors were fair in their approach and reasonable in their interpretations.

Line 143-5 (and table 1) - Were the authors referring to proportion of the total cohort as a % or average number of cases per surgeon in each quartile?

Line 157 - Was it possible to separate race from ethnicity using these data?

Could the authors comment on the use of minimally invasive surgery over time? Endoscopic hysterectomies were in their infancy in 2000 and would be interesting to see if the same outcomes were observed, for example, in a 2000-2007 cohort as a 2007-2014 cohort.

The data used for this report are at least seven years old. Is it possible to obtain more contemporary data?

Reviewer #3:

This is a well-written manuscript reporting on a retrospective cohort study utilizing a New York State database to examine access to high volume surgeons as well as morbidity and mortality for patients undergoing hysterectomies at high volume centers in New York State. The authors found significant socioeconomic disparities, as well as significant differences in morbidity and mortality among those who received care from low vs high volume gynecologic surgeons. This is a well-done study that contributes to an important and growing body of literature in disparities in care.

Specific considerations:

Consider adjusting the title to be more specific to the study - I would emphasize the assessment of the disparities in morbidity/mortality between low and high-volume surgeons.

Excellent, concise introduction building up to your objective.

It would be valuable to have a flow chart showing the total cases identified in the dataset, those excluded and for what reasons, and the final numbers assessed. While the authors do describe their process in the methods, I am left curious about the total number of patients excluded for incomplete records or other reasons. This information will help shed some

light on how robust your dataset is.

Lines 136-141: was all of the individual surgeon level data available in the dataset, or was the data de-identified and queried in other ways? Please specify.

Line 259: Replace "surgery" with "surgeon".

For all tables, the heading should be a stand-alone statement. Please expand your table titles to ensure they adequately describe their contents.

Consider use of one or two figures to tell your story/findings graphically. There are some powerful numbers here that could be highlighted with the use of figures.

STATISTICS EDITOR COMMENTS:

Lines 60-70, 173-177: The results are cited as both aORs and aRRs. Did the population studied represent all hysterectomies performed in NY from 200-2014 or a representative sample? If all were included, then should be expressed as RRs, if a sample, then as ORs. Also, should be consistent throughout.

lines 142-144: Need to be precise as to what is meant by "average", that is, was it the mean or the median volume (using data from Table 1, it appears to be median)? Also, for the Q3, the average is cited as 10.7, while the range is 2.0-6.8. I think the Authors mean IQR, rather than range, since the range must include both the mean and median values. Need to clarify.

Tables 1, 2: As shown by the Authors, the Q1 group's patients had a different profile in terms of older age, more non-Caucasian, more comorbidities, more emergency admissions, and more abdominal hysterectomies. In other words, a higher risk profile for morbidity and mortality.

Table 3: Should label as quartiles not quarters. It should also be noted that the differences between Q3 and Q4 are either statistically NS or have margins that are close to no meaningful clinical difference. So the "substantially greater risk" cited in the Abstract conclusion does not universally apply, but rather the difference appears to be when comparing quartiles above vs below the median.

Supplemental Table: The column headings are incomplete. Only the last set should refer to mortality. I suggest that this Table is important enough to warrant being in the main text, rather than in supplemental material. The mortality rates, after allocation by quartile, result in relatively low counts for the emergency case analysis. Those counts are too low to allow for adjustment with the number of adjustors cited. That is, the model is likely overfitted.

EDITORIAL OFFICE COMMENTS:

1. The Editors of Obstetrics & Gynecology are seeking to increase transparency around its peer-review process, in line with efforts to do so in international biomedical peer review publishing. If your article is accepted, we will be posting this revision letter as supplemental digital content to the published article online. Additionally, unless you choose to opt out, we will also be including your point-by-point response to the revision letter. If you opt out of including your response, only the revision letter will be posted. Please reply to this letter with one of two responses:

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2. Obstetrics & Gynecology uses an "electronic Copyright Transfer Agreement" (eCTA). When you are ready to revise your manuscript, you will be prompted in Editorial Manager (EM) to click on "Revise Submission." Doing so will launch the resubmission process, and you will be walked through the various questions that comprise the eCTA. Each of your coauthors will receive an email from the system requesting that they review and electronically sign the eCTA.

Please check with your coauthors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the

manuscript's title page.

3. 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.

4. 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.

5. 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.

6. 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 for reporting randomized controlled trials (ie, CONSORT), observational studies (ie, STROBE), observational studies using ICD-10 data (ie, RECORD), meta-analyses and systematic reviews of randomized controlled trials (ie, PRISMA), harms in systematic reviews (ie, PRISMA for harms), studies of diagnostic accuracy (ie, STARD), meta-analyses and systematic reviews of observational studies (ie, MOOSE), economic evaluations of health interventions (ie, CHEERS), quality improvement in health care studies (ie, SQUIRE 2.0), and studies reporting results of Internet e-surveys (CHERRIES). Include the appropriate checklist for your manuscript type upon submission. 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 <http://ong.editorialmanager.com>. In your cover letter, be sure to indicate that you have followed the CONSORT, MOOSE, PRISMA, PRISMA for harms, STARD, STROBE, RECORD, CHEERS, SQUIRE 2.0, or CHERRIES guidelines, as appropriate.

7. 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.

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

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- * If all or part of the paper was presented at the Annual Clinical and Scientific Meeting of the American College of Obstetricians and Gynecologists or at any other organizational meeting, that presentation should be noted (include the exact dates and location of the meeting).

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

11. Provide a précis on the second page, for use in the Table of Contents. The précis is a single sentence of no more than 25 words that states the conclusion(s) of the report (ie, the bottom line). The précis should be similar to the abstract's conclusion. Do not use commercial names, abbreviations, or acronyms in the précis. Please avoid phrases like "This paper presents" or "This case presents."

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14. 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.

15. ACOG is moving toward discontinuing the use of "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.

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

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* 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 Apr 05, 2021, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,
John O. Schorge, MD
Associate Editor, Gynecology

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