OBSTETRICS & GYNECOLOGY

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

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

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

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

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

Date: Dec 04, 2020
To: "Erica E Marsh" [redacted]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-20-2511

RE: Manuscript Number ONG-20-2511

Trends in Emergency Department Utilization Among Women with Fibroids in the United States 2006-2016

Dear Dr. Marsh:

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 Dec 28, 2020, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1:

This article does provide insight at a national level into Emergency Department (ED) care for women with leiomyomas. It offers data regarding changes in ED volume, costs, and admission rates over time.
This article may be better suited for a journal whose focus is Emergency Medicine, Hospital Administration, or Public Health. Although important, your objective to study cost, emergency department visit volume, payer mix, and regional variation in care may be less germane to the practicing gynecologist.
Line 117: One line providing a definition of "no charge" payment would be helpful.
Line 119: The rationale into your grouping of hospital types is not inherently obvious and would benefit from a brief explanation. Also, the grouping of "metropolitan teaching" and "metropolitan nonteaching + nonmetropolitan" is not reflected in Tables 1-3. A clearer explanation in the text and tables of how many groups there are and who resides in each group would be a help.
Line 293: I agree that the high percentage of women with private insurance frequenting the ED was unexpected. As such, I agree with your comment in line 307. Although not possible from your database, it would have been informative to understand what factors perceived by the patient prompted the ED visit rather than an office visit. On a similar note, understanding these same factors for all payer groups might better lead to an opportunity for better healthcare utilization.
Line 302: I think your explanation for the admission disparity is limited. Disease severity in those presenting to the ED is another possible explanation. Differing disease severity among your groups may stem from differences in health literacy, access to primary-care clinics, and care continuity. Patient choice regarding admission is another potential explanation.
Line 449: Pelvic imaging is costly. For Table 3, a third column in which you present the total dollar cost attributed to each diagnostic intervention might be informative. For women with nonsevere bleeding from leiomyomas, outpatient rather than ED-based imaging often is suitable. This can be a substantial cost saver and might be a discussion point to add. Also, in the legend, it might be helpful to define "infusions." This helps clarify its difference from "intravenous hydration."

Reviewer #2:

The presented manuscript is a retrospective analysis of the trends in fibroid-related Emergency Department visits from 2006-2016 as well as factors associated with a subsequent admission. The authors utilized a national database (Healthcare Cost and Utilization Project Nationwide Emergency Department Sample). They applied ICD codes with a primary diagnosis of uterine fibroids as well as secondary diagnoses ICD codes, CPT codes and hospital charges.

1. Abstract - Lines 59-60: consider stating this as an average annual cost as annual costs are utilized elsewhere in the manuscript (line 85).
2. Introduction - Appropriately representative of the manuscript.
3. Methods - Lines 115-116: is utilizing the median household income for the patient's zip code an accurate measure of income? Lines 119-120: were metropolitan non-teaching and non-metropolitan hospitals grouped, and if so, why? I cannot find/see the appendices.
4. Results - Lines 161-162: It would be interesting to see what proportion of all ED visits was fibroid-related and if this changed during the study period. Is it possible that the proportion is unchanged and that overall ED utilization increased?
5. Discussion - Lines 260-262: Alternatively, fibroid burden may be less in the younger patients.

Reviewer #3:

The authors present an interesting analyses of ED visits for fibroids over an 11 year period using publically available data in the NEDS. Fibroids are a major public health problem due to their high prevalence and significant impact on quality of life as well as healthcare utilization. However, data on ED use for women with fibroids and associated costs is lacking. Therefore, this analyses may be helpful in filling an evidence gap and can further elucidate the impact of fibroid care on healthcare costs and utilization.
However, there are several key issues that need to be addressed that limit enthusiasm for publication at this point:

1. Trend in fibroid cases: The primary findings emphasize that the overall number of fibroid cases in the ED has increased significantly over the 11 year time timeframe. However, in considering this prevalence, the authors do not account for changes in the overall population which increased by about 25 million during this time frame, or the total number of ED visits among women during that time frame which may have also significantly increased. Perhaps the increase in fibroid cases is primarily related to and increase in overall population and/or an increase in overall use of the ER by all women (not just for fibroids), rather than an increase in use of emergency services by women with fibroids among all women with fibroids.
To try to address this issue, the authors should present fibroid cases as a percentage of all ED visits among women of the selected age. If the % of fibroid visits among all visits has also doubled, that might indicated a true increase in the use of ED services among women with fibroids (although of course it is possible that % may go up if the number of visits for other non-fibroid care is decreasing).
The authors present admission rates as a % of total fibroid cases and should do the same for fibroid cases in the ED among all ED visits in women.
The use of absolute number of cases vs. proportion of cases also leads to problematic interpretation of data described in the discussion section. The opening paragraph of the discussion puts forth a hypothesis that women are increasing using emergency services for non-urgent fibroid-related issues. However, if the % of fibroid cases among all ED cases has not increased over time, I do not think the authors would conclude that more women are using the ED for fibroid care.

2. Race/ethnicity missing in analyses: The authors highlight the higher prevalence of fibroids among Black women and use this information to explain higher rates of hospital admission in the South. They also discussion that systemic racism may contribute to regional differences in hospitalization rates. However, the authors do not present any data on race/ethnicity in the study population. This is a major omission in the manuscript. The authors do not explain WHY they left out race/ethnicity in the analyses so the reader will certainly be confused by this lack of data. However, I am aware that NEDS does not have race/ethnicity as an available data field. The authors need to acknowledge this limitation in the available data and explain how lack of race/ethnicity impacts interpretation of their results.

3. Interpretation of data: There are several points in the discussion that need further clarification or are not aligned with data presented in the text/tables as follows:
**page 13, line 241 states that since HTN was the most common comorbidity among fibroid cases, that this analysis shows an opportunity to decrease healthcare utilization for HTN through improved preventative care for fibroids. Perhaps I am misreading this, but this does not seem to flow together as a cogent argument. Women with fibroid diagnosis are coming to ED for fibroid care, not care for HTN. This needs major clarification and/or omissions.
**page 14, line 261 discusses possible reason for why younger women are less likely to be admitted because of "different perceptions of what constitutes a medical emergency leading to higher care-seeking behavior". It is unclear what the authors are describing or implying here. What perception are they referring to and is it among young or older women and how would that impact decision to admit to hospitals?
In addition, the authors hypothesize that older women may be more likely to have admission because of more comorbidities. But, the authors have data on comorbidities so they do not need to hypothesize on this point; they can do the analyses to see if older women had more comorbidities in the data set compared with younger women with fibroids.
**page 15, beginning line 289. This discussion on impact of SES needs more explanation and clarification. The authors point out that low income women were the highest proportion in the ED, but that there is an unexpected result with private insurance being the most common payer in the ED. These seem to be findings that are not internally consistent. IF the lowest quartile of income is most common, why is private insurance also most common. Please provide an explanation of

how to reconcile these two findings.
In addition, "no charge" patients were much more likely to be admitted that self-pay, but the authors did not provide an explanation for this finding.
***Interpretation of decline in admissions: the abstract conclusion say that the decline in admissions suggest that many of these visits could be addressed in non acute care. Perhaps this is true, but another explanation could just be that there have been an increase in effective therapies that can be given in the ED over the last 10 years that decrease chance of admission. As one example, many EDs are now using tranexamic acid to manage heavy bleeding, a medication that was not available in 2006. Perhaps the rate of admissions is going down because of increased use of tranexamic acid?

Other smaller issues to address include:

1. Why was 11 years chosen up to 2016? Isn't 2017 of NEDS available?
2. Why did the authors stop at age 55? I presume they are aiming to exclude postmenopausal women with the 55 age cut off, but then why exclude postmenopausal women if they are going to the ED and have fibroid as primary diagnosis?
3. page 6, line 81. Sentence about one in five visit ED needs a reference
4. Table 1 can be omitted. There are no key findings of trends over time and no analysis is discussed in the text.
5. Table 2 and 4 can easily be combined into one table.

STATISTICS EDITOR COMMENTS:

Tables 1, 2: Need to enumerate the missing data.

Table 4: Need to include a separate column of unadjusted ORs for contrast. Need to label multivariable as aORs, Need to include a footnote listing all variables retained in the final model.

Figs 1 and 2: Need to have legends to figures.

Fig 1: To a small extent, the increase in annual ED visits is attributable to an increase in population over the 11 year period. Should account for that portion of the increase. Also, should include comment in legend as to the statistical changes in each group.

Fig 2: Costs are notorious for not conforming to a normal distribution, but rather being skewed to the right. Therefore average (ie, mean values) are not a good representation of costs. Should instead format as median(IQR) and include in legend a comment as to the statistical tests used to evaluate the increases over time.

EDITORIAL OFFICE COMMENTS:

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

2. 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. 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.

4. If applicable: 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.

5. 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 observational studies using ICD-10 data (ie, RECORD). 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.

6. 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.

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.

9. 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).

10. 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. Please provide a word count.

11. 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.

12. 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.

13. 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.

14. 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%").

15. Your manuscript contains a priority claim. We discourage claims of first reports since they are often difficult to prove. How do you know this is the first report? If this is based on a systematic search of the literature, that search should be described in the text (search engine, search terms, date range of search, and languages encompassed by the search). If it is not based on a systematic search but only on your level of awareness, it is not a claim we permit.

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 reference you are citing is still current and available. If the reference you are citing has been updated (ie, 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 (exceptions could include manuscripts that address items of historical interest). All ACOG documents (eg, Committee Opinions and Practice Bulletins) may be found at the Clinical Guidance page at https://www.acog.org/clinical (click on "Clinical Guidance" at the top).

18. Figures 1-2: Please upload as figure files on Editorial Manager.

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

***

If you choose to revise your manuscript, please submit your revision through Editorial Manager at http://ong.editorialmanager.com. Your manuscript should be uploaded in a word processing format such as Microsoft Word. Your revision's cover letter should include the following:

* A confirmation that you have read the Instructions for Authors (http://edmgr.ovid.com/ong/accounts/authors.pdf), and
* A point-by-point response to each of the received comments in this letter. 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 Dec 28, 2020, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

John O. Schorge, MD
Associate Editor, Gynecology

2019 IMPACT FACTOR: 5.524
2019 IMPACT FACTOR RANKING: 6th out of 82 ob/gyn journals

MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

[redacted]

January 12, 2021

John Schorge, MD
Obstetrics & Gynecology
409 12th Street SW
Washington, DC 20024

Dear Dr. Schorge,

Thank you for the opportunity to revise our manuscript, "Trends in emergency department utilization among women with fibroids in the United States 2006-2017," which we believe will be of interest to the readership of *Obstetrics & Gynecology.* We demonstrated that the economic burden of fibroid-related ED care is substantial and progressively increasing. Further, we have identified a cohort of women potentially utilizing the ED for non-urgent fibroid-related care who can be targeted for outpatient intervention. We have followed the specific guidelines for reporting observational studies using ICD-10 data (i.e. RECORD) throughout our manuscript.

We have addressed each of the comments provided by the reviewers and revised our manuscript accordingly.

We look forward to your response.

Sincerely,

Erica E. Marsh MD MSCI

[redacted]

REVIEWER COMMENTS:

Reviewer #1:

Line 117: One line providing a definition of "no charge" payment would be helpful.

Thank you for the suggestion. “No charge” has now been defined in Lines 129-131. We have also combined the insurance categories of “no charge” and “self-pay” into one “uninsured” category based on the AHRQ Statistical Brief cited below. We have included an explanation of this in Line 129.

Owens PL (AHRQ) and Mutter R (AHRQ). *Payers of Emergency Department Care, 2006*. HCUP Statistical Brief #77. July 2009. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb77.pdf

Line 119: The rationale into your grouping of hospital types is not inherently obvious and would benefit from a brief explanation. Also, the grouping of "metropolitan teaching" and "metropolitan nonteaching + nonmetropolitan" is not reflected in Tables 1-3. A clearer explanation in the text and tables of how many groups there are and who resides in each group would be a help.

We have clarified our rationale for grouping by hospital type in Lines 132-134. An explanation of this grouping has also been added to the footnotes of Table 1.

Line 293: I agree that the high percentage of women with private insurance frequenting the ED was unexpected. As such, I agree with your comment in line 307. Although not possible from your database, it would have been informative to understand what factors perceived by the patient prompted the ED visit rather than an office visit. On a similar note, understanding these same factors for all payer groups might better lead to an opportunity for better healthcare utilization.

Thank you for the comment. We agree that future research should look into patients’ motivations for visiting the ED and we have added a sentence in Lines 251-252 to reflect this.

Line 302: I think your explanation for the admission disparity is limited. Disease severity in those presenting to the ED is another possible explanation. Differing disease severity among your groups may stem from differences in health literacy, access to primary-care clinics, and care continuity. Patient choice regarding admission is another potential explanation.

Thank you for the suggestion. We agree and have expanded the discussion to include these alternate explanations to the discussion in Lines 330-331.

Line 449: Pelvic imaging is costly. For Table 3, a third column in which you present the total dollar cost attributed to each diagnostic intervention might be informative. For women with nonsevere bleeding from leiomyomas, outpatient rather than ED-based imaging often is suitable. This can be a substantial cost saver and might be a discussion point to add. Also, in the legend, it might be helpful to define "infusions." This helps clarify its difference from "intravenous hydration."

Thank you for the suggestion. We agree that it would be very informative to compare the total cost of each intervention listed in Table 3. Unfortunately, the NEDS database does not provide cost data at the CPT level so we are unable to provide this information. We have added a discussion of the potential cost savings if patients receive outpatient imaging Lines 257-259. We have also added a footnote to the previous Table 3 (now Table 2) which defines “Injections & Infusions” per CMS.

Reviewer #2:

1. Abstract - Lines 59-60: consider stating this as an average annual cost as annual costs are utilized elsewhere in the manuscript (line 85).

Thank you for the suggestion. We decided to remove this text from the abstract in order to comply with the word limits.

2. Introduction - Appropriately representative of the manuscript.

Thank you for your comment.

3. Methods - Lines 115-116: is utilizing the median household income for the patient's zip code an accurate measure of income?

Thank you for the comment. We agree that this variable is not ideal, however, income quartile is the only income information provided in the HCUP databases (i.e. NEDS, NIS, etc.) and has been utilized in numerous publications. We have clarified this in the Methods (Lines 128-129) and have added this as a potential limitation of our study in Lines 339-341.

Lines 119-120: were metropolitan non-teaching and non-metropolitan hospitals grouped, and if so, why? I cannot find/see the appendices.

We have clarified our rationale for grouping by hospital type in Lines 132-134. An explanation of this grouping has also been added to the footnotes of Table 1.

4. Results - Lines 161-162: It would be interesting to see what proportion of all ED visits was fibroid-related and if this changed during the study period. Is it possible that the proportion is unchanged and that overall ED utilization increased?

The proportion of ED visits that were fibroid-related also increased throughout the study period. We have added this important information to our Results section in Lines 171-175 and have also added Table 3 which depicts this information.

5. Discussion - Lines 260-262: Alternatively, fibroid burden may be less in the younger patients.

Thank you for the suggestion. We have added this as an alternate explanation of our findings in Lines 291-292.

Reviewer #3:

1. Trend in fibroid cases: The primary findings emphasize that the overall number of fibroid cases in the ED has increased significantly over the 11 year time timeframe. However, in considering this prevalence, the authors do not account for changes in the overall population which increased by about 25 million during this time frame, or the total number of ED visits among women during that time frame which may have also significantly increased. Perhaps the increase in fibroid cases is primarily related to and increase in overall population and/or an increase in overall use of the ER by all women (not just for fibroids), rather than an increase in use of emergency services by women with fibroids among all women with fibroids. To try to address this issue, the authors should present fibroid cases as a percentage of all ED visits among women of the selected age. If the % of fibroid visits among all visits has also doubled, that might indicated a true increase in the use of ED services among women with fibroids (although of course it is possible that % may go up if the number of visits for other non-fibroid care is decreasing). The authors present admission rates as a % of total fibroid

cases and should do the same for fibroid cases in the ED among all ED visits in women. The use of absolute number of cases vs. proportion of cases also leads to problematic interpretation of data described in the discussion section. The opening paragraph of the discussion puts forth a hypothesis that women are increasing using emergency services for non-urgent fibroid-related issues. However, if the % of fibroid cases among all ED cases has not increased over time, I do not think the authors would conclude that more women are using the ED for fibroid care.

The proportion of ED visits that were fibroid-related also increased throughout the study period. We have added this important information to our Results section in Lines 171-175 and have also added Table 3 which depicts this information.

2. Race/ethnicity missing in analyses: The authors highlight the higher prevalence of fibroids among Black women and use this information to explain higher rates of hospital admission in the South. They also discussion that systemic racism may contribute to regional differences in hospitalization rates. However, the authors do not present any data on race/ethnicity in the study population. This is a major omission in the manuscript. The authors do not explain WHY they left out race/ethnicity in the analyses so the reader will certainly be confused by this lack of data. However, I am aware that NEDS does not have race/ethnicity as an available data field. The authors need to acknowledge this limitation in the available data and explain how lack of race/ethnicity impacts interpretation of their results.

We agree that data on race/ethnicity would be an important addition to our manuscript. Unfortunately, the NEDS database does not provide this information. We have added this as a limitation of our study in Lines 339-341.

3. Interpretation of data: There are several points in the discussion that need further clarification or are not aligned with data presented in the text/tables as follows:

****page 13, line 241 states that since HTN was the most common comorbidity among fibroid cases, that this analysis shows an opportunity to decrease healthcare utilization for HTN through improved preventative care for fibroids. Perhaps I am misreading this, but this does not seem to flow together as a cogent argument. Women with fibroid diagnosis are coming to ED for fibroid care, not care for HTN. This needs major clarification and/or omissions.**

Thank you for your comment. We have omitted this from the discussion.

****page 14, line 261 discusses possible reason for why younger women are less likely to be admitted because of "different perceptions of what constitutes a medical emergency leading to higher care-seeking behavior". It is unclear what the authors are describing or implying here. What perception are they referring to and is it among young or older women and how would that impact decision to admit to hospitals?**

Thank you for your comment. We have expanded this discussion on Lines 287-290 to help clarify our message.

In addition, the authors hypothesize that older women may be more likely to have admission because of more comorbidities. But, the authors have data on comorbidities so they do not need to hypothesize on this point; they can do the analyses to see if older women had more comorbidities in the data set compared with younger women with fibroids.

Comorbidities <u>not</u> related to the presenting diagnosis may not be completely documented in NEDS per conversations with HCUP and our emergency physician colleague co-author. Therefore we didn't pursue this analysis due to concerns of reporting incomplete data. We removed the sentence referring to unrelated comorbidities from the manuscript.

****page 15, beginning line 289. This discussion on impact of SES needs more explanation and clarification. The authors point out that low income women were the highest proportion in the ED, but that there is an unexpected result with private insurance being the most common payer in the ED. These seem to be findings that are not internally consistent. IF the lowest quartile of income is most common, why is private insurance also most common. Please provide an explanation of how to reconcile these two findings.**

We have added a potential explanation to reconcile these findings in Lines 318-322.

In addition, "no charge" patients were much more likely to be admitted that self-pay, but the authors did not provide an explanation for this finding.

We have combined the insurance categories of "no charge" and "self-pay" into one "uninsured" category based on the AHRQ Statistical Brief cited below. We have included an explanation of this in Line 129.

Owens PL (AHRQ) and Mutter R (AHRQ). *Payers of Emergency Department Care, 2006*. HCUP Statistical Brief #77. July 2009. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb77.pdf

*****Interpretation of decline in admissions: the abstract conclusion say that the decline in admissions suggest that many of these visits could be addressed in non acute care. Perhaps this is true, but another explanation could just be that there have been an increase in effective therapies that can be given in the ED over the last 10 years that decrease chance of admission. As one example, many EDs are now using tranexamic acid to manage heavy bleeding, a medication that was not available in 2006. Perhaps the rate of admissions is going down because of increased use of tranexamic acid?**

Thank you for the suggestion. This is an excellent alternative explanation and we have added to our discussion in Lines 236-237.

1. Why was 11 years chosen up to 2016? Isn't 2017 of NEDS available?

At the time of our initial analysis, we did not have access to the 2017 database. We now have access to the 2017 database and have updated our analyses and title to reflect this.

2. Why did the authors stop at age 55? I presume they are aiming to exclude postmenopausal women with the 55 age cut off, but then why exclude postmenopausal women if they are going to the ED and have fibroid as primary diagnosis?

Thank you for your question. We chose to exclude women over the age of 55 years in order to exclude most postmenopausal women. Our concern was that, if postmenopausal women presented to the ED with bleeding and were incidentally noted to have fibroids, there is more concern for an incorrect primary diagnosis of fibroids.

3. page 6, line 81. Sentence about one in five visit ED needs a reference

We have added the appropriate reference to this sentence Lines 94-95.

4. Table 1 can be omitted. There are no key findings of trends over time and no analysis is discussed in the text.

We have omitted Table 1.

5. Table 2 and 4 can easily be combined into one table.

We have combined Tables 2 and 4 into a new Table 1.

STATISTICS EDITOR COMMENTS:

Tables 1, 2: Need to enumerate the missing data.

What was formerly Table 1 is no longer included in the manuscript based on Reviewer #3s suggestion. We have enumerated the missing data as a footnote in the new Table 1 (previously Table 2).

Table 4: Need to include a separate column of unadjusted ORs for contrast. Need to label multivariable as aORs, Need to include a footnote listing all variables retained in the final model.

We have added a column to the prior Table 4 (now Table 1) for unadjusted ORs. We have also labeled another column as adjusted ORs. We have also added a footnote listing all variable retained in the final model.

Figs 1 and 2: Need to have legends to figures.

We have included legends with our figures.

Fig 1: To a small extent, the increase in annual ED visits is attributable to an increase in population over the 11 year period. Should account for that portion of the increase. Also, should include comment in legend as to the statistical changes in each group.

We have added longitudinal data to Table 1 showing that the percentage of ED patients with fibroids as a primary diagnosis has increased over time.

Fig 2: Costs are notorious for not conforming to a normal distribution, but rather being skewed to the right. Therefore average (ie, mean values) are not a good representation of costs. Should instead format as median(IQR) and include in legend a comment as to the statistical tests used to evaluate the increases over time.

We have changed our analyses of ED charges and have now reported the median and IQR. Please note the IQR bars are overlapping and may be unclear to the reader. Please let us know if you would like to keep these bars. The figure legend reflects this.

EDITORIAL OFFICE COMMENTS:

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

A. OPT-IN: Yes, please publish my point-by-point response letter.
B. OPT-OUT: No, please do not publish my point-by-point response letter.

We would like to opt in, please publish our point-by-point response letter.

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.

All disclosures are correctly reported on the title page.

3. 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.

Our study is based on data from AHRQ and data use agreements have been signed and adhered to.

4. If applicable: 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.

The Healthcare Cost and Utilization Project (HCUP) staff confirms that data values are valid, internally consistent, and consistent with established norms, when feasible.

Citation:
HCUP Quality Control Procedures. Healthcare Cost and Utilization Project (HCUP). April 2020. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/db/quality.jsp

5. 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 observational studies using ICD-10 data (ie, RECORD). 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.

We have adhered to the RECORD guidelines and uploaded the checklist with our submission. We have also indicated this in our cover letter.

6. 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.

Please see Appendix 1 for a list of the ICD codes included in this study.

b. Use both the diagnosis and procedure codes.

Appendix 2 lists the CPT procedure codes included in this study.

c. Verify the selected codes apply for all years of the study.

We confirm that the selected codes apply for all years of the study.

d. Conduct sensitivity analyses using definitions based on alternative codes.

There are no "alternative codes" for fibroids. A fibroid diagnosis is typically pretty clear and all fibroid-related ICD-9 and ICD-10 codes were included in the analysis. Similar to your recent publication from the National Inpatient Sample database (reference below), we did not conduct sensitivity analyses.

Haight SC, Byatt N, Moore Simas TA, Robbins CL, Ko JY. Recorded Diagnoses of Depression During Delivery Hospitalizations in the United States, 2000-2015. Obstet Gynecol. 2019 Jun;133(6):1216-1223.

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.

We have acknowledged this potential limitation in our Discussion section in Lines 337-339.

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.

We have included the name of the database in our 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.

RECORD item 6.3 does not apply to our manuscript as it does not involve linkage of databases. We have addressed RECORD item 7.1 by listing all codes used in our Appendices.

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.

Thank you for this comment and making us aware of these definitions. We have reviewed them and there are no problematic definitions from the reVITALize initiative.

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.

We confirm that our manuscript adheres to the length restrictions for Original Research reports (4691 words, 19 pages).

9. Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:
*** All financial support of the study must be acknowledged.**

We have added a statement acknowledging our financial support in Line 36.

*** 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.**

We did not utilize any manuscript preparation assistance.

*** 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.**

This item does not apply to our manuscript, as all persons who contributed to the work reported in the manuscript contributed sufficiently to be authors.

*** 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).**

We have noted that a portion of the data included in the paper was presented at an organizational meeting in Lines 33-34.

10. 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. Please provide a word count.

We have confirmed that our Abstract is consistent with what is reported in the manuscript. The total word count of the Abstract is 300 words.

11. 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.

We have spelled out all abbreviations and acronyms at first use and referenced the selected list of abbreviations/acronyms.

12. 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.

We have removed the symbol "/" from the text.

13. 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.

We have removed the word "provider" from the manuscript.

14. 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.

We have reported the results of our logistic regression using odds ratios and appropriate confidence intervals.

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.

This does not apply to our manuscript.

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%").

We have limited all reported p values to three decimal places. We have standardized all reported percentages by using one decimal place. The only exception is in Table 3, which reports very small percentages, requiring more than one decimal place. We are happy to limit these should the editorial office still want us to limit to one decimal place.

15. Your manuscript contains a priority claim. We discourage claims of first reports since they are often difficult to prove. How do you know this is the first report? If this is based on a systematic search of the literature, that search should be described in the text (search engine, search terms, date range of search, and languages encompassed by the search). If it is not based on a systematic search but only on your level of awareness, it is not a claim we permit.

We have removed this priority claim.

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.

We confirm that we have reviewed the journal's Table Checklist and our tables all conform to the 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.

We have added the DOI to each journal article reference and an accessed date to each website reference.

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 reference you are citing is still current and available. If the reference you are citing has been updated (ie, 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 (exceptions could include manuscripts that address items of historical interest). All ACOG documents (eg, Committee Opinions and Practice Bulletins) may be found at the Clinical Guidance page at https://www.acog.org/clinical (click on "Clinical Guidance" at the top).

Our manuscript does not reference any ACOG documents.

18. Figures 1-2: Please upload as figure files on Editorial Manager.

We have uploaded our figures as figure files on Editorial Manager.

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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We have uploaded our figures as figure files on Editorial Manager.

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.

Our figures were not generated from a 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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