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: Feb 06, 2020
To: "Philip Darney"
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-19-2376

RE: Manuscript Number ONG-19-2376

Increasing Maternal Mortality in the USA Compared to Decreases in Ethiopia, Nepal, Brazil and UK: Contrasts in Reproductive Health Policies

Dear Dr. Darney:

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 Feb 27, 2020, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

REVIEWER #1:

The authors submit a current commentary on the rise of maternal mortality in the United States despite a decrease in other nations. I have the following comments regarding the manuscript:

Abstract

1. Line 51. I would be cautious about saying that there is "an accelerating increase" in maternal mortality in the U.S. There are a number of articles demonstrating that all, or at least the vast majority, of the increase is related to different means of ascertainment (O codes, pregnancy checkbox, etc) (Joseph et al Obstet Gynecol 2017; 129:91, Baeva et al Obstet Gynecol 2018; 131(5):762).

Background

1. Line 99. Would be cautious comparing California to the rest of the U.S. While I recognize the excellent efforts of the maternal quality collaborative in California, they were the last state to adopt the pregnancy checkbox, and have not generated maternal mortality statistics through review by a committee (as is strongly advocated by the CDC and other national leaders in this space). Thus, in many ways, their data are not comparable to any other states. Would favor taking this comparison out.

2. Figure 1. Since 2015, the MMR in the U.S. has leveled out. Can the authors extend this graph through 2019?

3. Figure 2. Would advocate for removing Figure 2. See comment #1 for rationale.

4. Line 105. What do the authors mean by "are not greatly different"? Please provide numbers.

5. Line 119. This statement that the checkbox accounts for a small proportion of the increase is incorrect. See references above. I am also unaware of this being thought to be responsible for racial disparities. Please provide references if this is the case.

6. Line 127. "Drug abuse" is not typically used. Perhaps substance use disorder? This sentence also needs a citation.

7. Line 130. Consider opioid overdose rather than opioid abuse.

8. Line 136-8. Do we know the abortion numbers well? I suspect we miss some maternal deaths related to terminations. I am an advocate for this important message, but some references need to be provided. These will be controversial statements.

9. Line 145-151. See my previous comments re: TX and CA. This is tricky territory. The TX increase has been refuted in several subsequent publications. CA data are just not comparable to other states. What else was happening in these states over this time period?

10. Figure 4. Multiple typos that need to be fixed in this figure. Also, please provide the total number of deaths for each pie chart.

11. The point that the authors are trying to make with the Nepal graph needs to be clarified. Right now it seems that the figure conveys less women got pregnant so less women died. Was this because of contraceptive access?

12. Line 227. This sentence seems almost against the point the authors are trying to make. Citing and supporting improvement in "clandestine abortion" as a way to reduce the MMR is not really what we are going for here.

13. Line 298. The authors refer back to the FIGO panel here. But there is a paucity of reference to the opinion of the panelists in the rest of the piece. If the commentary is supposed to be a summary of the opinion of the panelists, then this needs to be more clear throughout. How were these countries chosen for the panel? Who was the representative? What were the objectives of the panel?

REVIEWER #2:

Overview:
This commentary arises out of the summary of a meeting a FIGO panel, commenting on implications of healthcare policy on maternal mortality. This is an extremely important and timely topic, and I am of the opinion that not only would this benefit an OBGYN audience, but also legislators and the general public.

Background:
1. Line 75: please write out MMR (assuming maternal mortality rate) in first use
2. Line 79: many may not be familiar with MDG V goals - please write out (assuming this refers to UN Millennium Development Goals)
3. Lines 78-82: This is quite a long sentence. Would consider breaking up into 2 to make easier to read

Characteristics of maternal mortality in the USA:
1. 106: What is the reference for this?
2. 137: "worst women's health services" - how is this defined? Assessed? Demonstrated? - assuming least coverage of reproductive services including contraception and termination accessibility

Maternal Mortality in Ethiopia:
1. Fig 4: These 3D pie charts may look visually interesting but could certainly save substantial space (and make potentially easier to see) with side-by-side flat pie chart comparison.

Maternal Mortality in Nepal:
No comment

Maternal Mortality in Brazil:
1. Table 1: Given that this commentary focuses on maternal mortality, including child mortality numbers is perhaps not relevant. If authors choose to include, would advocate for including only the more encompassing categories and omitting rows with childhood deaths due to intestinal, respiratory etiologies. Could consider including only maternal mortality and post-neonatal mortality int his 2nd table. Also, why are there 2 different rows for rate of child mortality? The numbers in these 2 rows are also different.

Maternal Mortality in UK:
1. 276: I believe this line is likely in error?

An American Public Health Crisis:
2. 313: Would consider ending with a stronger call to action.

REVIEWER #3:

This is an excellent manuscript with comparisons among the countries drawn well. It is not comprehensive but makes good points about the state of maternal mortality in the US.

Background:

The seven interventions are not all clearly described. A full list of all seven would be helpful. Or, if they are all included in the list, numbering them so the reader can tell that all seven are included. I am left wondering what the other important interventions are.

USA:

1. The information about Georgia and Massachusetts is good, but sticking to the California/Texas story would improve the point - does California spend way more than Texas? Switching to Georgia/Massachusetts seems like you are cherry-picking odd cases.

2. Page 8, line 139 - need to mention what changed between 1995 and 2009 - many states with more restrictive abortion laws. This is not clear in the text

Ethiopia:
3. For the figures, having more parallel time periods (like 1990-1999 vs 2006-2015, or 1999 verus 2015) would be more solid evidence of the change. Displaying the total number of maternal deaths on the side of the figures would be nice.

Nepal:

4. Page 12, line 188 - what year was this law passed?

Brazil

5. Page 13, line 220 - I would remove this statement about the US from this section

6. Page 13, line 227 - a reference for the improvement in clandestine abortion services and expansion of contraception would be helpful

UK

7. Page 15, line 271 - I would remove this statement about the US from this section

8. Page 17, line 313 - some conclusion would be useful - like good care is not enough and policy changes are critical

General:

9. Figures are not very good quality and resolution. Please fix the figures and make them more uniform throughout the document

REVIEWER #4:

This Commentary manuscript reports the findings of a five-country panel convened at 2018 FIGO to examine practices and policies in those countries (Ethiopia, Nepal, Brazil, UK and USA) could inform successful reductions in the US maternal mortality rate. The analytic approach was largely ecologic as the panelists explored population-based issues in healthcare that appeared correlated with reductions in MMR. They concluded that policies that expanded access to reproductive services including pregnancy care, contraception and safe abortion were associated with reductions in MMR and progress toward MDG goals and contrasted those changes to changes in the opposite direction for the United States.

Global Comment:

This is an important topic for the United States as policies directed at reproductive care become more restrictive and the attention given to maternal mortality has finally reached its appropriate and deserved level. However, a critical issue with this paper is that the focus is on the "rising" level of maternal mortality. The MMR has not been reported in the United States since 2007 as changes in the US Standard death certificate and their incremental implementation across reporting areas have resulted in serious questions about our ability to accurately identify these events. In fact, there is a growing literature that suggests that these changes, particularly the introduction of the pregnancy checkbox, have resulted in overestimation of the MMR and thus, an increasing trend line. The authors briefly acknowledge this problem and also acknowledge that a statistical discussion is beyond the scope of the paper. This is understandable but going forward to display trends based on vital statistics weakens their argument in that one can criticize that if the increase is not real, then what is the problem? There is now recent evidence and analyses that make a convincing case that the MMR has not increase in the United States since the turn of the Century(see: https://www.cdc.gov/nchs/maternal-mortality/index.htm). There continues to be doubt regarding the actual rate, but there is no doubt that it is a) unacceptably high and b) it is not falling. This reviewer suggests that the authors re-focus on the high US MMR and the fact that it is not falling rather than an increase which is likely more measurement artifact than a true increase in risk.

Specific comments:

1. The convening of a panel at FIGO is brought up in the abstract but there is little to no discussion of this in the manuscript narrative. Providing a few lines would be valuable for context.

2. California has indeed been a leader on both the policy and QI fronts. However, the peculiarity of their death certificate calls into question at least some of the decrease. CA is the only state with a checkbox that specifies only pregnant within one year. All such deaths where the only relationship to pregnancy is designated by the checkbox are categorized as "late maternal deaths" and not included in MMR calculations. This likely results in underestimation of the CA MMR (please see page 19 of Rossen LM, Womack LS, Hoyert DL, Anderson RN, Uddin SFG. The impact of the pregnancy checkbox and misclassification on maternal mortality trends in the United States, 1999-2017. National Center for Health Statistics. Vital Health Stat 3(44). 2020). When juxtaposed against the likely overestimation for the United States (Figure 2), the gap is exaggerated.

3. Care should be taken when comparing state MMRs. As the authors rightly acknowledge racial disparities in MMR are huge and hence comparisons that do not account for demographic differences are specious. Please see (Kramer MR, et al. Changing the conversation: Applying a health equity framework to maternal mortality reviews. Am J Obstet Gynecol. 2019 Dec;221(6):609.e1-609.e9).

4. The authors refer to opioids as a cause of maternal death. To be sure, women die from overdoses during and shortly after pregnancy. These are difficult to account for in vital statistics and do not meet definitions for maternal deaths by WHO criteria. Hence, while critically important, these are not accounted for in the US MMR.

5. On page 8 where unintended pregnancy is addressed, the sentence that states 900 women die and half of these are not intended needs to be clarified. There is little to no information about pregnancy intention for women die. It is reasonable to apply the global US unintended pregnancy to these women, but the sentence as written relates to women who die.

STATISTICAL EDITOR'S COMMENTS:

1. General: The commentary omits any discussion of the accuracy or precision of estimates re: maternal mortality rates and whether those metrics have become more or less accurate over time. Even in less developed countries, MM is infrequent, but a small inaccuracy would have different effects given larger or smaller counts of MM. Accuracy and accuracy from year to year requires a consistent infrastructure to collect the data. If that differs by Country or by State, are those trends accurate? Is it possible to compare different regions without acknowledging that source of potential error?

2. Fig 1: Are the rates in 2000 vs 2015 comparable in all the countries cited? Esp in USA, has the ascertainment changed over time, therefore making serial trends questionable?

3. Fig 2: Are all States comparable in accuracy over time? Can California or other larger States with more medical infrastructure be compared to all other States, which may not have the same structures in place to record MM or comparable patient risk profiles?

4. Fig 3: Are race/ethnicity evenly distributed among the States? If the ascertainment of MM or the risk profiles differ by State, are these crude rates comparable over time? Again, related to ascertainment/reporting, has that been stable from 2005-2014?

Associate Editor's Comments:

Thank you for submitting your manuscript to Obstetrics & Gynecology. We would be happy to consider a revised version but only if in your revision you are particularly responsive to the concerns of Reviewers #1 and #4, specifically that the MMRs of California and Texas and comparisons thereof are likely not valid and any inferences you have drawn from those rates and comparisons are therefore questionable. Please of course be responsive to all of the points raised by all reviewers and understand that to do so in a satisfactory way is going to require extensive revision and likely several revision iterations.

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. 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.

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. Tables, figures, and supplemental digital content should be original. The use of borrowed material (eg, lengthy direct quotations, tables, figures, or videos) is discouraged, but should it be considered essential, written permission of the copyright holder must be obtained. Permission is also required for material that has been adapted or modified from another source.

Both print and electronic (online) rights must be obtained from the holder of the copyright (often the publisher, not the author), and credit to the original source must be included in your manuscript. Many publishers now have online systems for submitting permissions request; please consult the publisher directly for more information.

When you submit your revised manuscript, please upload 1) the permissions license and 2) a copy of the original source from which the material was reprinted, adapted, or modified (eg, scan of book page(s), PDF of journal article, etc.).

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.

5. Because of space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Current Commentary articles should not exceed 12 typed, double-spaced pages (3,000 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.

6. Titles in Obstetrics & Gynecology are limited to 100 characters (including spaces). Do not structure the title as a declarative statement or a question. Introductory phrases such as "A study of..." or "Comprehensive investigations into..." or "A discussion of..." should be avoided in titles. Abbreviations, jargon, trade names, formulas, and obsolete terminology also should not be used in the title. Titles should include "A Randomized Controlled Trial," "A Meta-Analysis," or "A Systematic Review," as appropriate, in a subtitle. Otherwise, do not specify the type of manuscript in the title.

7. 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).

8. 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 limits for different article types are as follows: Current Commentary articles, 250 words. Please provide a word count.

9. 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.

10. 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.

11. 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%").

12. 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.

13. 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 via the Clinical Guidance & Publications page at https://www.acog.org/Clinical-Guidance-and-Publications/Search-Clinical-Guidance.

14. The Journal's Production Editor had the following queries about the figures in your manuscript:

"Figures 1–6: Please upload letters of permission for these figures (should include print and electronic permission). Each figure should be uploaded as a high-res figure file on Editorial Manager (eps, tiff, jpeg, png). Please include a legend for each figure at the end of your manuscript. "

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.

16. Authors whose manuscripts have been accepted for publication have the option to pay an article processing charge and publish open access. With this choice, articles are made freely available online immediately upon publication. An information sheet is available at http://links.lww.com/LWW-ES/A48. The cost for publishing an article as open access can be found at http://edmgr.ovid.com/acd/accounts/ifauth.htm.

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.

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 Feb 27, 2020, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

The Editors of Obstetrics & Gynecology

2018 IMPACT FACTOR: 4.965
2018 IMPACT FACTOR RANKING: 7th out of 83 ob/gyn journals

____
In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Use the following URL: https://www.editorialmanager.com/ong/login.asp?a=r). Please contact the publication office if you have any questions.

23 February, 2020

RE: Manuscript Number ONG-19-2376

Increasing Maternal Mortality in the USA Compared to Decreases in Ethiopia, Nepal, Brazil and UK: Contrasts in Reproductive Health Policies (old title)

New title : Maternal Mortality in the USA Compared to Ethiopia, Nepal, Brazil and UK: Contrasts in Reproductive Health Policies

Dear Editors:

Thank you for your thoughtful and helpful review of our Commentary on the comparative maternal mortality panel discussion at FIGO Rio, 2018.

I have responded to and incorporated all the reviewers' suggestions and have included all of the additional references mentioned by the reviewers. These responses are written in ALL CAPS below following each of the 5 reviewers numbered comments and questions and may be printed by the journal. Reaching the 3000 word commentary limit required deleting all figures and a table. Their removal was suggested by some reviewers because they were redundant with the text. On the rare occasions when the five reviewers' opinions differed, I hope I achieved compromise. The title is also changed.

Reviewer comments followed by responses IN CAPS:

REVIEWER #1:

The authors submit a current commentary on the rise of maternal mortality in the United States despite a decrease in other nations. I have the following comments regarding the manuscript:

Abstract

1. Line 51. I would be cautious about saying that there is "an accelerating increase" in maternal mortality in the U.S. There are a number of articles demonstrating that all, or at least the vast majority, of the increase is related to different means of ascertainment (O codes, pregnancy checkbox, etc) (Joseph et al Obstet Gynecol 2017; 129:91, Baeva et al Obstet Gynecol 2018; 131(5):762). INCREASE CHANGED THROUGHOUT TO NO DECREASE. BOTH REFS NOW CITED. THANK YOU FOR NOTING THEIR OMISSION.

Background

1. Line 99. Would be cautious comparing California to the rest of the U.S. While I recognize the excellent efforts of the maternal quality collaborative in California, they were the last state to adopt the pregnancy checkbox, and have not generated maternal mortality statistics through review by a

committee (as is strongly advocated by the CDC and other national leaders in this space). Thus, in many ways, their data are not comparable to any other states. Would favor taking this comparison out. AGREE AND REMOVED FIGURE COMPARING CALIF TO US MMR AND ACCOMPANYING COMMENT.

2. Figure 1. Since 2015, the MMR in the U.S. has leveled out. Can the authors extend this graph through 2019?
FIGURE MADE COMMENTARY TOO LONG AND DIDN'T ADD ANYTHING NOT ALREADY IN TEXT. DELETED TO GET TO 3000 WORDS.

3. Figure 2. Would advocate for removing Figure 2. See comment #1 for rationale. AGREE AS FOR 2 ABOVE.

4. Line 105. What do the authors mean by "are not greatly different"? Please provide numbers. REMOVED THE REF TO SPECIFIC STATES TO DECREASE WORDS TO 3000. PRECEEDING SENTENCE CONVEYS POINT.

5. Line 119. This statement that the checkbox accounts for a small proportion of the increase is incorrect. See references above. I am also unaware of this being thought to be responsible for racial disparities. Please provide references if this is the case. STATEMENT CORRECTED. IT WAS MEANT TO APPLY ONLY TO REGIONAL VARIATION AND IS CLARIFIED.

6. Line 127. "Drug abuse" is not typically used. Perhaps substance use disorder? This sentence also needs a citation.

CHANGED TO SUBSTANCE USE DISORDER . REFERENCE IS TERPLAN.

7. Line 130. Consider opioid overdose rather than opioid abuse. CHANGED TO OVERDOSE.

8. Line 136-8. Do we know the abortion numbers well? I suspect we miss some maternal deaths related to terminations. I am an advocate for this important message, but some references need to be provided. These will be controversial statements. CONCUR THAT WE DO NOT KNOW HOW MANY DEATHS THERE WERE FROM ILLEGAL ABORTION. BEST ESTIMATE IS FROM TIETZE (NOW CITED) OF AT LEAST 200. CDC'S ABORTION SURVEILLANCE UNIT UNLIKELY TO MISS MANY LEGAL ABORTION DEATHS WHICH HAVE RANGED FROM ABOUT 4-10/YR FOR MANY YEARS.

9. Line 145-151. See my previous comments re: TX and CA. This is tricky territory. The TX increase has been refuted in several subsequent publications. CA data are just not comparable to other states. What else was happening in these states over this time period? (LITTLE ARGUMENT THAT CALIF MMR HAS DECREASED AND TEXAS HAS NOT SO REWORDED ACCORDINGLY)

10. Figure 4. Multiple typos that need to be fixed in this figure. Also, please provide the total number of deaths for each pie chart. FIG 4 ISN'T NECESSARY TO MAKE OUR ETHIOPIAN COLLEAGUE'S (FEIRUZ) POINT. DELETED TO KEEP TO 3000 WORD LIMIT.

11. The point that the authors are trying to make with the Nepal graph needs to be clarified. Right now it seems that the figure conveys less women got pregnant so less women died. Was this because of contraceptive access? YES, FEWER PREGNANCIES (CONTRACEPTION) AND FEWER DELIVERIES (ABORTION) DECREASED EXPOSURE TO RISK OF MATERNAL DEATH. THE FIG 5 DOESN'T ADD TO TEXT AND IS DELETED TO GET TO 3000 WORD LIMIT.

12. Line 227. This sentence seems almost against the point the authors are trying to make. Citing and supporting improvement in "clandestine abortion" as a way to reduce the MMR is not really what we are going for here. GOOD POINT. DELETED.

13. Line 298. The authors refer back to the FIGO panel here. But there is a paucity of reference to the opinion of the panelists in the rest of the piece. If the commentary is supposed to be a summary of the opinion of the panelists, then this needs to be more clear throughout. How were these countries chosen for the panel? Who was the representative? What were the objectives of the panel? (CLARIFIED NATURE OF THE PANEL. THE REPRESENTATIVES OF THE FIVE COUNTRIES ARE THE AUTHORS OF THIS COMMENTARY. EACH PROVIDED FOR THIS COMMENTARY A SUMMARY OF HIS OR HER PRESENTATION AT THE PANEL DISCUSSION. THEY ARE EITHER NATIONAL OB GYN SOCIETY PRESIDENTS OR REPS OF THEIR NATIONAL SOCIETIES' MATERNAL MORTALITY GROUPS WHO

ATTENDED FIGO RIO AND WHOSE COUNTRIES HAD RECORDED SUBSTANTIAL REDUCTIONS IN MMR-THE USA IS THE EXCEPTION AND THUS THE FOCUS OF THE PANEL'S DISCUSSION)

REVIEWER #2:

Overview:
This commentary arises out of the summary of a meeting a FIGO panel, commenting on implications of healthcare policy on maternal mortality. This is an extremely important and timely topic, and I am of the opinion that not only would this benefit an OBGYN audience, but also legislators and the general public.

Background:
1. Line 75: please write out MMR (assuming maternal mortality rate) in first use. DONE
2. Line 79: many may not be familiar with MDG V goals - please write out (assuming this refers to UN Millennium Development Goals). DONE
3. Lines 78-82: This is quite a long sentence. Would consider breaking up into 2 to make easier to read. DONE

Characteristics of maternal mortality in the USA:
1. 106: What is the reference for this? THIS LINE IS TITLE OF FIG 1, NOW DELETED BECAUSE REDUNDANT WITH TEXT AND TO REACH 3000 WORD LIMIIT

2. 137: "worst women's health services" - how is this defined? Assessed? Demonstrated? - assuming least coverage of reproductive services including contraception and termination accessibility REWORDED FOR SPECIFICITY.

Maternal Mortality in Ethiopia:

1. Fig 4: These 3D pie charts may look visually interesting but could certainly save substantial space (and make potentially easier to see) with side-by-side flat pie chart comparison.

Maternal Mortality in Nepal:

No comment

Maternal Mortality in Brazil:

1. Table 1: Given that this commentary focuses on maternal mortality, including child mortality numbers is perhaps not relevant. If authors choose to include, would advocate for including only the more encompassing categories and omitting rows with childhood deaths due to intestinal, respiratory etiologies. Could consider including only maternal mortality and post-neonatal mortality in his 2nd table. Also, why are there 2 different rows for rate of child mortality? The numbers in these 2 rows are also different. REMOVED THIS TABLE AS REDUNDANT WITH TEXT AND TO ACHIEVE 3000 WORD LIMIT.

Maternal Mortality in UK:

1. 276: I believe this line is likely in error? YES, DELETED

An American Public Health Crisis:

2. 313: Would consider ending with a stronger call to action. MADE IT STONGER AND ADDED TWO CITATIONS

REVIEWER #3:

This is an excellent manuscript with comparisons among the countries drawn well. It is not comprehensive but makes good points about the state of maternal mortality in the US.

Background:

The seven interventions are not all clearly described. A full list of all seven would be helpful. Or, if they are all included in the list, numbering them so the reader can tell that all seven are included. I am left wondering what the other important interventions are. TURNED TEXT INTO COMPLETE LIST WITH % DEATHS PREVENTABLE. THANKS FOR SUGGESTION.

USA:

1. The information about Georgia and Massachusetts is good, but sticking to the California/Texas story would improve the point - does California spend way more than Texas? Switching to Georgia/Massachusetts seems like you are cherry-picking odd cases. REMOVED GA-MA COMPARISON. WERE CHOSEN BECAUSE THEY WERE HIGHEST AND LOWEST FOR LATEST YEAR BUT SMALL N MAKES RATES VARY A LOT YEAR TO YEAR. TEXT

NOW NOTES CA DID NOT SPEND MUCH MORE THAN TX DURING PERIOD OF INTEREST (SEE KAISER'S STATE DATA)

2. Page 8, line 139 - need to mention what changed between 1995 and 2009 - many states with more restrictive abortion laws. This is not clear in the text. CLARIFIED IN SHORTENED TEXT

Ethiopia:

3. For the figures, having more parallel time periods (like 1990-1999 vs 2006-2015, or 1999 verus 2015) would be more solid evidence of the change. Displaying the total number of maternal deaths on the side of the figures would be nice. DELETED FIGURES TO SAVE WORDS AND CLARIFIED IN TEXT

Nepal:

4. Page 12, line 188 - what year was this law passed? 2002 INSERTED. THANKS FOR NOTICING. DELETED DETAILS OF LEGAL IMPLEMENTATION TO GET DOWN TO 3000 WORDS.

Brazil

5. Page 13, line 220 - I would remove this statement about the US from this section. DONE. HELPED SAVE WORDS.

6. Page 13, line 227 - a reference for the improvement in clandestine abortion services and expansion of contraception would be helpful. DELETED THIS STATEMENT PER OTHER REVIEWER'S SIMILAR COMMENT.

UK

7. Page 15, line 271 - I would remove this statement about the US from this section. DELETED AND SAVED WORDS.

8. Page 17, line 313 - some conclusion would be useful - like good care is not enough and policy changes are critical. MADE THAT CONCLUDING STATEMENT. THANKS FOR ENCOURAGEMENT.

General:

9. Figures are not very good quality and resolution. Please fix the figures and make them more uniform throughout the document. DELETED ALL FIGS BECAUSE REDUNDANT WITH TEXT AND MADE COMMENTARY TOO LONG. DIFFICULT TO GET CLEARER FIGS FROM CO AUTHORS.

REVIEWER #4:

This Commentary manuscript reports the findings of a five-country panel convened at 2018 FIGO to examine practices and policies in those countries (Ethiopia, Nepal, Brazil, UK and USA) could inform successful reductions in the US maternal mortality rate. The analytic approach was largely ecologic as the panelists explored population-based issues in healthcare that appeared correlated with reductions in MMR. They concluded

that policies that expanded access to reproductive services including pregnancy care, contraception and safe abortion were associated with reductions in MMR and progress toward MDG goals and contrasted those changes to changes in the opposite direction for the United States.

Global Comment:

This is an important topic for the United States as policies directed at reproductive care become more restrictive and the attention given to maternal mortality has finally reached its appropriate and deserved level. However, a critical issue with this paper is that the focus is on the "rising" level of maternal mortality. The MMR has not been reported in the United States since 2007 as changes in the US Standard death certificate and their incremental implementation across reporting areas have resulted in serious questions about our ability to accurately identify these events. In fact, there is a growing literature that suggests that these changes, particularly the introduction of the pregnancy checkbox, have resulted in overestimation of the MMR and thus, an increasing trend line. The authors briefly acknowledge this problem and also acknowledge that a statistical discussion is beyond the scope of the paper. This is understandable but going forward to display trends based on vital statistics weakens their argument in that one can criticize that if the increase is not real, then what is the problem? There is now recent evidence and analyses that make a convincing case that the MMR has not increaseD in the United States since the turn of the Century.

(see https://urldefense.proofpoint.com/v2/url?u=https-3A__www.cdc.gov_nchs_maternal-2Dmortality_index.htm&d=DwIGaQ&c=iORugZls2LlYyCAZRB3XLg&r=WtULJcqblkU9cghPkc8J4V-g4IvqQOuLVgKXxs97pmo&m=cIDRL5sVr08_AfHGXMfu-NsYcBGkcJyHsT5jm-DY4LQ&s=bUBXdb6emMDDYkWfe9YW0AqUoe8VL_XPvhr4t22fN88&e=). There continues to be doubt regarding the actual rate, but there is no doubt that it is a) unacceptably high and b) it is not falling. This reviewer suggests that the authors re-focus on the high US MMR and the fact that it is not falling rather than an increase which is likely more measurement artifact than a true increase in risk. MADE CHANGES THROUGHOUT AWAY FROM INCREASE TO LACK OF IMPROVEMENT AND STAGNATION.

Specific comments:

1. The convening of a panel at FIGO is brought up in the abstract but there is little to no discussion of this in the manuscript narrative. Providing a few lines would be valuable for context. ADDED TO BACKGROUND CONSISTENT WITH 3000 WORD LIMITATION

2. California has indeed been a leader on both the policy and QI fronts. However, the peculiarity of their death certificate calls into question at least some of the decrease. CA is the only state with a checkbox that specifies only pregnant within one year. All such deaths where the only relationship to pregnancy

is designated by the checkbox are categorized as "late maternal deaths" and not included in MMR calculations. This likely results in underestimation of the CA MMR (please see page 19 of Rossen LM, Womack LS, Hoyert DL, Anderson RN, Uddin SFG. The impact of the pregnancy checkbox and misclassification on maternal mortality trends in the United States, 1999-2017. National Center for Health Statistics. Vital Health Stat 3(44). 2020). When juxtaposed against the likely overestimation for the United States (Figure 2), the gap is exaggerated. INCLUDED THIS REF AND REPHRASED STATEMENT COMPARING CALIIFORNIA AND TEXAS.

3. Care should be taken when comparing state MMRs. As the authors rightly acknowledge racial disparities in MMR are huge and hence comparisons that do not account for demographic differences are specious. Please see (Kramer MR, et al. Changing the conversation: Applying a health equity framework to maternal mortality reviews. Am J Obstet Gynecol. 2019 Dec;221(6):609.e1-609.e9). CITED THIS REF AND REPHRASED.

4. The authors refer to opioids as a cause of maternal death. To be sure, women die from overdoses during and shortly after pregnancy. These are difficult to account for in vital statistics and do not meet definitions for maternal deaths by WHO criteria. Hence, while critically important, these are not accounted for in the US MMR. CLARIFIED IN TEXT

5. On page 8 where unintended pregnancy is addressed, the sentence that states 900 women die and half of these are not

intended needs to be clarified. There is little to no information about pregnancy intention for women die. It is reasonable to apply the global US unintended pregnancy to these women, but the sentence as written relates to women who die. YOU ARE RIGHT THAT I MERELY APPLIED THE ROUGH UNINTENDED RATE TO THOSE WHO DIE. REWORDED STATEMENT FOR CLARITY. THANKS.

STATISTICAL EDITOR'S COMMENTS:

1. General: The commentary omits any discussion of the accuracy or precision of estimates re: maternal mortality rates and whether those metrics have become more or less accurate over time. Even in less developed countries, MM is infrequent, but a small inaccuracy would have different effects given larger or smaller counts of MM. Accuracy and accuracy from year to year requires a consistent infrastructure to collect the data. If that differs by Country or by State, are those trends accurate? Is it possible to compare different regions without acknowledging that source of potential error? HAVE INCLUDED REFS TO ACKNOWLEDGE ERRORS IN MMR MEASUREMENT, EG RE: TEXAS

2. Fig 1: Are the rates in 2000 vs 2015 comparable in all the countries cited? Esp in USA, has the ascertainment changed over time, therefore making serial trends questionable? YES AND COMMENTARY NOW INCLUDES REFS TO THAT EFFECT.

BUT DIFFS IN RATE OF CHANGE ARE SO GREAT THAT MEASUREMENT CHANGES ARE NOT ADEQUATE EXPLANATION.

3. Fig 2: Are all States comparable in accuracy over time? Can California or other larger States with more medical infrastructure be compared to all other States, which may not have the same structures in place to record MM or comparable patient risk profiles? I AGREE AND DELETED FIGURE WHICH IMPLIED THEY WERE.

4. Fig 3: Are race/ethnicity evenly distributed among the States? If the ascertainment of MM or the risk profiles differ by State, are these crude rates comparable over time? Again, related to ascertainment/reporting, has that been stable from 2005-2014? YOU ARE RIGHT THAT THERE ARE BIG DIFFERENCES IN RACIAL COMPOSITION BY STATE. TX AND CA ARE BOTH LARGE STATES WITH SIMILAR DEMOGRAPHY AND ARE NOW USED FOR COMPARISON WHILE GA AND MASS, WHICH ARE VERY DIFFERENT, WERE REMOVED.

Thanks to reviewers for their careful reading, helpful comments and additional references.

Sincerely,

Corresponding Author