

OBSTETRICS & GYNECOLOGY



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

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

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: 03/06/2023
To: "Anna Kheyfets" [REDACTED]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-23-184

RE: Manuscript Number ONG-23-184

Selecting Measures for a Maternal Equity Safety Bundle to Eliminate Racial Inequities Across Labor & Delivery Units in Massachusetts

Dear Dr. Kheyfets:

Thank you for sending us your work for consideration for publication in the Obstetrics & Gynecology Special Issue on Racism & Reproductive Health. Your manuscript has been reviewed by the Editorial Board and by special expert referees. The Editors would like to invite you to submit a revised version for further consideration.

If you wish to revise your manuscript, please read the following comments submitted by the reviewers and Editors. Each point raised requires a response, by either revising your manuscript or making a clear argument as to why no revision is needed in the cover letter.

To facilitate our review, we prefer that the cover letter you submit with your revised manuscript include each reviewer and Editor comment below, followed by your response. That is, a point-by-point response is required to each of the EDITOR COMMENTS (if applicable), REVIEWER COMMENTS, and STATISTICAL EDITOR COMMENTS (if applicable) below.

The revised manuscript should indicate the position of all changes made. Please use the "track changes" feature in your document (do not use strikethrough or underline formatting).

Your submission will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by 03/27/2023, we will assume you wish to withdraw the manuscript from further consideration.

EDITOR COMMENTS:

1. Thank you for submitting this work to Obstetrics & Gynecology. If you opt to submit a revision for consideration, please expand to an Original Research submission. This will allow additional word count (3,000 words) to better explain the process of stakeholder selection, selection of your measures, and the Delphi method that you employed. It will also allow you to break up your tables.
2. There is not a Bundle related to racism and health equity on the AIM website. There is just a framework. Please remove references to an existing AIM bundle on this topic.
3. The table is formatted in a way that the reader expect it to flow from left to right from structure to process to outcome. Given that the selected structures, processes, and outcomes are not related, please format table in a different way. Perhaps stacked with a box for structures, then processes, then outcomes?

Please also note the following:

* Help us reduce the number of queries we add to your manuscript after it is revised by reading the Revision Checklist at https://journals.lww.com/greenjournal/Documents/RevisionChecklist_Authors.pdf and making the applicable edits to your manuscript.

REVIEWER COMMENTS:

Reviewer #1:

Summary:

Black Birthing people experience a disproportionate amount of adverse maternal and birth outcomes than any other race in the united states including morbidity and mortality. This Research letter reports on a Reduction of Peripartum Racial/Ethnic Disparities framework in Massachusetts. Maternal Safety Bundles (MSB) have been successful in providing actionable implementation of evidence-based practices. Proven benefits in lowering SMM have been found by defining measures stratified by race and ethnicity. In order to improve the framework with action steps to identify racial gaps and address racism, authors conducted an literature review and semi-structured interviews with experts and stakeholders in maternal health. Seven themes were chosen after inductive coding of 25 interviews and the enactment of the Delphi technique. Proposed and selected Measures for the bundle are presented in Table 1.

Comments:

1. Line 49: Does not explicitly state that interrater reliability methods were conducted and interrater reliability was achieved, but Delphi technique for consensus on measures can be an adequate replacement
2. Line 60: Only 9 participants from Massachusetts, justify national reach for a MSB tailored for Massachusetts
3. Line 65: Theme 3 is shifting culture toward equity: Culture of what?
4. Results: I think a racial background of the stakeholders would be a beneficial conclusion to show how representative the treating pool is in racial congruence with Black birthing people.
5. Discussion: Implementation plans and goals would be a nice addition. Predict what the potential benefits of this MSB could be
6. Table 1: Further information describing why some of the proposed measures were not selected would be nice

Equity:

1. Uses birthing people
2. Identifies that the issue is racism not race in a well supported argument
3. Could further explain representation of interviewer sample aside from saying it is diverse in the acknowledgements

Reviewer #2:

Thank you for the opportunity to review this paper. My comments are given below:

1. What are maternal safety bundles?
2. "Whereas other Alliance for Innovation on Maternal Health (AIM) MSBs, have explicit measures to monitor their efficacy and implementation, the AIM Reduction of Peripartum Racial and Ethnic Disparities Bundle did not and was created as a framework." Explain the relevance. Is the latter what is currently in use as well?
3. The background information given for this project seems to be well researched and presented, however it does not effectively lead up to a research question. The statement "Given the stark racial inequities across state maternal outcomes, our project 37 aimed to adapt the original framework and create measures for this MSB to provide 38 teams with action steps and metrics to identify racial gaps and address racism." seems to be the research question, however I feel from the background I learned very little about the AIM MSBs or why it is perhaps not effective as the current framework. I would suggest rephrasing this section to make these points more clear to the reader.
4. "A literature review was paired with semi-structured interviews of experts and 42 stakeholders including OB/GYNs..." a literature review of what? where/how were they interviewed? were the interviewers trained in any way to ensure that all the interviews were conducted equally without any leading language, bias, etc? What was the racial/ethnic makeup of those interviewed?
5. "Facilitators included supportive 71 leadership, political will and support, financial incentives, and dedicated time." Where did facilitators come in? Why is this relevant?
6. The conclusion is vague and does not seem to answer a research question, rather states what seems to be already known in literature as presented by the introduction

Reviewer #3:

This research letter is a qualitative report of findings from 25 interviews and a literature review to identify themes that were then developed into structure, process, and outcome measures that could be measured as part of an adopted statewide maternal equity bundle. The manuscript is brief and well written, with preliminary and selected measures for a bundle presented in a clear format. The concept of self-reported race is still difficult to imagine for many electronic health records where race and ethnicity are entered at a point prior to evaluation by a clinical provider. The investigators used an equity rubric. The subject is relevant and useful to many.

There is an argument that because race is a social construct, it should not be used in research to indicate differences in characteristics or outcomes. However most investigators have access to race that is assigned to the EMR somehow, whether reported or assigned. Could the authors comment on how best to incorporate the recommendation to disaggregate outcomes by race when in reality, race may be assigned rather than self reported and is a social construct?

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Sincerely,

Torri D. Metz, MD, MS
Deputy Editor, Obstetrics

The Editors of Obstetrics & Gynecology

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.

April 10th, 2023

Torri D. Metz, MD, MS

Deputy Editor, Obstetrics

Obstetrics & Gynecology

409 12th Street, SW

Washington, DC 20024-2188

Dear Dr. Torri D. Metz,

Thank you for considering our revised manuscript, “Selecting Measures for a Maternal Equity Safety Bundle to Eliminate Racial Inequities Across Labor & Delivery Units in Massachusetts” for publication as an Original Research piece in the *Obstetrics & Gynecology* Special Issue on Racism in Reproductive Health. This article summarizes our methodology and results for developing structure, process, and outcome measures to guide in implementation and measure the efficacy of the Perinatal Neonatal Quality Improvement Network of Massachusetts (PNQIN) Maternal Equity Safety Bundle to reduce racial and ethnic inequities in maternal morbidity. Given the requested change in format of the article and subsequent extensive edits, we did not use track changes. We greatly appreciate your review and suggestions.

Thank you again for your consideration.

Sincerely,

Anna Kheyfets

MD/MPH Candidate, Tufts University School of Medicine

[REDACTED]

Audra R Meadows MD MPH

Maternal Equity Project Lead, PNQIN MA

Vice Chair, Culture and Justice

UC San Diego OB/GYN

EDITOR COMMENTS:

1. Thank you for submitting this work to Obstetrics & Gynecology. If you opt to submit a revision for consideration, please expand to an Original Research submission. This will allow additional word count (3,000 words) to better explain the process of stakeholder selection, selection of your measures, and the Delphi method that you employed. It will also allow you to break up your tables.

Thank you for this comment, suggestion, and opportunity. We have expanded on the research letter as an Original Research submission to describe our methodology and results.

2. There is not a Bundle related to racism and health equity on the AIM website. There is just a framework. Please remove references to an existing AIM bundle on this topic.

Thank you for this comment. We have updated the manuscript to clarify we used the published framework, rather than the archived bundle, to guide the development of the Maternal Equity Bundle for Massachusetts as described in our introduction (Lines 56-62).

“The Perinatal Neonatal Quality Improvement Network of Massachusetts (PNQIN), the MA state PQC, aimed to implement a maternal equity bundle to create an equity-focused infrastructure across birthing facilities in MA. PNQIN sought to adapt the Reduction of Peripartum Racial and Ethnic Disparities Conceptual Framework and Maternal Safety Consensus Bundle and create a MSB to equip teams seeking to address discrimination and racism in maternal inequities with action steps and standardized metrics.”

3. The table is formatted in a way that the reader expect it to flow from left to right from structure to process to outcome. Given that the selected structures, processes, and outcomes are not related, please format table in a different way. Perhaps stacked with a box for structures, then processes, then outcomes?

Thank you for this comment. We updated Table 1 to separate the rows of preliminary and selected measures to address this concern.

REVIEWER COMMENTS:

Reviewer #1:

Summary:

Black Birthing people experience a disproportionate amount of adverse maternal and birth outcomes than any other race in the united states including morbidity and mortality. This

Research letter reports on a Reduction of Peripartum Racial/Ethnic Disparities framework in Massachusetts. Maternal Safety Bundles (MSB) have been successful in providing actionable implementation of evidence-based practices. Proven benefits in lowering SMM have been found by defining measures stratified by race and ethnicity. In order to improve the framework with action steps to identify racial gaps and address racism, authors conducted an literature review and semi-structured interviews with experts and stakeholders in maternal health. Seven themes were chosen after inductive coding of 25 interviews and the enactment of the Delphi technique. Proposed and selected Measures for the bundle are presented in Table 1.

Comments:

1. *Line 49: Does not explicitly state that interrater reliability methods were conducted and interrater reliability was achieved, but Delphi technique for consensus on measures can be an adequate replacement*

Thank you for this comment. We updated the methodology to describe our modified Delphi technique for consensus on measures (lines 101-119).

2. *Line 60: Only 9 participants from Massachusetts, justify national reach for a MSB tailored for Massachusetts*

We purposely oversampled Massachusetts to design a Maternal Equity Bundle specific to MA. However, this process and the measures can be applied and adapted in other states with insight from clinicians working in their respective states. This is noted in our limitations section (Lines 281-284).

“The MEB created is best suited for implementation in MA but could be adapted for other states in the U.S. However, hospitals and POCs should consider the contextual similarities to determine how transferable the findings will likely be to their setting.”

3. *Line 65: Theme 3 is shifting culture toward equity: Culture of what?*

We update the new manuscript to further explain shifting toward a culture in the department that emphasizes and prioritizes equity (Lines 160-167).

“Eight participants (32%) noted that by implementing structure measures for an equity bundle, one would change the institution’s culture toward one that emphasizes equity. This begins by having staff understand the historical context of racial inequities. The expected outcome of shifting culture is the improvement of the patient reported experience measures. Patients may feel integrated as contributing members of their healthcare team when included in shared-decision making and patient huddles.²⁵ An additional goal of this bundle is to set a foundation for further equity work within participating institutions.”

4. *Results: I think a racial background of the stakeholders would be a beneficial conclusion to show how representative the treating pool is in racial congruence with Black birthing people.*

Thank you for this suggestion. Racial and ethnic demographics of the expert stakeholders by self-identification were not collected. The authors of this article encompass 50% of the PNQIN Maternal Equity Bundle Workgroup; demographics are described in the acknowledgements.

5. *Discussion: Implementation plans and goals would be a nice addition. Predict what the potential benefits of this MSB could be*

Thank you for this suggestion. We included implementation plans in the next steps section (Lines 285-288) and benefits in the discussion (Lines 226-233) and in *Figure 1*.

6. *Table 1: Further information describing why some of the proposed measures were not selected would be nice*

Thank you for this suggestion. In this expanded version, we have explained why some proposed measures were not selected in the Delphi methods sub-section (Lines 102-119).

Equity:

1. *Uses birthing people*

2. *Identifies that the issue is racism not race in a well supported argument*

3. *Could further explain representation of interviewer sample aside from saying it is diverse in the acknowledgements*

Reviewer #2:

Thank you for the opportunity to review this paper. My comments are given below:

1. *What are maternal safety bundles?*

Thank you for your question. We explain Maternal Safety Bundles in the introduction of this new manuscript (Lines 39-55).

“To address systems factors, the Alliance for Innovation on Maternal Health (AIM) publishes maternal safety bundles (MSB) of evidence-based practices and institutional guidelines.^{10,11} The AIM bundles, implemented through perinatal quality collaboratives (PQCs), include five domains: Readiness, Recognition and Prevention, Response, Reporting and Systems Learning, and most recently, Respectful Care.^{12,13} While they are evidence-based collections of recommendations, they are intended to be adapted to the needs of each collaborative using

quality improvement (QI) methodology.

Maternal Safety Bundles have successfully improved outcomes and reduced racial gaps through structured, actionable steps for implementing evidence-based practices. In California, MM rates decreased and SMM racial disparities reduced after implementing an obstetric hemorrhage MSB while national rates rose.^{14,15} One health system implemented an equity-focused goal of reducing MM for Black individuals across five hospital sites forming a data-driven, QI collaborative to address inequities.¹⁶ Davidson et al. demonstrated a decline in SMM and the SMM racial disparity after data disaggregated by race and ethnicity was presented at department meetings, even before other bundle measures were implemented.¹⁷ These findings suggest that calling attention to racial gaps in SMM activates teams toward improvement, may aid in decreasing racial inequities in MM and SMM, and emphasizes the importance of defining measures to target improvements.¹⁷”

2. "Whereas other Alliance for Innovation on Maternal Health (AIM) MSBs, have explicit measures to monitor their efficacy and implementation, the AIM Reduction of Peripartum Racial and Ethnic Disparities Bundle did not and was created as a framework." Explain the relevance. Is the latter what is currently in use as well?

Thank you for your question. In the new manuscript, we explain our process of adapting the Reduction of Peripartum Racial and Ethnic Disparities Conceptual Framework and Maternal Safety Consensus Bundle (published by Howell et al. in 2018) to create the PNQIN Maternal Equity Bundle. The AIM Reduction of Peripartum Racial and Ethnic Disparities Conceptual Framework and Maternal Safety Consensus Bundle has been archived as a standalone bundle, but the framework remains published and guided our design (Lines 56-62).

“The Perinatal Neonatal Quality Improvement Network of Massachusetts (PNQIN), the MA state PQC, aimed to implement a maternal equity bundle to create an equity-focused infrastructure across birthing facilities in MA. PNQIN sought to adapt the Reduction of Peripartum Racial and Ethnic Disparities Conceptual Framework and Maternal Safety Consensus Bundle and create a MSB to equip teams seeking to address discrimination and racism in maternal inequities with action steps and standardized metrics.¹⁸ This paper describes the methodology of creating the PNQIN Maternal Equity Bundle (MEB).”

3. The background information given for this project seems to be well researched and presented, however it does not effectively lead up to a research question. The statement "Given the stark racial inequities across state maternal outcomes, our project 37 aimed to adapt the original framework and create measures for this MSB to provide 38 teams with action steps and metrics to identify racial gaps and address racism." seems to be the research question, however I feel from the background I learned very little about the AIM MSBs or why it is perhaps not effective as the current framework. I would suggest rephrasing this section to make these points more clear to the reader.

Thank you for this comment. We have reframed our introduction to introduce maternal safety bundles (Lines 56-62). Our aim was to define measures for an equity-focused maternal safety bundle, as no prior methodology or has been published.

“The Perinatal Neonatal Quality Improvement Network of Massachusetts (PNQIN), the MA state

PQC, aimed to implement a maternal equity bundle to create an equity-focused infrastructure across birthing facilities in MA. PNQIN sought to adapt the Reduction of Peripartum Racial and Ethnic Disparities Conceptual Framework and Maternal Safety Consensus Bundle and create a MSB to equip teams seeking to address discrimination and racism in maternal inequities with action steps and standardized metrics.¹⁸ This paper describes the methodology of creating the PNQIN Maternal Equity Bundle (MEB)."

4. "A literature review was paired with semi-structured interviews of experts and 42 stakeholders including OB/GYNs..." a literature review of what? where/how were they interviewed? were the interviewers trained in any way to ensure that all the interviews were conducted equally without any leading language, bias, etc? What was the racial/ethnic makeup of those interviewed?

Thank you for this suggestion. Racial and ethnic demographics of the expert stakeholders by self-identification were not collected. The authors of this article encompass 50% of the PNQIN Equity Workgroup; demographics are described in the acknowledgements. We have additionally expanded on the methods, including the literature review, stakeholder interviews, and modified Delphi methodology in the full Original Research manuscript.

5. "Facilitators included supportive 71 leadership, political will and support, financial incentives, and dedicated time." Where did facilitators come in? Why is this relevant?

Thank you for this comment. We have further explained in this manuscript the experts interviewed offered facilitators and barriers to implementing equity-focused work (Lines 132-133).

"Participants also named facilitators and barriers to conducting equity work during interviews (Table 2)."

6. The conclusion is vague and does not seem to answer a research question, rather states what seems to be already known in literature as presented by the introduction

Thank you for this comment. We have expanded the conclusion to address this concern (Lines 284-296).

Reviewer #3:

This research letter is a qualitative report of findings from 25 interviews and a literature review to identify themes that were then developed into structure, process, and outcome measures that could be measured as part of an adopted statewide maternal equity bundle. The manuscript is brief and well written, with preliminary and selected measures for a bundle presented in a clear format. The concept of self-reported race is still difficult to imagine for many electronic health records where race and ethnicity are entered at a point prior to evaluation by a clinical provider. The investigators used an equity rubric. The subject is relevant and useful to many.

There is an argument that because race is a social construct, it should not be used in research to indicate differences in characteristics or outcomes. However most investigators have access to race that is assigned to the EMR somehow, whether reported or assigned. Could the authors comment on how best to incorporate the recommendation to disaggregate outcomes by race when in reality, race may be assigned rather than self-reported and is a social construct?

Thank you for this comment, we address the need for race, ethnicity and language (REAL) data to be self-identified by patients in the discussion (Lines 248-250).

“Third, self-report of demographic data collected by health systems is recommended to accurately document and identify outcomes and experiences by patient REaL.”