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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.

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Questions about these materials may be directed to the Obstetrics & Gynecology editorial office:

obgyn@greenjournal.org.
RE: Manuscript Number ONG-19-1660

Association between time of day and the decision for an intrapartum cesarean delivery

Dear Dr. Son:

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 Nov 01, 2019, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1: This study is a secondary analysis looking at the impact of the time of day on the decision to perform a cesarean delivery. The conclusion that the differences seen in the the decision to perform a cesarean delivery are variable due to labor management practices is not fully supported by the data presented.

1. One cannot help but notice that the participating institutions have published countless articles and conducted years and years of research on labor and labor management practices. Furthermore, many of these institutions and the authors on this paper have promulgated labor management guidelines upon us that reflect a standardized approach to labor management that one would assume was practiced at their institutions and during the study period. It is inconceivable that there is significant difference in labor management practice in such an esteemed group of researchers who have spent the last 20 or more years serving as the example for the rest of us.

2. The fact that adjusting for hospital makes no difference in the findings makes the point above, ie. if practice management differences impacts the decision to perform a cesarean delivery one should see differences in hospitals/institutions.

3. What impact do patient characteristics have on these results? Did size of the fetus, gestational age(by week), co morbidities play a role.

4. In a cohort of patients where the decision to perform a cesarean should be relatively uniform(see comments above), the question is not when the cesarean was performed but when was the induction or augmented started. This of course depends on when the patient who was augmented went into spontaneous labor which several authors both in the states and Europe have linked to circadian rhythms. It also depends on when inductions are scheduled which is often dependent on staffing of the units. Was any adjustment made for nursing or anesthesia staffing?

5. Why was there no weekend effect? One would expect to see different decision making on the weekend if labor management practices are different due to different personnel packages and the "I want to get in and get out phenomenon on what is otherwise a day off for many docs". Once again, these are high quality centers that practice evidence based medicine and conduct vigorous and structured research trials and have for years. The issue is not when the decision to perform the cesarean occurred but when did the labor or induction start and what factors influence this.

6. I always hate to see the spline in such a large data set. It is certainly a legitimate statistical tool, but in effect it is a sophisticated guess about data that is absent. Hard to believe 7956 is not enough to avoid such sophisticated modeling/guesswork.
Reviewer #2: This is a paper based on a poster presentation at the 2018 SMFM Annual Meeting. It is a secondary analysis of a multicenter observational cohort of 115,502 deliveries which only included nulliparas at term with a singleton, cephalic, non-anomalous live gestation (APEX study). Specifically, this study attempted to determine if the decision and indications for performing a CD varied by time of day, and data was reviewed for each individual hour. Also, the study wanted to see if the definition of labor dystocia was different, depending on time of day. This is a very important question to answer, as there is a significant aim to avoid a primary CD if at all possible.

168-169 - I appreciated that the "weekend effect" was considered. Despite a Labor & Delivery unit operating 24/7, there clearly is a difference in staffing (both MDs and nursing) on weekends which may lend to a change in labor management.

All subsets of Figure 2 were very organized and helped the reader understand the true differences in rate of CD by time of day and indication. Although it has always been understood that there were fewer CDs overnight (hospital staffing, MD availability), these graphs clearly demonstrate this, with increasing rates of CD for labor dystocia as the morning moves into afternoon (MD availability is likely at its highest during this time). What also confirmed previous thought is that the CD rate won't change during the day when the indication is specifically for non-reassuring FHTs, as this can occur unexpectedly at any time during the 24-hour day.

217-230 - I appreciate the other studies described as comparisons. It is important to note that these types of studies have been done before. However, the authors attempt to explain why their study is different, in that they were able to evaluate the time of decision for CD. Also, they stated that their study differed from prior studies, because they were able to examine the time of day and the indication for the CD, not just the relationship between time of day and CD.

258-259 - Strengths of study were well written. I appreciate that despite the authors' presumption that a strength was the large number of hospitals they sampled, they also acknowledged that the majority were teaching hospitals with abundant resources and may not be generalizable to most hospitals in the US. However, they mentioned that if there was this much variation in times of CD at these large hospitals with 24/7 coverage, then one could infer that the results would be similar, if not more pronounced, in community hospitals without the abundance of resources.

Overall, this was an organized study which adds to the existing literature that there clearly is a difference in CD rates throughout the 24-hour day. This study added to the literature by being able to describe indications for delivery, and not just overall delivery data.

Reviewer #3: This is a secondary analysis of a multicenter observational cohort of 115k deliveries including nulliparous patients attempting labor. The objective was to examine whether the decision and indications for performing an intrapartum cesarean delivery (CD) varied by time of day. 36,014 women were analyzed, 7956 included in the study as they underwent CD. Primary outcomes were decision to perform CD and the indication for CD. Secondary outcomes were adherence to to application of standards for the diagnosis of labor dystocia. The study found that the decision for CD decreased from midnight to morning, nadiring at 10a and subsequently rising to peak at 9p. The frequency of CD for dystocia was also significantly associated with time of day mirroring overall CD. The frequency of other indications for cesarean did not differ by time of day. The authors conclude that among nulliparas attempting labor at term, decision to perform CD, particularly for dystocia, varied with time of day. Ways in which this manuscript could be improved include:

1. Lines 135-136: By any chance to you track decision to incision time? It would be interesting to see if this varied by time of day as well.

2. Lines 141-142: Why did you choose to lump the dystocia categories together rather than just leave them as separate categories?

3. Lines 262-265: Did you have enough data to compare these groups? It would be interested if teaching and non-teaching hospital differed or similar.

4. Lines 279-280: Could you elaborate on what you hypothesize is driving these differences? Physician convenience? Guilt over leaving a evolving dystocia patient for the next shift? Nursing or anesthesia changes in shift?

STATISTICAL EDITOR’S COMMENTS:

1. lines 194-205: This part of the analysis deserves longer exposition, either in main text or as supplemental. Were there similar curves (ie, similar to Fig 2) of time of day vs time from 5 cm dilation to CD decision that would be instructive? Also, was there any relation of time since admission to time of CD decision that varied with time of day of admission?
2. lines 207-210: Should include in supplemental material the analysis of weekday and weekend time of day vs CD decision, preferably with similar time vs CD decision curves.

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. Responsible reporting of research studies, which includes a complete, transparent, accurate and timely account of what was done and what was found during a research study, is an integral part of good research and publication practice and not an optional extra. Obstetrics & Gynecology supports initiatives aimed at improving the reporting of health research, and we ask authors to follow specific guidelines for reporting randomized controlled trials (ie, CONSORT), observational studies (ie, STROBE), meta-analyses and systematic reviews of randomized controlled trials (ie, PRISMA), harms in systematic reviews (ie, PRISMA for harms), studies of diagnostic accuracy (ie, STARD), meta-analyses and systematic reviews of observational studies (ie, MOOSE), economic evaluations of health interventions (ie, CHEERS), quality improvement in health care studies (ie, SQUIRE 2.0), and studies reporting results of Internet e-surveys (CHERRIES). Include the appropriate checklist for your manuscript type upon submission. Please write or insert the page numbers where each item appears in the margin of the checklist. Further information and links to the checklists are available at http://ong.editorialmanager.com. In your cover letter, be sure to indicate that you have followed the CONSORT, MOOSE, PRISMA, PRISMA for harms, STARD, STROBE, CHEERS, SQUIRE 2.0, or CHERRIES guidelines, as appropriate.

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: 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.

6. Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:

* All financial support of the study must be acknowledged.
* Any and all manuscript preparation assistance, including but not limited to topic development, data collection, analysis, writing, or editorial assistance, must be disclosed in the acknowledgments. Such acknowledgments must identify the entities that provided and paid for this assistance, whether directly or indirectly.
* All persons who contributed to the work reported in the manuscript, but not sufficiently to be authors, must be acknowledged. Written permission must be obtained from all individuals named in the acknowledgments, as readers may infer their endorsement of the data and conclusions. Please note that your response in the journal's electronic author form verifies that permission has been obtained from all named persons.
* If all or part of the paper was presented at the Annual Clinical and Scientific Meeting of the American College of Obstetricians and Gynecologists or at any other organizational meeting, that presentation should be noted (include the exact dates and location of the meeting).

7. The most common deficiency in revised manuscripts involves the abstract. Be sure there are no inconsistencies between the Abstract and the manuscript, and that the Abstract has a clear conclusion statement based on the results found in the paper. Make sure that the abstract does not contain information that does not appear in the body text. If you submit a revision, please check the abstract carefully.
In addition, the abstract length should follow journal guidelines. The word limits for different article types are as follows:

Original Research articles, 300 words. Please provide a word count.

8. 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.

9. 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.

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

11. 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.

12. The Journal's Production Editor had the following to say about the figures in this manuscript:

"Figure 2: Please be sure to cite Figures 2C and 2D in the 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.

13. 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.

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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 Nov 01, 2019, 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.
Dear Editors,

Thank you for the opportunity to revise our manuscript titled “Association between time of day and the decision for an intrapartum cesarean delivery” for review and reconsideration for publication in Obstetrics & Gynecology. We greatly appreciate the thoughtful insights from the reviewers, and we believe that we were able to address their comments and questions in our responses below. We have read the “Instructions for Authors.” We followed the STROBE reporting guidelines and have included the completed checklist for your review.

We thank you for your consideration of our revised manuscript for publication. Please contact us if you have any questions or concerns.

Sincerely,
Moeun Son, MD, M.Sci
Yinglei Lai, Ph.D.
Jennifer Bailit, M.D., M.P.H.
Uma M. Reddy, M.D., M.P.H.
Ronald J. Wapner, M.D.
Michael W. Varner, M.D.
John M. Thorp, Jr., M.D.
Kenneth J. Leveno, M.D.
Steve N. Caritis, M.D.
Mona Prasad, D.O.
Alan T.N. Tita, M.D., Ph.D.
George Saade, M.D.
Yoram Sorokin, M.D.
Dwight J. Rouse, M.D.
Sean C. Blackwell, M.D.
Jorge E. Tolosa, M.D., M.S.C.E.
for the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Maternal-Fetal Medicine Units (MFMU) Network
Response to Reviewers:

Reviewer #1: This study is a secondary analysis looking at the impact of the time of day on the decision to perform a cesarean delivery. The conclusion that the differences seen in the decision to perform a cesarean delivery are variable due to labor management practices is not fully supported by the data presented.

1. One cannot help but notice that the participating institutions have published countless articles and conducted years and years of research on labor and labor management practices. Furthermore, many of these institutions and the authors on this paper have promulgated labor management guidelines upon us that reflect a standardized approach to labor management that one would assume was practiced at their institutions and during the study period. It is inconceivable that there is significant difference in labor management practice in such an esteemed group of researchers who have spent the last 20 or more years serving as the example for the rest of us.

2. The fact that adjusting for hospital makes no difference in the findings makes the point above, i.e. if practice management differences impact the decision to perform a cesarean delivery one should see differences in hospitals/institutions.

With regards to comments #1 and #2, it is our opinion that these findings within a group of large (and mostly academic) institutions only further highlight the significance of our findings. If temporal variations in the decision for intrapartum cesarean are seen in high-resource settings, we would expect that these variations may be even more pronounced in less-resourced settings. It was also not surprising to us that adjusting for hospital did not alter our findings since the systemic factors that may be driving the temporal variations are likely factors that impact all institutions. Furthermore, the participating institutions themselves had comparable resources which may have resulted in similar findings when adjusting for individual hospital.

3. What impact do patient characteristics have on these results? Did size of the fetus, gestational age (by week), co morbidities play a role.

Our analyses did not account for individual patient characteristics because we used time of day as an indirect measure of system-based factors. However, our study sample included relatively low-risk women with term, singleton, non-anomalous gestations (see Table 1) to minimize the impact of individual patient characteristics.

4. In a cohort of patients where the decision to perform a cesarean should be relatively uniform (see comments above), the question is not when the cesarean was performed but when was the induction or augmented started. This of course depends on when the patient who was augmented went into spontaneous labor which several authors both in the states and Europe
have linked to circadian rhythms. It also depends on when inductions are scheduled which is often dependent on staffing of the units. Was any adjustment made for nursing or anesthesia staffing?

This was addressed in the manuscript (lines 242-248). We feel that we demonstrated that thresholds for determining labor dystocia were differently utilized based on time of day, which argues against a purely circadian etiology. While it is possible that the temporal pattern may be influenced by when labor inductions were started, our findings remained significant even after evaluating the diagnosis of labor dystocia made after labor induction versus spontaneous labor.

5. Why was there no weekend effect? One would expect to see different decision making on the weekend if labor management practices are different due to different personnel packages and the "I want to get in and get out phenomenon on what is otherwise a day off for many docs". Once again, these are high quality centers that practice evidence-based medicine and conduct vigorous and structured research trials and have for years. The issue is not when the decision to perform the cesarean occurred but when did the labor or induction start and what factors influence this.

Figures were added in the Supplement to show the associations between time of day (using decision time to perform cesarean) and decision to perform cesarean using weekday vs. weekend as an interaction term. While the temporal variations seen on the weekday versus weekend are not identical, temporal variations (within a 24-hour period) were similarly seen on the weekday and on the weekend. We believe this shows that the actual system-based factors that impact decision for intrapartum cesarean may differ on weekdays vs. weekends, but that system-based factors generally impact the decision for intrapartum cesarean whether it is a weekday or weekend.

6. I always hate to see the spline in such a large data set. It is certainly a legitimate statistical tool, but in effect it is a sophisticated guess about data that is absent. Hard to believe 7956 is not enough to avoid such sophisticated modeling/guesswork.

The aim of our analyses was to examine whether temporal patterns existed for the decision to perform an intrapartum cesarean throughout the 24-hour period of a day. Generalized additive models with smoothing splines were used to assess for possible patterns without assuming any parametric forms. We believe that the large sample size was necessary to examine the patterns related to time of day (by hour).

Reviewer #2: This is a paper based on a poster presentation at the 2018 SMFM Annual Meeting. It is a secondary analysis of a multicenter observational cohort of 115,502 deliveries which only included nulliparas at term with a singleton, cephalic, non-anomalous live gestation (APEX study). Specifically, this study attempted to determine if the decision and indications for performing a CD varied by time of day, and data was reviewed for each individual hour. Also,
the study wanted to see if the definition of labor dystocia was different, depending on time of day. This is a very important question to answer, as there is a significant aim to avoid a primary CD if at all possible.

168-169 - I appreciated that the "weekend effect" was considered. Despite a Labor & Delivery unit operating 24/7, there clearly is a difference in staffing (both MDs and nursing) on weekends which may lend to a change in labor management.

All subsets of Figure 2 were very organized and helped the reader understand the true differences in rate of CD by time of day and indication. Although it has always been understood that there were fewer CDs overnight (hospital staffing, MD availability), these graphs clearly demonstrate this, with increasing rates of CD for labor dystocia as the morning moves into afternoon (MD availability is likely at its highest during this time). What also confirmed previous thought is that the CD rate won't change during the day when the indication is specifically for non-reassuring FHTs, as this can occur unexpectedly at any time during the 24-hour day.

217-230 - I appreciate the other studies described as comparisons. It is important to note that these types of studies have been done before. However, the authors attempt to explain why their study is different, in that they were able to evaluate the time of decision for CD. Also, they stated that their study differed from prior studies, because they were able to examine the time of day and the indication for the CD, not just the relationship between time of day and CD.

258-259 - Strengths of study were well written. I appreciate that despite the authors' presumption that a strength was the large number of hospitals they sampled, they also acknowledged that the majority were teaching hospitals with abundant resources and may not be generalizable to most hospitals in the US. However, they mentioned that if there was this much variation in times of CD at these large hospitals with 24/7 coverage, then one could infer that the results would be similar, if not more pronounced, in community hospitals without the abundance of resources.

Overall, this was an organized study which adds to the existing literature that there clearly is a difference in CD rates throughout the 24-hour day. This study added to the literature by being able to describe indications for delivery, and not just overall delivery data.

We appreciate this reviewer’s synopsis and perspective. There were no comments that necessitated a specific response.

Reviewer #3: This is a secondary analysis of a multicenter observational cohort of 115k deliveries including nulliparous patients attempting labor. The objective was to examine whether the decision and indications for performing an intrapartum cesarean delivery (CD) varied by time of day. 36,014 women were analyzed, 7956 included in the study as they underwent CD. Primary outcomes were decision to perform CD and the indication for CD.
Secondary outcomes were adherence to application of standards for the diagnosis of labor dystocia. The study found that the decision for CD decreased from midnight to morning, nadiring at 10a and subsequently rising to peak at 9p. The frequency of CD for dystocia was also significantly associated with time of day mirroring overall CD. The frequency of other indications for cesarean did not differ by time of day. The authors conclude that among nulliparas attempting labor at term, decision to perform CD, particularly for dystocia, varied with time of day. Ways in which this manuscript could be improved include:

1. Lines 135-136: By any chance to you track decision to incision time? It would be interesting to see if this varied by time of day as well.

The decision-to-incision time interval was not considered in our analyses as this is outside the scope of our study aims. Our main objective was to focus on the time of day the decision to perform a cesarean was made, particularly how it relates to labor management guidelines that are promoted for the safe prevention of the first cesarean. Therefore, we focused solely on the decision-making for an intrapartum cesarean instead of accounting for other factors that may have occurred after the fact.

2. Lines 141-142: Why did you choose to lump the dystocia categories together rather than just leave them as separate categories?

Arrest of dilation, arrest of descent, and failed induction of labor were all included in the same category of labor dystocia for ease of data analysis and interpretation of results. The primary objective of this study was to evaluate decision time and indication for cesarean to critically assess whether the decision-making for an intrapartum cesarean (as it relates to labor management) varies with time of day. Therefore, our focus was to compare intrapartum cesareans performed for labor arrest disorders versus fetal status concerns versus other medical indications.

3. Lines 262-265: Did you have enough data to compare these groups? It would be interesting if teaching and non-teaching hospital differed or similar.

The text has been modified to include this analysis.

4. Lines 279-280: Could you elaborate on what you hypothesize is driving these differences? Physician convenience? Guilt over leaving an evolving dystocia patient for the next shift? Nursing or anesthesia changes in shift?

This study is not an a priori planned secondary analysis of the original study, and the data are observational in nature. As such, while we are able to infer significant associations from the data, but we believe it is outside the scope of this analysis to speculate too specifically on the potential factors that are driving the significant findings. We believe it is an appropriate next step in future work to specifically examine the potential system factors that may be contributing to temporal differences in intrapartum cesareans.
STATISTICAL EDITOR’S COMMENTS:

1. lines 194-205: This part of the analysis deserves longer exposition, either in main text or as supplemental. Were there similar curves (ie, similar to Fig 2) of time of day vs time from 5 cm dilation to CD decision that would be instructive? Also, was there any relation of time since admission to time of CD decision that varied with time of day of admission?

Figures for the analyses of time of day and decision to perform cesarean at less than 5 cm dilation, median duration of time from cervical dilation of 5 cm to decision to perform cesarean, and the median duration of time from complete cervical dilation to decision to perform cesarean have been added to the Supplement.

The time of day of hospital admission was not examined in our analyses as our focus was the time of day of the decision for intrapartum cesarean. We believe we addressed the potential concerns that time of cesarean may have been impacted by time of hospital admission (lines 242-248). We feel that we demonstrated that thresholds for determining labor dystocia were differently utilized based on time of day, which argues against a purely circadian etiology for spontaneous labor. While it is possible that the temporal pattern may be influenced by when labor inductions were started, our findings remained significant even after evaluating the diagnosis of labor dystocia made after labor induction versus spontaneous labor.

2. lines 207-210: Should include in supplemental material the analysis of weekday and weekend time of day vs CD decision, preferably with similar time vs CD decision curves.

Figures for the analyses of weekday versus weekend have been added to the Supplement.

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.

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 co-authors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the manuscript’s title page.

We confirm that the disclosures listed in the eCTA forms are correctly disclosed on the manuscript’s title page.

3. Responsible reporting of research studies, which includes a complete, transparent, accurate and timely account of what was done and what was found during a research study, is an integral part of good research and publication practice and not an optional extra. Obstetrics & Gynecology supports initiatives aimed at improving the reporting of health research, and we ask authors to follow specific guidelines for reporting randomized controlled trials (ie, CONSORT), observational studies (ie, STROBE), meta-analyses and systematic reviews of randomized controlled trials (ie, PRISMA), harms in systematic reviews (ie, PRISMA for harms), studies of diagnostic accuracy (ie, STARD), meta-analyses and systematic reviews of observational studies (ie, MOOSE), economic evaluations of health interventions (ie, CHEERS), quality improvement in health care studies (ie, SQUIRE 2.0), and studies reporting results of Internet e-surveys (CHERRIES). Include the appropriate checklist for your manuscript type upon submission. Please write or insert the page numbers where each item appears in the margin of the checklist. Further information and links to the checklists are available at http://ong.editorialmanager.com. In your cover letter, be sure to indicate that you have followed the CONSORT, MOOSE, PRISMA, PRISMA for harms, STARD, STROBE, CHEERS, SQUIRE 2.0, or CHERRIES guidelines, as appropriate.

The STROBE reporting guidelines were followed, and the checklist has been completed and will be submitted with this revision.

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://urldefense.proofpoint.com/v2/url?u=http-3A__www.acog.org_About-2DACOG_ACOG-2DDepartments_Patient-2DSafety-2Dand-2DQuality-2DImprovement_reVITALize&d=DwlGaQ&c=yHISQ4HhBbqes5BQ9ueu5zKhE7rtNXt_d012z2PA6ws&r=hsw09qTHtJ1aX3yFrTtL40UvStmoiN-t5uhpLU6gPs&m=j1E0xDd66RaVlnXu6hr1A-Nvovlgp6a1guRa2BAGTe5o&s=FU-GUK78gscq0QXyuyDGvuiY3laHTw8Z4i01Zf8xCj&e=. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

We have revised the text to make use of the reVITALize definitions.
5. 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.

Our original research report is within the recommended length restrictions.

6. Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:

* All financial support of the study must be acknowledged.
* Any and all manuscript preparation assistance, including but not limited to topic development, data collection, analysis, writing, or editorial assistance, must be disclosed in the acknowledgments. Such acknowledgments must identify the entities that provided and paid for this assistance, whether directly or indirectly.
* All persons who contributed to the work reported in the manuscript, but not sufficiently to be authors, must be acknowledged. Written permission must be obtained from all individuals named in the acknowledgments, as readers may infer their endorsement of the data and conclusions. Please note that your response in the journal's electronic author form verifies that permission has been obtained from all named persons.
* If all or part of the paper was presented at the Annual Clinical and Scientific Meeting of the American College of Obstetricians and Gynecologists or at any other organizational meeting, that presentation should be noted (include the exact dates and location of the meeting).

These have been addressed on the title page.

7. The most common deficiency in revised manuscripts involves the abstract. Be sure there are no inconsistencies between the Abstract and the manuscript, and that the Abstract has a clear conclusion statement based on the results found in the paper. Make sure that the abstract does not contain information that does not appear in the body text. If you submit a revision, please check the abstract carefully.

In addition, the abstract length should follow journal guidelines. The word limits for different article types are as follows: Original Research articles, 300 words. Please provide a word count.

We have reviewed the abstract and believe it is consistent with the manuscript. The abstract length is within the recommendation.

8. Only standard abbreviations and acronyms are allowed. A selected list is available online at https://urldefense.proofpoint.com/v2/url?u=http-3A__edmgr.ovid.com_ong_accounts_abbreviations.pdf&d=DwIGaQ&c=yHlS04HhBraes5BQ9ueu5zKhE7rtNt_d012z2PA6ws&r=hswo9qtHTj1aX3yFrTtl40UvStmoIN-
We have modified the text to only include standard abbreviations in the above list.

9. 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.

The text has been modified to remove the virgule symbols.

10. Please review the journal's Table Checklist to make sure that your tables conform to journal style. The Table Checklist is available online here: https://urldefense.proofpoint.com/v2/url?u=http-3A__edmgr.ovid.com_ong_accounts_table-5Fchecklist.pdf&d=DwIGaQ&c=yHlS04HhBraes5BQ9ueu5zKhF7rtNXt_d012z2PA6ws&r=hswo9qtHTjJ1aX3yFrTtL40UvStmoiN-t5uhpLU6qPs&m=j1E0xDd6RaVlnXu6hr1A-Nvolwpn6a1quRa2BAGTeSo&s=3x7Sr8CTTyiHpb0ceXFNUcv6bsh4je7wSBbRS_uk4tI&e=. The tables have been edited to adhere to the journal’s Table Checklist.

11. 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://urldefense.proofpoint.com/v2/url?u=https-3A__www.acog.org_Clinical-2DGuidance-2Dand-2DPublications_Search-2DClinical-2DGuidance&d=DwlGaQ&c=yHlS04HhBraes5BQ9ueu5zKhF7rtNXt_d012z2PA6ws&r=hswo9qtHTjJ1aX3yFrTtL40UvStmoiN-t5uhpLU6qPs&m=j1E0xDd6RaVlnXu6hr1A-Nvolwpn6a1quRa2BAGTeSo&s=9iP3_sSnvpTcaXyzYhSqhDnSpYaZ6YXwhBX-tNpCXE&e=. The College document cited in our manuscript is still current and available.

12. The Journal's Production Editor had the following to say about the figures in this manuscript:
"Figure 2: Please be sure to cite Figures 2C and 2D in the manuscript."

The text has been modified to appropriately cite Figures 2c and 2d.

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.

The manuscript has been modified so that figures are now submitted as separate files instead of being embedded within the manuscript.