

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:	May 14, 2020
То:	"Rasha Khoury"
From:	"The Green Journal" em@greenjournal.org
Subject:	Your Submission ONG-20-1214

RE: Manuscript Number ONG-20-1214

Characteristics and Outcomes of 241 Births to Women with SARS-CoV-2 at Five New York City Medical Centers

Dear Dr. Khoury:

Your manuscript has been reviewed by the Editorial Board and by special expert referees. Dr. Chescheir is interested in potentially publishing your revised manuscript in a timely manner. In order to have this considered quickly, we need to have your revision documents submitted to us as soon as you are able. I am tentatively setting your due date to May 19, 2020, but please let me know if you need additional time.

The standard revision letter text follows.

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).

REVIEWER COMMENTS:

Reviewer #1: Excellent data but manuscript far too long.

Essentially everything I wanted to know about COVID in these patients is contained in the abstract.

Therefore I would suggest reformatting as a research letter.

Also, have any of these patients been reported previously? If yes, would make that very clear in manuscript.

Reviewer #2: The authors collated real-time data from 5 NYC L&D units at the epicenter of the pandemic. Abstract is straightforward and well-written yet 'most' seems to be understating when considering 97.5%. The fact that nearly all newborns test negative despite Mom positive is worth highlighting.

Intro

1 - Quite long, but flows well and chock-full of important background, timely data provided here

Methods

2 - It is a bit of a mixed bag in who was actually tested (line 116-120) which will have some implications in interpretation
3 - The reader wonders how IRB approval was achieved so quickly, and across 5 centers in advance of a pandemic no one knew was coming

4 - How/who collected the data (line 127)?

Results

5 - It is repetitive to list the percentages delivering at the NYC hospitals and also have it in Table 1 - this could easily be deleted from the text. Demographic info is otherwise nicely summarized through line 166.

6 - Again repetitive to list all of the OB reasons for presentation and also more powerfully presenting them in the Table. Why did the other 26 (10.8%) present? The reader is left to wonder.

7 - It is not well displayed within the paper, but should be clarified: apparently 148 asymptomatic women tested positive - ok this is 1 category that includes data from hospitals 1-3, and also 4 after they converted over to universal screening; the other 93 had symptoms and were tested positive at all 5 hospitals...therefore 2 different categories with data collected differently. The data would be better presented by saying 148 were initially asymptomatic, and of these 102 (69%)

remained asymptomatic throughout; 46 (41%) developed symptoms during hospitalization (what was the breakdown of these symptoms that providers best keep in mind during labor). Of the 93 symptomatic patients, 54 (58%) presented with a cough, etc...(line 170+).

8 - More mixing and matching follows (line 175) and this is confusing due to the mixed bag of data acquisition - it would be most helpful to separate out the asymptomatic and symptomatic presentations insofar as is possible

9 - The escalating rate of PTL and also cesarean by severity of COVID would be best presented in tabular format (line 190-194)

Discussion

10 - This is quite a long section and the opening paragraph doesn't tell the reader much line 228-232 & the last sentence here belongs later in limitations.

11 - Paragraph #2 is indirectly related and after the opening 20 lines of text (line 226-246), very little of the actual data compiled in this study has been interpreted for the reader

12 - The authors call for universal testing, but considering this is at the height of the pandemic epicenter, they should qualify their recommendation - what about areas of (very) low prevalence? when would the authors advocate for scaling back universal testing at their sites?

13 - It would be helpful to know what PPE precautions were in place for these COVID-positive patients.

14 - It seems understating to say that cesarean rate 'may' have been drive by severe/critical COVID - the table suggests that is certainly was - is there any other theory?

15 - Is there any pathophysiological statement to explain why COVID almost never is transmitted to the newborN/

16 - The info concluding with line 291 seems exactly in alignment with what we already know about the general population 17 - The lengthy paragraph line 293-304 is unneeded verbage - it's nice to say, but really has nothing to do with this study

18 - Limitations mention false negative - how often were negative testers retested? Were they treated like normal L&D patients, or POL, or what

19 - The paragraph line 319 reflects some of the skipping around found in this paper - it continues on a topic first mentioned in line 280, then dropped, then picked up here

20 - The concluding paragraph could use some rewriting

There are a lot of tables that could use some condensing for clarity and page limit considerations

Table 1 - It is of interest the significant amount of missing data; Age is well acknowledged by Median - shouldn't need <25, 25-35, etc - same comment for BMI; I would favor breaking out presenting symptoms into a separate table, redoing the percentages with 93 as the denominator; The part on comorbidities is non-essential and could be moved to SDC - seems strange to consider Previous cesarean in the comorbidity list

Table 2 could be moved in its entirety to SDC

Table 3 has necessary data

Table 4 could be integrated with Table D by adding one additional column

Table 5 could be better in sync with the text

Table 6 could be moved to SDC as some of the P values are spurious (mode of delivery, pregnancy length)

Table C seems unnecessary as it is essentially same as Table 4.

STATISTICAL EDITOR COMMENTS:

The Statistical Editor makes the following points that need to be addressed:

General, lines 308-311: It is difficult to interpret or generalize the calculations of proportions asymptomatic, mild, severe etc since (1) the population was a mix of universal testing, only symptomatic patients tested and a transition from symptomatic to universal and (2) possibly changing prevalence of Covid-19 during the time period studied. It would be more informative to separate the universal testing cohorts from the others to arrive at a more precise estimate of proportions that were asymptomatic, mild, severe and critical (with respective CIs).

lines 196 and Table 4: Need to clarify for the reader that the PTB < 34 wks is a subset of the PTB < 37 wks, otherwise the %s total > 100% and the total count is > 239 births.

lines 222-223, Table 4 and Suppl Table D: These associations (severe and critical cases vs rates of CD or PTB) are based on whether the distribution of counts deviated from random distribution, but the data were not tested for specific pairwise differences between the less severe and either severe or critical cases. In fact, it was only the critical group that was statistically different in terms of PTB rates, not the severe group. The other issues were whether there was sufficient power to establish a difference, to adjust for the prior histories of CD or whether there was a prior planned-for CD.

Table 1: Again, difficult to interpret or generalize, since only 81 (MSH) +27(ELM) + 67(NYP-CU) = 175 were in that category, with some portion of the 39 from MMC. That is, the arithmetic is correct, but the sample is biased w.r.t. all Covid-19 laboring women in NYC at that time. So, all the description of % with various signs (table 2) and symptoms is also biased as are the findings in Table 3.

Same issues with Table 5.

Table 6: Cannot interpret due to issues previously stated with testing criteria.

EDITORIAL OFFICE COMMENTS:

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

A. OPT-IN: Yes, please publish my point-by-point response letter.

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

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

Please check with your coauthors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the manuscript's title page.

We are currently missing forms from: Joanne STONE William E. SCHWEIZER Bijan KHAKSARI Fabiano HEITOR Johanna MONRO

3. Please spell out the acronyms of the hospitals where the women delivered: MMC, MSHS, MSH, MSW, ELM, NYP-CU, and NYU.

4. Your Discussion states, "...this early albeit largest report of pregnancy outcomes for women with SARS-CoV-2..." Please add details of a literature search to support this statement: databases searched, search terms, and dates (including years).

5. For the references in your References list that contain URLs, please include the title of the content and not just the author. For example, in reference 1, in addition to "World Health Organization" as the author, add "WHO advice for international travel and trade in relation to the outbreak of pneumonia caused by a new coronavirus in China" after the author name as the title. In addition, change "Accessed" to "Retrieved."

6. Be sure the abbreviations you use in your tables are defined the table footnotes, especially table 2.

7. Rename each supplementary table an "appendix" ("Appendix 1," "Appendix 2," etc.). Be sure they are also cited this way in the body text.

8. 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.

9. 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.

10. 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).

11. Provide a short title of no more than 45 characters, including spaces, for use as a running foot.

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

In addition, the abstract length should follow journal guidelines. The word limit for Original Research articles is 300 words. Please provide a word count.

13. 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.

14. The journal does not use the virgule symbol (/) in sentences with words. Please rephrase your text to avoid using "and/or," or similar constructions throughout the text. You may retain this symbol if you are using it to express data or a measurement.

15. 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%").

16. Line 226: Your manuscript contains a priority claim. We discourage claims of first reports since they are often difficult to prove. How do you know this is the first report? If this is based on a systematic search of the literature, that search should be described in the text (search engine, search terms, date range of search, and languages encompassed by the search). If it is not based on a systematic search but only on your level of awareness, it is not a claim we permit.

17. 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.

18. The American College of Obstetricians and Gynecologists' (ACOG) documents are frequently updated. These documents may be withdrawn and replaced with newer, revised versions. If you cite ACOG documents in your manuscript, be sure the reference you are citing is still current and available. If the reference you are citing has been updated (ie, replaced by a newer version), please ensure that the new version supports whatever statement you are making in your manuscript and then update your reference list accordingly (exceptions could include manuscripts that address items of historical interest). If the reference you are citing has been withdrawn with no clear replacement, please contact the editorial office for assistance (obgyn@greenjournal.org). In most cases, if an ACOG document has been withdrawn, it should not be referenced in your manuscript (exceptions could include manuscripts that address items of historical interest). All ACOG documents (eg, Committee Opinions and Practice Bulletins) may be found at the Clinical Guidance page at https://www.acog.org/clinical (click on "Clinical Guidance" at the top).

19. Each supplemental file in your manuscript should be named an "Appendix," numbered, and ordered in the way they are first cited in the text. Do not order and number supplemental tables, figures, and text separately. References cited in appendixes should be added to a separate References list in the appendixes file.

20. 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.

Sincerely,

Nancy C. Chescheir, MD Editor-in-Chief

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.







May 19, 2020

Nancy C. Chescheir, MD Editor-in-Chief, *Obstetrics & Gynecology*

Dear Dr. Chescheir,

Please find attached a revised manuscript entitled, *Characteristics and Outcomes of 241 Births to Women with SARS-CoV-2 at Five New York City Medical Centers* for your consideration. Additionally, attached to this letter a point-by-point response to reviewer and editorial office comments.

This manuscript presents a large case series reporting the impact of SARS-CoV-2 and COVID-19 on pregnancy outcomes in the third trimester. Given the strong collaboration between New York City hospitals, as well as the fact that we have been at the epicenter of the pandemic in the U.S., we are pleased to be able to present data that informs the clinical and scientific community about pregnancy outcomes in this environment.

The authors of this manuscript represent the multiple institutions that participated in preparing this case series, and the details of their affiliations are noted on the cover page. All authors have reviewed this manuscript and have approved its submission. None of the authors has noted a conflict or relevant financial disclosure. Additionally, IRB approval was obtained at each of the institutions that participated. This information has not been published or presented elsewhere previously and will not be unless a final negative decision is made by the Editors of *Obstetrics & Gynecology*. The lead author* affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

Our findings and recommendations are aimed at contributing to the generalizable knowledge that will enhance and improve care for pregnant women with SARS-CoV-2 and COVID-19. Thank you in advance for considering this work and please contact us if we can provide any further information.

Sincerely,

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Siobhan Dolan, MD, MPH

*Rasha Khoury, MD, MPH

Department of Obstetrics & Gynecology and Women's Health, 1695 Eastchester Road, Bronx, NY 10461

REVIEWER COMMENTS:

Reviewer #1: Excellent data but manuscript far too long.

Revised version shortened as able

Essentially everything I wanted to know about COVID in these patients is contained in the abstract. Therefore I would suggest reformatting as a research letter.

I respect this suggestion but this was a tremendous effort across many institutions with many collaborators who worked quickly while also being the leaders addressing the clinical implications of the pandemic in NYC ad imparting lessons learned in this work. In order to reflect that I believe we need to keep the manuscript as an original research article.

Also, have any of these patients been reported previously? If yes, would make that very clear in manuscript.

1. During manuscript preparation and submission to your journal, 33 women from NYP-Columbia have been reported in aggregate and without outcome data (report was regarding percent asymptomatic women uncovered with universal testing)

Sutton D, Fuchs K, D'Alton M, Goffman D. Universal Screening for SARS-CoV-2 in Women Admitted for Delivery. *N Engl J Med.* April 2020:NEJMc2009316. doi:10.1056/NEJMc2009316

2. The following manuscript on COVID19 severity among hospitalized pregnant women was published after our data collection and manuscript were complete and included 7 women from Montefiore; 6 women from NYU and 12 women from Mt Sinai (from our case series)

Pierce-Williams RAM, Burd J, Felder L, et al. Clinical course of severe and critical COVID-19 in hospitalized pregnancies: a US cohort study. *Am J Obstet Gynecol MFM*. May 2020:100134. doi:10.1016/j.ajogmf.2020.100134

3. In addition, 32 of the NYU patients were reported here (regarding detection of SARS-CoV-2 in placental and fetal membrane samples)

Penfield CA, Brubaker SG, Limaye MA, et al. Detection of SARS-COV-2 in Placental and Fetal Membrane Samples. *Am J Obstet Gynecol MFM*. May 2020:100133. doi:10.1016/j.ajogmf.2020.100133

Reviewer #2: The authors collated real-time data from 5 NYC L&D units at the epicenter of the pandemic. Abstract is straightforward and well-written yet 'most' seems to be understating when considering 97.5%. The fact that nearly all newborns test negative despite Mom positive is worth highlighting.

Agreed. Changed in line 51 and 59 to "nearly all" rather than "most" to reflect the 97.5%.

Intro

1 - Quite long, but flows well and chock-full of important background, timely data provided here

Methods

2 - It is a bit of a mixed bag in who was actually tested (line 116-120) which will have some implications in interpretation

This reflects the reality of the iterative learning, differential resources and evolution of testing availability and reliability during the unfolding of the pandemic/community spread of the virus. While it is a mixed bag from a research standpoint it reflects the clinical and health system reality. The lack of universal testing from the outset is a limitation of the study, however we made the *a priori* decision to include all laboring women, rather than just those admitted to L&D after universal testing was implemented. We agree that this skews the data towards more symptomatic SARS-CoV-2 positive women in the Montefiore/NYU cohorts. However, excluding MMC and NYU would drastically limit our sample size, especially in our Hispanic and black, non-Hispanic race/ethnic groups. We present these data as a descriptive early snapshot of the pandemic in NYC and acknowledge the limitations in terms of potential representativeness.

3 - The reader wonders how IRB approval was achieved so quickly, and across 5 centers in advance of a pandemic no one knew was coming

At all academic centers in NYC the IRBs stopped all non-COVID19 related research and created a fast track for review of COVID19 related proposals. The lead author produced the IRB protocol application and the REDCap database with feedback from collaborators which in turn was shared across institutional IRBs for efficiency. Our aim had been to include all hospital systems in NYC but the ones excluded could not get IRB approval in time. We continue to collect cases across all institutions for prospective data collection and learning.

4 - How/who collected the data (line 127)?

Data was collected through EMR chart review (real-time and retrospective) by research coordinators, fellows and faculty from each institution and entered into a single REDCap database. Data were aggregated at Montefiore/Einstein, de-identified and analyzed by the study statistician.

Results

5 - It is repetitive to list the percentages delivering at the NYC hospitals and also have it in Table 1 - this could easily be deleted from the text. (Removed). Demographic info is otherwise nicely summarized through line 166.

6 - Again repetitive to list all of the OB reasons for presentation and also more powerfully presenting them in the Table. Why did the other 26 (10.8%) present? The reader is left to wonder.

Addressed in text, remainder presented with gastrointestinal and influenza like illness symptoms

7 - It is not well displayed within the paper, but should be clarified: apparently 148 asymptomatic women tested positive - ok this is 1 category that includes data from hospitals 1-3, and also 4 after they converted over to universal screening; the other 93 had symptoms and were tested positive at all 5 hospitals...therefore 2 different categories with data collected differently. The data would be better presented by saying 148 were initially asymptomatic, and of these 102 (69%) remained asymptomatic throughout; 46 (41%) developed symptoms during hospitalization (what was the breakdown of these symptoms that providers best keep in mind during labor). Of the 93 symptomatic patients, 54 (58%) presented with a cough, etc...(line 170+).

Reorganized to help display this information better. The difference in testing strategies reflects the reality of learning, and the variation in resources, test availability and reliability across the city as the pandemic unfolded.

8 - More mixing and matching follows (line 175) and this is confusing due to the mixed bag of data acquisition - it would be most helpful to separate out the asymptomatic and symptomatic presentations insofar as is possible

The difference in testing strategies reflects the reality of learning, and the variation in resources, test availability and reliability across the city as the pandemic unfolded. As we made an a priori decision during data collection and analysis to include all cases regardless of testing strategies (this is a descriptive study) we present the data with that in mind (we are not attempting to make comparisons between the symptomatic and asymptomatic patients in this study but are describing outcomes in relation to disease severity once symptomatic). Follow-up case control studies of SARS-CoV-2 positive women after implementation of universal testing will provide the framework for comparisons between symptomatic and asymptomatic women.

9 - The escalating rate of PTL and also cesarean by severity of COVID would be best presented in tabular format (line 190-194) -Agreed moved from supplemental material to main table

Discussion

10 - This is quite a long section and the opening paragraph doesn't tell the reader much line 228-232 & the last sentence here belongs later in limitations. (Addressed)

11 - Paragraph #2 is indirectly related and after the opening 20 lines of text (line 226-246), very little of the actual data compiled in this study has been interpreted for the reader. Reorganized to communicate the relevance

12 - The authors call for universal testing, but considering this is at the height of the pandemic epicenter, they should qualify their recommendation - what about areas of (very) low prevalence? when would the authors advocate for scaling back universal testing at their sites?

Discussed with all authors who unanimously suggest that until the global pandemic has receded, regardless of local prevalence, universal testing would be recommended for labor and delivery admissions given the large number of asymptomatic women and the high risk of exposure and transmission on labor and delivery (to protect staff, other patients and newborns). If we are to scale back universal testing prevalence needs to be quite low globally and there need to be adequate local resources to address new outbreaks including bed/room availability, test availability and reliability, PPE availability. If scaling back universal testing would recommend expanding the list of inclusion criteria for selective testing including common obstetric complications such as chorioamnionitis and preeclampsia. Some authors suggested not scaling back universal testing until there are adequate treatments and a vaccine regardless of local prevalence.

13 - It would be helpful to know what PPE precautions were in place for these COVID-positive patients.

Eventually as we learned more about the transmissibility and number of asymptomatic patients and as we had more reliable supply of PPE we used surgical masks, N-95, face shields, goggles, gloves, and gowns for labor and delivery care of SARS-CoV-2 positive patients as well as for persons under investigation.

14 - It seems understating to say that cesarean rate 'may' have been drive by severe/critical COVID - the table suggests that is certainly was - is there any other theory?

Changed to "was likely driven by", as we did not audit each labor and delivery unit's culture of practice during the study period and the pandemic, the rate could have also been driven up by team stress, fatigue, change in unit culture, understaffing etc.

15 - Is there any pathophysiological statement to explain why COVID almost never is transmitted to the newborn

At this time, we do not have enough data to understand this. Could it possibly be related to low viral load at the time of delivery? As many were born via cesarean to women with more severe disease, did that decrease length of exposure to maternal tissues? Most women were infected in the late third trimester, was that not enough time for vertical transmission? OR was fetus infected but then recovered by delivery? It is also possible that nasopharyngeal swab at delivery is not the ideal time to evaluate vertical transmission. It will be interesting to see more data on neonatal antibodies as antibody tests become more reliable. Ongoing cord blood, placental and neonatal studies will elucidate this better in coming months.

16 - The info concluding with line 291 seems exactly in alignment with what we already know about the general population

Included this

17 - The lengthy paragraph line 293-304 is unneeded verbage - it's nice to say, but really has nothing to do with this study.

This is about the context of maternal health in NYC which cannot be spoken about without discussing the inequities in the burden of maternal and perinatal morbidity and mortality generally and those highlighted by inequities in the manifestation of this pandemic. As we learn more about the inequities in SARS-CoV-2 infection and COVID-19 severity and as eloquently discussed by Cleveland et al here* we wanted to draw attention to this critical point.

* Cleveland Manchanda E, Couillard C, Sivashanker K. Inequity in Crisis Standards of Care. *N Engl J Med.* May 2020:NEJMp2011359. doi:10.1056/NEJMp2011359

18 - Limitations mention false negative - how often were negative testers retested? Were they treated like normal L&D patients, or POL, or what

While all symptomatic women were treated as persons under investigation regardless of the SARS-CoV-2 PCR result it is likely that some number of asymptomatic women were missed. At the time of this manuscript writing we did not have enough tests available for repeat testing however with the arrival of more reliable testing ability women who test negative have repeat test done at every peripartum admission regardless of length of time from last test

19 - The paragraph line 319 reflects some of the skipping around found in this paper - it continues on a topic first mentioned in line 280, then dropped, then picked up here Reorganized

20 – The concluding paragraph could use some rewriting. Rewritten

There are a lot of tables that could use some condensing for clarity and page limit considerations

Thank you for your suggestions for table reorganization, reflected in manuscript revision

Table 1 - It is of interest the significant amount of missing data; Age is well acknowledged by Median - shouldn't need <25, 25-35, etc - same comment for BMI; I would favor breaking out presenting symptoms into a separate table, redoing the percentages with 93 as the denominator; The part on comorbidities is non-essential and could be moved to SDC - seems strange to consider Previous cesarean in the comorbidity list

Made edits above. Prior cesarean is listed in comorbidity list as it is a variable in the co-morbidity-based screening tool to predict severe maternal morbidity at the time of delivery as published here Easter SR, Bateman BT, Sweeney VH, et al. A comorbidity-based screening tool to predict severe maternal morbidity at the time of delivery. *Am J Obstet Gynecol*. 2019;221(3):271.e1-271.e10. doi:10.1016/j.ajog.2019.06.025

Table 2 could be moved in its entirety to SDC

Done

Table 3 has necessary data

Yes

Table 4 could be integrated with Table D by adding one additional column

Done

Table 5 could be better in sync with the text

It is reflected in text where appropriate

Table 6 could be moved to SDC as some of the P values are spurious (mode of delivery, pregnancy length)

Moved to SDC

Table C seems unnecessary as it is essentially same as Table 4.

Removed

STATISTICAL EDITOR COMMENTS:

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General, lines 308-311: It is difficult to interpret or generalize the calculations of proportions

asymptomatic, mild, severe etc since (1) the population was a mix of universal testing, only symptomatic patients tested and a transition from symptomatic to universal and (2) possibly changing prevalence of Covid-19 during the time period studied. It would be more informative to separate the universal testing cohorts from the others to arrive at a more precise estimate of proportions that were asymptomatic, mild, severe and critical (with respective CIs).

Addressed above but will repeat here as well. The various testing strategies reflects the reality of the iterative learning, differential resources and evolution of testing availability and reliability during the unfolding of the pandemic/community spread of the virus. While it is a mixed bag from a research standpoint it reflects the clinical and health system reality. The lack of universal testing from the outset is a limitation of the study, however we made the *a priori* decision to include all laboring women, rather than just those admitted to L&D after universal testing was implemented and so did not separate them out in the analysis. We agree that this skews the data towards more symptomatic SARS-CoV-2 positive women in the Montefiore/NYU cohorts. However, excluding MMC and NYU would drastically limit our sample size, especially in our Hispanic and black, non-Hispanic race/ethnic groups. We present these data as a descriptive early snapshot of the pandemic in NYC and not for purpose of comparison between symptomatic and asymptomatic SARS-CoV-2 infected women. We acknowledge the limitations in terms of generalizability

lines 196 and Table 4: Need to clarify for the reader that the PTB < 34 wks is a subset of the PTB < 37 wks, otherwise the %s total > 100% and the total count is > 239 births.

Clarified

lines 222-223, Table 4 and Suppl Table D: These associations (severe and critical cases vs rates of CD or PTB) are based on whether the distribution of counts deviated from random distribution, but the data were not tested for specific pairwise differences between the less severe and either severe or critical cases. In fact, it was only the critical group that was statistically different in terms of PTB rates, not the severe group. The other issues were whether there was sufficient power to establish a difference, to adjust for the prior histories of CD or whether there was a prior planned-for CD.

Thank you for this comment. We appreciate that the linear trend in preterm and CD rates over COVID-19 severity does not provide as much information as the pairwise contrasts between different COVID-19 severity groups. We have added this to Table 3 (3b and 3c). We agree that there are no observed differences between asymptomatic and mild COVID19 in terms of preterm birth rates or CD rates, which is not an unexpected result. We also agree that for preterm births, the only statistically significant contrast is between the two extreme groups (asymptomatic vs. critical COVID19), however we also observed a linear trend in both CD and preterm rates that should be further explored such that severe disease is associated with a 67% higher risk of preterm birth (p=.19) and a 62% increase in CD rate (p=.01).

Our goal with this analysis was to explore the potential relationship between COVID-19 severity and clinical outcomes. As this is a descriptive study, we did not power the study for any specific comparisons. The associations we observed need further study with a larger sample size and or control group as well as adjustment for the many potential confounders that could impact the observed relationships.

The cesarean deliveries for severe and critical COVID-19 patients were primary cesareans with the sole indication being worsening maternal respiratory status.

Table 1: Again, difficult to interpret or generalize, since only 81 (MSH)+27(ELM)+67(NYP-CU)= 175 were in that category, with some portion of the 39 from MMC. That is, the arithmetic is correct, but the sample is biased w.r.t. all Covid-19 laboring women in NYC at that time. So, all the description of % with various signs (table 2) and symptoms is also biased as are the findings in Table 3.

We are only suggesting percentages of our cohort (241 women) and not of all women admitted to the various labor and deliveries at the time of data collection

Same issues with Table 5.

Table 6: Cannot interpret due to issues previously stated with testing criteria.

Moved to supplementary material. This is descriptive only, we both recognized a priori and acknowledged in this manuscript that the lack of universal testing across all sites under estimates the number of women positive for SARS-CoV-2 however it is a reflection of research amidst an evolving novel virus pandemic where resources, knowledge, clinical guidelines and protocols are changing daily.

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3. Please spell out the acronyms of the hospitals where the women delivered: MMC, MSHS, MSH, MSW, ELM, NYP-CU, and NYU.

They are defined in line 125-129 but we have added the definition again in Tables

4. Your Discussion states, "...this early albeit largest report of pregnancy outcomes for women with SARS-CoV-2..." Please add details of a literature search to support this statement: databases searched, search terms, and dates (including years).

Removed the priority claim

5. For the references in your References list that contain URLs, please include the title of the content and not just the author. For example, in reference 1, in addition to "World Health Organization" as the author, add "WHO advice for international travel and trade in relation to the outbreak of pneumonia caused by a new coronavirus in China" after the author name as the title. In addition, change "Accessed" to "Retrieved."

Done

6. Be sure the abbreviations you use in your tables are defined the table footnotes, especially table 2.

Done

7. Rename each supplementary table an "appendix" ("Appendix 1," "Appendix 2," etc.). Be sure they are also cited this way in the body text.

Done where relevant

8. 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 <u>https://www.acog.org/About-ACOG/ACOG-Departments/Patient-Safety-and-Quality-Improvement/reVITALize</u>. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

I believe this is in reference to cesarean delivery \rightarrow changed to cesarean birth where appropriate in keeping with reVITALize. We have defined preterm birth as indicated in reVITALize

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Word count on title page (abstract 240; text 5370)

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