BMJ - Decision on Manuscript ID BMJ.2018.044966.R **Body:** 09-Sep-2018

Dear Dr. Khandwala

Manuscript ID BMJ.2018.044966.R1 entitled "The Association of Paternal Age and Perinatal Outcomes between 2007 and 2016 in the United States"

Thank you for sending us your paper. We sent it for external peer review again.

We hope very much that you will be willing and able to revise your paper as explained below in the reviewer's comments so that can reach a final decision. Could you please add some details requested by reviewer Brown but without carrying out additional analyses (perhaps a small table or box with references?)? Yours sincerely,

Tiago Villanueva Associate Editor tvillanueva@bmj.com

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** Comments from the external peer reviewers**

Reviewer: 1

Recommendation:

Comments:

Good rebuttal, my comments have been incorporated. Support acceptance in its present form.

Additional Questions:

Please enter your name: Henk Groen

Job Title: Epidemiologist

Institution: University Medical Centre Groningen

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

Fees for consulting?: No

Have you in the past five years been employed by an organisation that may in any way gain or lose financially from the publication of this paper?: No

Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper?: No

If you have any competing interests (please see BMJ policy) please declare them here:

Reviewer: 2

Recommendation:

Comments:

The authors have addressed all major concerns with this manuscript or explained in their response letter why it was not possible to do so. I feel the reporting is a lot clearer and the manuscript is consequently much improved.

Additional Questions:

Please enter your name: Sohinee Bhattacharya

Job Title: Senior lecturer in Obstetric Epidemiology

Institution: University of Aberdeen

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: Yes

Funds for a member of staff?: Yes

Fees for consulting?: No

Have you in the past five years been employed by an organisation that may in any way gain or lose financially from the publication of this paper?: No

Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper?: No

If you have any competing interests (please see BMJ policy) please declare them here:

Reviewer: 3

Recommendation:

Comments:

The authors have addressed most of the issues identified. I still think the biggest issue with this paper is the correlation between paternal age and maternal age and the possibility that advanced maternal age explains the study's findings. Most of my comments relate to the need to disentangle these effects and to provide more details about the plausibility of and mechanisms for an association with paternal age.

Abstract: The abstract should mention whether maternal age was taken into account in the findings presented.

Introduction: How do the paternally imprinted genes expressed within the placenta impact fetal and maternal health? I would like to see a more detailed explanation here.

Methods: The authors added an explanation to the "outcomes" that they were chosen based on what had previously been examined in relation to paternal age and what was available in their data. I am not sure this is adequate. I am still left wondering what the possible biological explanation is for some of these variables being associated with paternal age. I think there needs to be a fuller explanation here or in the Introduction, even if briefly, to provide context for the choice of outcomes.

Discussion: The odds ratios really are quite small. I think that the public health importance of the findings needs to be discussed within this context.

Additional Questions:

Please enter your name: Hilary Brown

Job Title: Assistant Professor

Institution: University of Toronto

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

Fees for consulting?: No

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Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper?: No

If you have any competing interests (please see BMJ policy) please declare them here:

Reviewer: 4

Recommendation:

Comments:

The authors have adjusted their manuscript to answer all the reviewers' comments and I believe this version is ready for publication in the BMJ.

Additional Questions:

Please enter your name: Rafael Perera

Job Title: Professor of Medical Statistics

Institution: University of Oxford

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

Fees for consulting?: No

Have you in the past five years been employed by an organisation that may in any way gain or lose financially from the publication of this paper?: No

Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper?: No

If you have any competing interests (please see BMJ policy) please declare them here: none