Title: Assessing fetal growth impairments based on family data as a tool for identifying high-risk babies. An example with neonatal mortality

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Author's response to reviews: see over
Dear Editor

Thank you very much for the provisional acceptance of the paper, and the reviewer’s helpful comments. We have modified the manuscript according to all the reviewers’ suggestions, and we hope that the manuscript is now suitable for publication in BMC Pregnancy and Childbirth. Below please find a detailed description of the changes made, as well as our responses to the points raised.

Please find attached the revised version of the manuscript and the electronic version of the figures in the manuscript.

I look forward to receiving your response.

Below, the reviewers’ comments are shown with *italics* typeface, while our response is shown with **bold** typeface.
Reviewer 2: Robert Platt

Comment 1:
Discretionary Revisions (which the author can choose to ignore)
1. In the box describing the model, move "where" from the first line to a second line by itself.

Response:
We have changed the text as suggested

Comment 2:
2. Further to my original comment 4 - you may want to state this (that you're using Poisson but interpreting as a relative risk).

Response:
In the method section we inserted the following text: “Though, we acknowledge that the reported relative risks are in principle incidence rate ratios, we prefer to refer to these as relative risks as most readers are familiar with this term.”
Reviewer 3: Russell Kirby

Comment 1:
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
On Figures 1 and 2, the authors misunderstood this reviewer's comment. Instead of '2.n.d', replace with 'second' and instead of '1.s.t', replace with 'first'.

Response:
We have changed Figures 1 and 2 as suggested

Comment 2:
Discretionary Revisions (which the author can choose to ignore)
On p 7, where the authors discuss mixture modeling, were any attempts to fit mixture models with more than two components made? This reviewer is working with a group that has used US national data and has a manuscript showing that for most populations, four component mixture models give a better fit to the data than do two component models. Given that this is an emerging area of research, the authors needn't change their text in responding to this question, but in the interest of science this reviewer would like to know if this was considered.

Response:
In the method section we have inserted the following section: “Initially, we investigated the assumption that the variance of the second-born babies birth weights were the same across all first-born’s gestational ages. Though, significant variation was observed, the estimated variance seemed to vary at no meaningful pattern, and we thus decided not to included this term in the model.”

With the large amount of information available to us, we cannot rely entirely on the estimated P-values as these may be too specific. Using a large study population we may find that a relative risk of 1.01 is significantly different from 1.00; such a finding should in most situations be regarded as irrelevant. Generally, statistical methods are wanted that both rely on differences in the obtained fit and on the magnitude of differences we are concerned about.

For further details please contact the first author of the study.