Reviewer’s report

Title: Poverty, urban-rural classification and term infant mortality: A population-based multilevel analysis

Version: 0 Date: 12 Oct 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Could an appropriately REVISED version of this work represent a technically sound contribution?

Probably - with minor revisions
GENERAL COMMENTS: This is in my assessment: a very relevant and very well conducted analysis. A strong paper.

REQUESTED REVISIONS:

I have read this paper with great interest, and highly value the efforts made and the approach taken by the authors. In essence, the authors confirm the overall high neonatal and infant mortality in term cases in the US, with a significant, but also strong association to poverty (OR up to 1.8), even in term cases.

This really is a call to action observation, since it is very reasonable to assume that the overall infant mortality in term cases should be 'the best' outcome, and this signal is likely only to be worse if we also consider preterm delivery and subsequent outcome (both mortality and morbidity).

I have read this paper with a background of a non US colleague (at least at present not active in the US), and therefore I do have some suggestions/considerations to further improve the messages, also for non US readership.

We adjusted for medical payer source (Medicaid yes/no) as a proxy for individual income to further isolate the effect of county poverty from individual socioeconomic status = please elaborate this a little bit more, since the Medicaid is a specific US topic (why is this a proxy).

It is worth to add a 'map' of the US to highlight all the states/counties with the different 'poverty' levels, to get an idea on the granularity of the data, and to highlight the national relevance of this paper?

The increase in OR is very 'steep', so not only the overall mortality rate is rather high for a high income country, but also the relationship between poverty and mortality is strong. How does this second aspect compares to eg. the Swedish data discussed in the discussion section.

Minor:
Figures as provided are hard to read, please check on quality of these documents.

ADDITIONAL REQUESTS/SUGGESTIONS:

Minor suggestions are provided above to further improve the paper.

Note: This reviewer report can be downloaded - see attached pdf file.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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