Reviewer’s report

Title: Different levels of associations between medical co-morbidities and preterm birth outcomes among racial/ethnic women enrolled in Medicaid 2014-2015: Retrospective Analysis

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Reviewer: P Dwarkanath

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PRCH-D-19-01447R1- Research Article

Title: Different levels of associations between medical co-morbidities and preterm birth outcomes among racial/ethnic women enrolled in Medicaid 2014-2015: Retrospective Analysis

The study has examined the different levels of association between preterm birth outcome and major medical co-morbidities among various racial/ethnic women enrolled in Medicaid. The authors have shown that the preterm birth rate was observed to be high in black women even after controlled for age, prenatal visit counts, and medical comorbidities.

General comments:

This manuscript is more of a descriptive analysis, only referring to the incidence of preterm births on adjusting to co-morbidities and other parameters during pregnancy. There is still a lacuna on various other determinants of preterm births which is not captured or mentioned.

Major comments:

The objective of the study was to examine the association of preterm births. However, there is a lot of discussion on the 0-12 weeks postnatally. What is the premise of this discussion? This information can be misleading.

The authors mention that "The current study found that drug dependence was associated with a higher preterm birth rate in black women whereas diabetes was associated with a higher preterm birth rate in Hispanic women". There is no genetic morphology assessment or any other supporting details to confirm that racial component is predominant determinant of preterm birth.

Minor comments:

Types of preterm births not defined. By definition, preterm is \(<37\) weeks of gestation, as well as early preterm which are at 28 weeks with complications and difficulty in survival.
There is a mention of number of prenatal visits and its association with preterm births. But the authors have not defined the clinical examination during the prenatal visits. This is an important as the clinical intervention can help in improving the birth outcomes particularly the preterm birth.

Explain:

'A multi-state study found that merely increasing obstetric providers was not associated with increased utilization of office-based prenatal care by black Medicaid enrolled pregnant women'. So, number of prenatal visits and obstetrics providers may not add significance to the association of preterm births.

Page 16, lines 18-20. Funding sentence is incomplete.

Mention the n's for table 1 and not only percentages.

For figures 1&amp;2, mention the legends on Y axis.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**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

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
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