Reviewer's report

Title: The Impact of Prenatal Care and Ethnicity on the Incidence of Preterm Birth in New Mexico

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Reviewer: Lynne Messer

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BMC Pregnancy and Childbirth
Title: The impact of prenatal care and ethnicity on the incidence of preterm birth in New Mexico.

This paper sought to explore the risk factors associated with preterm birth among women represented in New Mexico birth records for the years 1991-2005. They replicated many of the known associations represented in the literature.

I thought this was an interesting and well-written paper. I have a few comments, which I think if addressed, will strengthen the paper.

MAJOR COMPULSORY REVISIONS

The authors have data on an interesting and underrepresented population but are overly generic in their presentation of the material. The background replicates the epidemiology of preterm birth that is well-known among reproductive / perinatal researchers and therefore does not make a meaningful contribution to the literature. The authors could reframe their background material to highlight the significant contribution they are poised to make (the associations among Hispanics and Native Americans) and have a much better paper.

In a related matter, it is not helpful to provide the laundry list of possible consequences of prematurity. Without some reference to the population of interest, it seems like a throwaway paragraph.

The authors need to be careful about suggesting genetic explanations to complex and multifactorial problems. If they are going to indicate “….researchers to postulate that there might be a genetic component to preterm birth.” they need to provide a reference for that claim. Further, lots of other researchers have noted the probable social causation of adverse birth outcomes. I think it makes the authors look a little simplistic to present only one side of the argument.

In describing the preterm birth trajectories over time, the authors note the increases among Hispanic and Native American women. Since this information is going to be important for your material, it would be better to spend more than one sentence describing this trend and lose some of the generic background material that has been included.
The authors provide somewhat frequent assertions throughout the paper (e.g., “…and because it has been previously shown to be a good indicator of SES” without providing any references to the previous literature. This should be corrected throughout the paper.

Regarding the maternal conditions, many of these variables are poorly collected on the birth record. It is not clear why the authors would want to include all of them, given their rarity. Just because the variable is available on the birth record is not a good reason to include it. Further, literature exists as to the quality of various elements of the birth record. The authors could refer to it to guide your choice of variables to include / exclude. It would also be helpful if the authors would provide definitions of many of these, since not all are sufficiently common to be widely known.

In the results, it is not clear if any of the result are adjusted. Please clarify.

In the discussion, ties to Native American and / or Hispanic findings would be helpful. A summary of the statistically significant results (many of the paragraphs) is not that helpful, given the considerable literature devoted to the epidemiology of preterm birth.

MINOR COMPULSORY REVISIONS

Why did the authors not use a “==high school” education categorization? Graduating from high school is an important transition in the U.S. and those with “some high school” are very different from those “completed high school.”

The fact that a temporal trend is noted in the data suggests an indicator variable for “year” is warranted. It is not clear if the authors included this variable in their models.

Odds ratios should be graphed on the log, not natural, scale.

ANSWERS TO SPECIFIC QUESTIONS

1. Is the question posed by the authors well defined?
2. Are the methods appropriate and well described?
3. Are the data sound?
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
5. Are the discussion and conclusions well balanced and adequately supported by the data?
6. Are limitations of the work clearly stated?
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
8. Do the title and abstract accurately convey what has been found?
9. Is the writing acceptable?
The answers to all of the above questions are yes, with the possible exception of question 7. The authors do not note any other work on which they are building, which I take to mean they have not built upon other work, but am not entirely positive.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

i declare that i have no competing interests