Reviewer's report

Title: Exposure to cooking fuels and birth weight in Lanzhou, China: a birth cohort study

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Reviewer: Mukesh Dherani

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The researchers have assessed a very important theme which is a cause of one of the highest mortality rate in the lower income countries. The research question is well defined and research carried out in sound manner. However, some major questions need to be answered before it is suitable for publication:

Methods:
1. What is the catchment area of the population? How generalizable are the results for the Gansu Province?
2. Did the pregnant women come to the hospital from whole province or just the catchment area?
3. It is not clear if the study design was retrospective cohort or prospective cohort.
4. What are the reasons that 26.6% of women who did not participate in the study? Do we know their baseline characteristics to compare with those who participated?
5. What are the proportions of women who were excluded by each category? Are those women with missing birth weight similar to those who participated in the study?
6. Sample size calculations were not mentioned. How did the researchers reach this number given very little use of biomass fuel?

Results:
1. Table 1 describes results for 9231 newborns with information on birth weight and 8521 with information on SGA. Methods section suggested final analysis was based on 9895 pregnant women. Please describe the reasons for this discrepancy.
2. Table 1 is not distribution of characteristics it is actually a univariate analysis (presumably done retrospectively). You would rather like to assess the distribution by fuel type.
3. I am not sure if stratified analysis in table 4 is meaningful given the small numbers.

Discussion:
1. Please describe the impact of relatively less prevalence of biomass use/ or high gas use on the results.

2. You need to discuss the importance of measuring of household air pollution given huge variations in exposure and also the availability of technology.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'