Reviewer’s report

Title: Adolescent deliveries in Rural Cameroon: an 8-year trend, prevalence and adverse maternofoetal outcomes

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Reviewer: Elizabeth Mason

Reviewer's report:

The paper is of interest as it contributes to the overall understanding of outcomes of adolescent pregnancy in rural settings. However the paper lacks in-depth analysis and explanation of the findings.

Specific comments

1. Background - The background would be enriched by some primary analysis of data e.g. from census or DHS/MICS - current references are from previously published data. Line 35 - wrong contraceptive - is a judgment call -. Line 37 consequently - infers that the outcomes are a result of the practices in the previous sentence, this needs to be rephrased. Line 47 - analysis of the primary data of DHS/MICS, or census should yield provincial or urban/rural differences. The last sentence of the background should be rewritten - is marriage protective?

2. Methods:

The methodology needs greater explanation of the total expected delivering in the health district, proportion conducted overall in health facilities, and the proportion conducted in the 2 facilities selected. The numbers at the hospital and health centre and if there is a referral system between the HC and hospital. Also if the hospital receives referrals from other HCs. As caesarean section is used as one variable, do we assume this is only conducted at the district hospital? The Health Centre is staffed by a nurse - ? trained in midwifery?

Having an overall picture of the population from which the sample is taken, will enable better interpretation of the results.

3. Data collection:

The authors only included 77% of the total deliveries recorded during this 9 year period. This is potentially a huge selection bias. At least including the rationale for the exclusions will be
important. (have they been separately analysed and been shown there is no difference between adolescents and women >20 years).

Suggest the data on 2nd degree perineal tear be separated from the 3rd and 4th degree tears, as the long term adverse outcomes of these are much greater.

4. Results:

Line 19/20 the description of the married adolescents about - infers the marital status is not known in all. Is this the case?

There is no analysis of education level in the results tables - this will be important also in comparison of married and unmarried adolescents. Given the downward trend of adolescent deliveries over the years of the study, it would be useful to include information on whether there have also been trends in the adverse outcomes, or differences in referral patterns, health facility usage and CS rates. If there is no difference this can be commented on without necessarily adding to the number of tables. In addition the difference between deliveries in the health centre vs the hospital. This will add to the depth of the paper and an understanding if some of the adverse outcomes are also associated with the level of facility.

5. Discussion:

The discussion of the trends in adolescent pregnancy over time in relation to the rest of the country, and in relation to the government policies and programmes should be included. The current discussion on these findings line 21-32 indicated the government programmes are warranted, but not if they are already being implemented.

Given the comments on the methodology, data collection and results above, the discussion can be enriched by further analysis as suggested.

6. Study limitation:

This limitation is only valid if the proportion of adolescents using facilities are the same as those of adult women, also if the 25% of files excluded from the review do not have a higher proportion of adolescents. These points should be addressed.

7. Conclusion:
The conclusion needs to include some explanation of the downward trend over time, and to be adjusted in light of comments above.

8. Tables - a number of the tables contain simple errors in the totals, percentages, definitions (LBWt is < 2500g). These all need to be carefully reviewed and addressed.

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