Reviewer’s report

Title: Prevalence and patterns of cigarette smoking before and during early and late pregnancy according to maternal characteristics: the first national data based on the 2003 birth certificate revision, United States, 2016

Version: 0 Date: 27 Jun 2019

Reviewer: Laura Llambi

Reviewer's report:

General comments

The paper provides good information about a subject that has already been widely reported (maternal smoking and its patterns), but it is the first in the US to report data based on a nationally representative registry. The manuscript is clear in presenting a sound introduction, identifying what the paper is adding to what is already known. Overall the methodology seems sound, and in our opinion the study has two main strengths. First, it has good generalizability to all the United States. Second, it uses 7 categories of smoking status plus pre-pregnancy use; that clearly describe the whole spectrum of tobacco use in pregnant women, better than previous studies, and thus exploring these patterns which are unique to tobacco use during pregnancy and differ from adult or youth general patterns/statuses.

However, some aspects need to be improved/ discussed:

Abstract:

The authors states in the abstract that "The highest smoking rates in pregnancy were among non-Hispanic White women (76.33%), women 25-29 years old (33.01%), and women with a high school education (41.57%)."

I found those figures somehow confusing or misleading. After reading the whole paper, it is clear from Table 1, that that considering 100% as the whole population who smokes during pregnancy, 76.33% of these women are non Hispanic White, but as stated in the abstract, it looks as if that was the smoking rate of that group, which is in fact much lower. Same comment for the other two categories mentioned in that paragraph. Those figures are not mentioned again in the main text, only in tables. Therefore, considering that importance of a good abstract that reflects the main quantitative results of the paper, the author should consider changing or removing that specific paragraph of the abstract,
Results:

The author introduces discussion or comparisons with existing literature in lines 227-229 and 247 -250. I feel this section should present their results exclusively, and move those comments and considerations to the Discussion section. In fact, part of those comments (..complete smoking cessation…rather than reduction…) is repeated afterwards in lines 310-312 in the Discussion itself.

Discussion:

In line 322 the author states that …. "Disparities by age and education may be attributable to understanding harms related to tobacco exposure". I consider that sentence inaccurate or at least not very comprehensive. It has been described that smokers in general show high levels of knowledge about harms related to tobacco use, so it is unlikely that this factor explains the difference. Other variables such as being or nor primiparous; motivation to quit or awareness (better than understanding) of harms, could be also playing a role. Smoking in pregnancy is known to be influenced by much broader inequalities that are hard to be measured by registries ( attitudes, access to health services, poverty, cultural beliefs, etc). I would suggest expanding on those issues.

In line 325 the author mentions that "Current evidence is insufficient regarding cessation treatments options that could be recommended to pregnant women (eg. bupropion, varenicline)" which is absolutely true. In addition to this fact, it could be added that proved cessation interventions such as counseling, feedback, financial incentives have positive but limited efficacy, which have shown to be even less effective in real world scenarios. (references below)

Finally, I recommend accepting this manuscript, provided these minor corrections are done.


Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field
**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests'

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal