Reviewer’s report

Title: Implementation Challenges for an Ethical Introduction of Noninvasive Prenatal Testing: A Qualitative Study of Healthcare Professionals’ Views from Lebanon and Quebec

Version: 0 Date: 14 Nov 2019

Reviewer: Eline Bunnik

Reviewer's report:

This paper offers insight into health professionals' views of the barriers to the implementation of NIPT in two distinct healthcare systems. This is a timely topic as NIPT is in the process of being introduced in many healthcare systems around the world, and the views described in this paper will be of interest to those who are studying or shaping this process. The paper is nicely written. I have some minor concerns:

- It is not clear from the abstract and introduction what exactly the study is meant to describe; the abstract, for instance, refers to all of these: "the various considerations in place", "challenges and considerations", "barriers and considerations", "implementation considerations". I am not sure what 'considerations' is supposed to refer to: is it moral concerns? It would be preferable to choose and commit to one of these terms, 'challenges' maybe.

- The order of the presentation of the results may need reconsideration. There are 3 topics that the authors consider to be common to both countries (though something has gone wrong with the numbering: 1 financial/economic, 3 societal and 4 organizational/educational), and two considerations the authors deem specific to either the Quebec setting or the Lebanese setting. They agree, however, that on page 18 (bottom) that there are discrepancies between ways healthcare professionals perceived and addressed these challenges. I would suggest, for clarity, to merge these 'specific implementation considerations' with the rest of the results section, e.g. profit can be grouped under financial/economic, lobbying - I would say - can be grouped under societal, geographical access can be grouped under organisational/educational. Lebanese legislation contra abortion can be discussed in the introduction.

- The discussion is not sufficiently clear and concise and sometimes the authors are a little too quick with their conclusions, for instance: "This could be contextualized by the fact that the Lebanese healthcare system is a hybrid one and prenatal test are covered only for those who benefit from a certain form of coverage. NIPT introduction will thereby reinforce the existing disparities and exacerbate the inequity in accessing prenatal testing."

- The abstract and introduction start out a little too ambitious. I am not convinced that the study succeeds in establishing "the need for developing local as well as international frameworks that can guide NIPT in an ethically sound manner". It does show that there are challenges, both practical and moral, and that these differ between healthcare systems. This is interesting. But it does not establish these normative claims.

- please critically revise the discussion, e.g: I think that disparities may not be more pronounced in Quebec (p. 19, bottom), healthcare professional express concerns about these disparities more pronouncedly. E.g. top of page 21: Sex selection should be distinguished from termination of pregnancy in case of sex chromosome abnormalities. E.g. the sections line 9-20 are not clear. Findings
show for instance that professionals are worried about education but not that it is required. Top of page 22, "the lengthy absence of a law, as well as a Lebanese code of ethics..." I am not sure whether 'pressures and incentives' do apply to the Quebec setting.

- some minor things: it has not been explained what AUBMC is (page 16), there are references in the results section that had better be moved to the discussion, at some point (e.g. top of page 19) references are lacking, the authors may wish to language-edit the manuscript one last time to correct minor language errors.

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

Yes

**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.

Yes

**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

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

**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 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