Reviewer's report

Title: Pain medication during labour: which pain relief do women prefer and what do women use? Part of a prospective multi-centre cohort study

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Reviewer: Paloma Toledo

Reviewer's report:

This prospective multi-center cohort study by Klomp et al evaluates analgesic preferences and actual use patterns of 1,511 women who were part of a larger study (the DELIVER study). The authors used univariable and multivariable logistic regression methods to evaluate demographic and clinical characteristics that were associated with intended and actual use of labor analgesia. The authors found that very few women preferred pharmacologic pain relief, and only 15% of the women surveyed used pharmacologic pain relief. Ethnic background and planned place of birth were associated with preferred use of pharmacologic pain relief, and place of birth and parity were predictive of use of pharmacologic pain relief. This study is very unique in that it is a relatively large cohort from the Netherlands, which, in contrast to the United States has a culture of natural childbirth. I do have some questions and methodological issues that I will outline below by section.

Mandatory compulsory revisions:

Introduction:
1. I am a practitioner in the United States, and as such, am unfamiliar with the analgesic options that are available to patients who choose to deliver at home. Could the patient receive intravenous opioids if they opted for a home birth or epidural analgesia? From the way the introduction is written, it seems that all patients who are desirous of pharmacologic analgesia (I am assuming you mean opioid and neuraxial analgesia) would need to deliver in a hospital. As such, I don’t understand why the second multivariable model (actual analgesia use) would include patients who opted for a home birth as it seems that these patients could not have chosen to use this method of analgesia. This could affect the outcome of analgesic use if the choice of home birth precludes some or all of these options.

2. In the 7th line of page 5, consider rephrasing the sentence that starts with “Dealing with pain…” to something more on the lines of, “Labor pain management can be achieved through…” as the way it is currently written sounds colloquial.

Methods:
1. Consider changing the word clients to participants throughout the text.

2. What was the content of the three questionnaires? Is it possible to make them
available as an appendix or an online supplement? There may be other variables that you want to include from the survey depending on the content of the survey.

3. Were patients who ultimately delivered via cesarean delivery included or excluded from the sample?

4. How is level of education categorized? You may want to use the actual cut-offs used to define the educational levels, as this would improve your external validity.

5. Just to clarify, if I am born in the Netherlands, but my mother is Cuban and my father is from the Netherlands, I am considered non-Dutch? I would think that culturally I would be Dutch since I was born and raised in the Netherlands, and probably speak Danish and not Spanish, since my mother is living in the Netherlands. I realize that this is not your definition, but you may want to reanalyze your data using country of birth to define Dutch/non-Dutch as the Statistics Netherlands definition seems overly exclusive.

6. How was the question on pharmacological pain relief asked? Was this a yes/no question, or were they given choices and asked if they planned on using any/all of the options? This has implications for the data analysis.

7. You may want to include your model discrimination and fit indices in your methods and results.

Discussion:

1. Is there a cost difference, or any other reason, that someone who wants pharmacologic pain relief would not want to use obstetrician led care or deliver in a hospital?

2. Why did 85% of women who wanted pharmacologic pain relief not receive it? Is this a systems issue (analgesia not available to them, or they could not deliver in a hospital for some reason), is this a provider issue in that midwives are resistant to transferring patients to facilities that can deliver analgesia, or is it that patients changed their mind?

3. Do you have any information on what the multiparous patients used for their prior delivery analgesia? This would likely affect what form of analgesia they use for this delivery.

4. The very last paragraph of the discussion seems to repeat much of what has already been stated. Consider editing for brevity.

Level of interest: An article of limited interest

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 interest