Reviewer's report:

Title: Who makes the cut? A comparison of rates of and reasons for caesarean section in England and Australia

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Reviewer: Jane Ford

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This paper uses survey data from Australia (Queensland) and the UK to compare caesarean rates and differences in reported reasons for caesarean section (CS). This is an interesting use of survey data for cross-country comparisons, although the assumptions and limitations to this approach should be made more explicit.

- Major Compulsory Revisions

1. A key assumption of the paper is that women can reliably report the indication for caesarean section. While the limitations section includes reference to other research highlighting the congruence of maternal self report and medical records on indicators such as mode of birth and reason for caesarean, this should be presented earlier in the paper with specific findings on congruence/disparity in relation to reason for caesarean highlighted. In addition, congruence between maternal self-report of CS indication with medical records may not be the same as congruence with clinician report. A statement about the assumptions, limitations and potential biases of self-report of caesarean indication and in relation to this other cited research should also be added to the paper.

2. While for some caesareans there may be one main indication, in many cases there may be a number of reasons that collectively tip the decision toward a caesarean birth. These may include both maternal and fetal reasons (e.g., some hypertension, small for gestational age baby and failure to progress). While this was acknowledged in the final paragraph of the discussion, further (and earlier) discussion about how women’s understanding of the indications may differ from clinician understanding is warranted. For example, it may be that women are more likely to assign proximal reasons (failure to progress, fetal distress) than more distal reasons (maternal health concerns) in the case of intrapartum CS.

3. There are some problems with the comparability of the specified reasons for caesarean. The authors have retrospectively developed comparable categories based on ‘other’ responses. This is not the same as presenting women with the same lists and were the questions exactly comparable, some women may have selected different options. This limitation and the potential bias (particularly in relation to carer recommendations/hospital policy for UK respondents) should be added to the limitations paragraph.

4. The response rates (54.1% UK, 34.2% Queensland) are quite low. A comment on the response rates and likely impact on findings and generalizability should be
added to the paper. While apparently generally representative of the birthing population, the UK sample had higher proportions of older women than Queensland and the Queensland sample included more women giving birth in private hospitals, with multiple pregnancies and pregnancy complications.

5. Did the authors have any information on the hospital of birth – were there similar proportions of women in each sample giving birth in ‘tertiary’ centres (caring for a higher risk population)? Is it possible that a higher proportion of women in Queensland were treated in high risk settings (given the higher prevalence of maternal complications) and would these women be counselled differently about their reason for CS?

6. Some face validity could be added by comparing intrapartum and pre-labour caesarean rates and previous caesarean rates based on women’s report with population based reporting on these rates (rather than only mentioning that they are comparable in the limitations section). Population based rates of previous caesarean are available in the following:


- Minor Essential Revisions

1. The authors present the questions used to compare mode of delivery, but not those used to categorise labour onset which is a key part of this paper (particularly the comparison of pre-labour and intrapartum caesareans). Please provide details of the labour onset variables from each setting.

2. The algorithm for identifying a main indication includes a category ‘fetal health’ which appears distinct from fetal distress, however the checklists of possible reasons do not list a fetal health component separate to fetal distress. Please explain this discrepancy.

3. Table 1 would be better to present the p value for chi square tests than the #2 result in the last column.

4. It is not clear why additional columns for % of all births are included in Table 4. Why present the reason for caesarean indication and include vaginal births? Shouldn’t the comparison column be for all caesarean births?

5. While logistic regression analyses are undertaken, the results are not included in Table 3. It would be preferable to have these adjusted results in the table (rather than just the text) for ease of comparison for the reader. Further details about the logistic regression analyses are warranted – did you use forward or backward elimination, what was the P value for inclusion of variables?

- Discretionary Revisions

1. While a catchy title, ‘who makes the cut’ is not really the focus of the paper. I would suggest dropping this part of the title.
2. The discussion focuses heavily on the discrepancies in women’s self report of caesarean indication and the respective guidelines in the UK and Queensland. Given that the indications are based on women’s self-report of specific indications (the validity of which is unknown), I would have expected the discussion to attribute differences in reported reasons to more than just differences in guidelines and training. Is it likely that women are counselled differently in different settings about the reason for their CS? Why is it that in the context of suspected similar rates of breech presentation, there is such a discrepancy in the proportions of women in each setting ascribing this as a reason for CS? The differences between the samples in level of maternal education (not taken into account in analyses) could also be associated with variation in ascribing reasons for CS.

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

**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 I have no completing interests.