Reviewer's report

Title: Intelligent Structured Intermittent Auscultation (ISIA): Evaluation of a decision-making framework for fetal monitoring of low-risk women

Version: 1 Date: 12 March 2014

Reviewer: Deborah Davis

Reviewer's report:

Thank you for the opportunity to review this interesting article. The article is well written and reports on an educational intervention that aims to promote the use of IA for low risk women in labour; a monitoring technique that has been shown to be most appropriate for this cohort of women. This work is timely and important given the ubiquity of CTG monitoring in the hospital setting for all women despite the evidence which demonstrates detrimental effects of routine CTG use in a low risk population.

Discretionary revisions

1. I was at times confused about the term “eligible women” though the article very clearly explains that this refers to women who were eligible for IA. I thought that “low risk” might be a term that is more familiar to the readership though if this term were used it would also require definition (defining what it means in terms of this study).

2. Background page 3; consider replacing “dangerous practice” with something like “has been shown to be detrimental….”

3. Background page 4; consider replacing “critical synthesis of the principles of these guidelines” with “critical synthesis of these guidelines”

4. The tables are quite long and I wondered if having a row for both “yes” and “no” responses was necessary since the “no” responses can be calculated if you just provided the “yes” numbers and proportions. This would halve the length of the tables.

Minor essential revisions

1. Setting page 5; it would be useful to add a paragraph that describes the hospital setting in which the study was undertaken e.g. tertiary level hospital in a major city etc.

Major compulsory revisions

1. Phase 2 Intervention. The last line of this section refers to feedback from local, national and international midwifery exerts. It would be useful to provide more detail about how this was achieved.

2. The first paragraphs of the discussion repeat the study findings. The discussion does not situate the study findings within the context of other relevant national or international literature.
3. Page 11 states “in eligible women who received CTG monitoring instead of IA, the caesarean section rate was higher”. This is an interesting point. Was this difference statistically significant? Did the authors test this comparison? Please clarify this point.

4. Conclusion. I am not sure that the data supports the conclusion that the ISIA informed decision making framework supported midwives to make changes to the culture of the organisation. This statement needs better support.

5. The conclusion draws in some interesting qualitative material for example; “in both formal and informal feedback, midwives stated that exposure to the education session and ISIA framework challenged them to think differently….”. The methods section describes a pre intervention focus group but it is not clear from where the formal feedback is derived post intervention. This new piece of information would also be better placed in the findings section of the paper.

6. Table 1. Last lines comparing self-employed and hospital midwife. I am not sure from which comparison the p value is derived. It is comparing the self-employed midwife results pre and post intervention or the employed midwife pre and post intervention or is it comparing the employed and self-employed midwife? Could this be clarified.

7. Table 2. “Maternal pulse noted” first column seems to have an error with the proportions (44.5% yes and 95.5% no)

8. Table 3. “Duration” there is an error in the “no” row where 989.1 should read (89.1)

9. Table 3. “Uterine activity duration”. Correct error in bracket

**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 that I have no competing interests'