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: 11 March 2014

Reviewer: Valerie Smith

Reviewer's report:

This is a comprehensive, interesting study that is highly applicable to current midwifery practice. I have a number of suggested revisions that you might consider as follows:

Major Compulsory Revisions

1. Throughout this paper there is reference to CTG use during labour, the admission CTG and then simply the CTG; this makes it confusing for the reader to determine what type of monitoring is being evaluated and/or discussed at that time. It would be important, for clarity, that you are explicit on what exactly is being evaluated (e.g. many women may have CTG on admission but then have IA during labour or vice-versa); for example, on page 3, 2nd paragraph, line 1 - you refer to monitoring during labour, but then in line 3 you refer to the admission CTG as if was the same thing; similarly on page 8, you state that there was a relative increase of 12% in the use of IA for eligible women, and then in the discussion, page 10, 3rd paragraph you state that fewer low-risk women were exposed to admission CTG and this finding sits alongside a relative increase of 12% in IA use; but is this 12% not related to monitoring by IA during labour or is it referring to IA on admission with signs of labour? – So the question is, is this study about the effectiveness of the intervention on IA use on admission and during labour (together) or IA either on admission or during labour separately? You have to look hard to find this and it is not really clear – although page 7 refers to challenging decisions for non-clinically indicated admission CTG? Perhaps if you defined the term admission CTG, defined continuous monitoring during labour (to differentiate) and then consistently used the terms in the paper, or in your setting is monitoring during labour a continuum of admission CTG, and if so, then this need to be made clear (as they are differentiated in other units internationally).

2. Page 8 – the results for the total sample (pre and post intervention) of 615 are provided; this does not make sense in the context of this evaluation; rather these should be separated out; i.e. the number, and proportion, of women who received IA, CTG monitoring (is this during labour and should there be a separate number/proportion for admission CTG?), and women receiving no monitoring separately for pre-intervention and post-intervention.

Minor Essential Revisions

1. Page 3; regarding - the use of admission CTG has been identified as a
dangerous practice; can you say why?; this is a strong statement and readers may need a little bit more information as to why it is described as dangerous

2. Page 3, reference [5] at end of 2nd paragraph; is that correct? It is reference 4, Blix et al, that appear to evaluate the predictive ability of the admission CTG and not study 5?


4. Page 4; references 8 to 16 are all in separate brackets; should this not be written as [8-13], and similarly, references [8, 10, 14, 15, 16] – should this not be [8, 10, 14-16]; please check formatting of references throughout and ensure consistency.

5. On page 5 there is reference to 5 records being excluded; can you explain why these were excluded? – were these the 5 that went straight to CS on admission?

6. Page 9; you refer to a small increase in vaginal birth; can you state in text if this increase was statistically non-significant or significant?

**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