Reviewer’s report

Title: Change in practice: a qualitative exploration of midwives' and doctors' views about the introduction of STan monitoring in an Australian hospital.

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Reviewer: Ellen Blix

Reviewer’s report:

Change in practice: a qualitative exploration of midwives' and doctors' views about the introduction of Stan monitoring in an Australian hospital.

Thank you for the opportunity to review this interesting and important study. Since about 2000, STAN has been implemented in many hospitals in several countries. To my knowledge, only one previous study (a masters' thesis from Chalmers) has evaluated the implementation of STAN. A new study in the field is therefore welcomed.

The interviews and analyses seems to be well performed, but I miss some information and references through the study, and I have some comments.

Background:

Page 2, lines 44-54. I suggest that you explain that the STAN technology is adding analyses of the ST-segment in the fetal ECG to CTG, and that the STAN is more than a machine, it is a concept with a strong focus on education and training. You could also describe shortly under which circumstances STAN can be used. You should also provide a reference to the manufacturer of STAN.

I miss more information about the Australian context in the introduction part. You write in the discussion part that your hospital is the first to introduce STAN in Australia, you should provide this information here. Is the introduction supported by national guidelines/health authorities? According to RANZCOG guidelines from 2014, STan is not recommended due to insufficient evidence. You should state more clearly that the present study is a part of a bigger study aiming at evaluating STan in an Australian context.

What are the differences in practice and CS rates compared to the countries where STAN has been evaluated?

About the evidence of the effectiveness of STAN, you refer to one systematic review (reference 18, Potti et al 2012). At the time you did the interviews (June to August 2015), five RCTs had been performed, and five systematic reviews (Potti 2012, Becker 2012, Salmelin 2013, Schuit 2013 and Neilson 2013, the latter a Cochrane review). It is unclear why you choose to refer to Potti only. I recommend that you refer to all, or to the newest.
Page 2, lines 57-59: you write "Stan technology has been trialled and introduced into hospitals in Europe, the United Kingdom and the USA and has had inconsistent clinical results [18]." This can be misunderstood, the Potti systematic review (ref 18) does not include any trials from USA (but from UK, Sweden, Finland, France and the Netherlands).

You refer to a previous study (ref 19), investigating the implementation of STAN, you should write more about their results; what was the barriers and what were the success factors. This study was not restricted to Sweden, UK and Norway were included as well.

Methods:

I miss some information about fetal surveillance in high risk pregnancies before the introduction of STAN. What devices did you use? Telemetry?

You refer to a pilot RCT, could you provide a reference? E.g. clinicaltrials.gov.

You write that an international expert in CTG and Stan conducted staff training - was the expert from the producer of the technology, or was it an independent expert? How many super-users were trained in your hospital? 138 clinicians were trained and certified, is that all clinicians?

Could you provide the interview schedule in a supplementary file?

Results and discussion:

The midwives included in your study are much more experienced - and older - than the doctors are. Could that influence the results?

Your informants were concerned about that STan will lead to more interventions (amniotomy and fetal scalp electrodes) and restricting the mobility of the women. This seems to be realistic as it is described that conventional CTG was usually performed with external transducers and even with telemetry. In the discussion part, you write (p 16 lines 46-60):

"The findings suggest participants believed that the introduction of STan would increase interventions and result in a more "medicalised" process of labour, which many midwives and some doctors believe to be an undesirable outcome. This view is consistent with previous findings in the organisational culture and change literature, which indicates that resistance is significantly influenced by a failure to align change with the values of the people within the organization"

It is unclear to me what you mean with "a failure to align change with the values of the people within the organization". It can be understood as if midwives and obstetricians should change their values towards accepting a more medicalized approach to childbirth. I guess that this is not your intention, so please be more clear.
In the discussion part, (p 15, lines 32-37) you write: "The existing evidence base [31] may not be generalizable to Australia, as the Australian emergency caesarean section rate is significantly higher than the setting where most of the previous trials of STan were undertaken." You may be more detailed about the existing evidence, and what it concludes. Shortly after you did your interviews, one big RCT from USA was published (Belfort et al, 2015). Australia and USA have comparable cesarean section rates, and you should discuss the findings of the Belfort study and if they are generalizable to Australia. Are there other relevant differences between Australia and USA? The organization of maternity care?

**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.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Unable to assess

**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:

Acceptable

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