Reviewer's report

Title: Variation in hospital repeat caesarean section rates: a population based cohort study

Version: 1 Date: 8 June 2015

Reviewer: Evelien van Limbeek-Reinaerts

Reviewer's report:

This is a well written article addressing an important issue in healthcare i.e. between hospital variation in practice regarding CS-rates. The article is well written and describes sound research into this topic. However there are some aspects that need further attention/exploration.

- Minor essential revisions

1. It is unclear what the authors define as severe maternal and severe neonatal morbidity. Although references (33, 37) are given for the composite indicators, it would make the article more readable if the definitions were given.

2. P.6 line 105-109: it is unclear whether or not an ‘intention-to-treat’ principle was applied in the analyses. Was the intended mode of delivery the outcome variable? This is not clear.

3. The difference between the crude model and the unadjusted model is not clearly explained. Please clarify.

4. Please explain why the outlier hospitals were included in the analyses. What was the reason for not omitting them from the analyses?

5. On p.4 the study from Lee et al. (2013) is mentioned and it is argued that they adjusted only for a limited number of casemix factors. Including these factors helps the reader define what the current study is adding.

6. P.5 line 83: The abbreviation NSW is introduced, please use the full text here.

7. P.5 line 88: It is stated that hospitals with at least 20 women undergoing a trial of labour during the study period are selected. Please explain the reasoning for this.

8. P.5 line 92-98: The data used are extracted from the PDC and APDC. Please explain how these databases are ‘filled’; who is providing the data (health practitioners, clients) or from what files (patient records, questionnaires) are these databases extracted.

9. P.6 line 115: Please explain why overweight/obesity was treated as an individual level-factor, while it was constructed using data from a ‘higher’ level (local health district).

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests