Reviewer's report

Title: Perinatal mortality by gestational week in singleton pregnancies at and beyond term: a nationwide population-based cohort study

Version: 2 Date: 25 February 2014

Reviewer: Jonathan Snowden

Reviewer's report:

This is a population-based registry study of term and post-term perinatal mortality from Norway. The authors examine the impact of timing of delivery and small for gestational age (SGA) on perinatal mortality, before and after the widespread introduction of ultrasound (US) for gestational dating estimation in Norway. The topic is an interesting one with broad implications for perinatal/obstetric research. This is largely a descriptive study, but the authors should be clearer about their hypothesis/hypotheses. This would make the entire paper easier to follow. I also have concerns with the use of perinatal mortality as the outcome. There are different denominators required for stillbirth analysis versus neonatal death analysis.

Major Compulsory Revisions

1. The abstract is difficult to follow. It is not as clearly written and organized as the rest of the paper. In particular the Results & Conclusions sub-sections are confusing.

2. In the Introduction, the authors should state their hypothesis/motivations for asking these questions. The study questions themselves are outlined fairly clearly at the end of page 5, but the reader would benefit from a clear explanation of why these questions matter.

3. In particular, what is the motivation for the interaction analysis of SGA and post-term delivery?

4. Methods: It is now accepted that stillbirth and neonatal/infant death require different analytical techniques. Specifically, the population at risk for IUFD at any given week is the ongoing pregnancies beyond that week (i.e., fetuses at risk), whereas the risk set for neonatal death is the population of neonates born that week. This complicates perinatal death as an outcome. The authors need to address this in any revision.

Minor essential revisions

5. The Results section reads like a list in places. Because the hypothesis/study questions are not clearly stated, it is difficult for the reader to know what s/he should be taking away from the findings, or which findings to focus on.

6. The clinical implication about closer attention/monitoring to pregnancies with discrepant LMP and US delivery dates is sound.
7. Tables: The tables are busy/overloaded with information, particularly Table 1. Can they somehow be split out into multiple tables, or altered so they are more digestible?

8. Figure 1: Odds ratio y-axis needs to be on a log scale.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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