Reviewer's report

Title: The effectiveness of antenatal care programmes to reduce infant mortality and preterm birth in socially disadvantaged and vulnerable women in high-income countries: a systematic review

Version: 2 Date: 12 January 2011

Reviewer: Suzanne Belton

Reviewer's report:

Dear Colleagues,

thank you for this review opportunity.

1. Is the question posed by the authors well defined?

The death of many infants can clearly be prevented and we have much evidence showing that many countries have reduced this tragedy. Improvements in general standards of living, nutrition, hygiene, access to birth spacing and the avoidance of noxious substances during pregnancy all contribute to infant survival.

In the body of the text it is not immediately clear that the authors are referring to infant mortality and perinatal mortality, although this can be deduced from Table 1 – search strategies where these search items are included. Infant mortality means death during the first year of life. While perinatal mortality refers to the first month of life including stillborn babies after 22 weeks gestation. The vast majority of deaths occur in the perinatal and neonatal period.

I was unclear whether these early deaths from 22 weeks were included or excluded and what was the definition of preterm? Are these definitions the same across all of studies included in the review? Are American and European and Australian definitions the same? I feel this needs further clarification.

Furthermore, is there a social gradient in access to termination of pregnancy? I ask this question because if a woman can readily terminate her own pregnancy because she has the legal and economic access to abortion this may affect infant mortality. So it is not so much a question of how good is the antenatal care but does this woman want this baby and has she come early enough to choose termination, or for that matter engage with the antenatal care and the advice provided to her. In other words are we asking the wrong question? This would of course change your review considerably but it is worth thinking about.

The authors correctly point out that pre-term birth and congenital defects are of concern as is SIDS.

As we know that by changing babies sleeping position can reduce a SIDS event – it would seem that examining postnatal care and support to disadvantaged
women would have been a better review question rather than antenatal care.

We would like to believe that antenatal care reduces infant mortality, and authors like Enkin, Keirse and Chalmers have assisted us to know that specific elements do indeed impact positively on neonatal outcomes.

Antenatal care consists of various types of services, delivered in different models and Table 4 nominally describes the models of care provided.

I think one of the dissatisfying elements of this study is not knowing the quality of the alternative models of antenatal care and the standard antenatal care (or indeed what standard antenatal is across countries such as Greece, Canada, UK?). We know from experience in Australia that the quality of care provided to Indigenous women in rural and remote settings is not at the same standard as urban centres.

Socially and economically disadvantaged women are described well in this study.

2. Are the methods appropriate and well described?
   The authors have used standard systematic review procedures with GATE audit for quality.

   Page 4, 3 paragraph – ‘One review found some studies that reported beneficial effects of some interventions targeting Australian indigenous women, but the authors concluded that the evidence was flawed.’ Do you mean Rumbold and Cunningham, the authors of the review or the authors of the study reviewed? Can you make this clearer for the reader please?

3. Are the data sound?
   The authors found numerous studies that fitted their criteria yet were poorly constructed or were weak interventions.

   Comment – File 3 Panaretto (2007) note about ultrasound. One of the problems we face in Australia is dating pregnancies correctly for Indigenous mothers who often present late in pregnancy. This study was important in that it increased the number of early visits made by Indigenous women so their gestation could be accurately recorded. We are not able to accurately record preterm/term births in socially disadvantaged populations. I am sure that these types of issues are not isolated and clinicians working with disadvantaged populations will recognise this common difficulty. It raises the question of how we measure preterm births and how accurate are our stats.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

   It seems that early in the analysis the review cannot answer the issues of congenital anomalies or SIDS.

   Figure 2 – page 8 last paragraph – I cannot see it – but there is a figure 1?? List of figures is incorrect.
5. Are the discussion and conclusions well balanced and adequately supported by the data?
There was insufficient quality in the studies reviewed to draw conclusions.
If one assumes that many of these studies were endorsed and lead by obstetricians, one conclusion that the author’s politely refrain from saying is that obstetricians are unable to design intervention studies well.

6. Are limitations of the work clearly stated?
Yes.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Not applicable in this systematic review.

8. Do the title and abstract accurately convey what has been found?
The title is fine. The abstract is fine accept for clarifying the issue of perinatal death.

9. Is the writing acceptable?
Yes.

Reviewer’s report
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My comments fall into the category of
- Minor Essential Revisions
The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

Advice
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- Accept after minor essential revisions (which the authors can be trusted to make)

Level of interest
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An article whose findings are important to those with closely related research interests
Quality of written English
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- Acceptable

Statistical review
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It would be advisable to run this article past a statistician.
- Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests
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I have no competing interests.

**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.