Reviewer's report

Title: Preconception Care for Diabetic Women for Improving Maternal and Fetal Outcomes: a Systematic Review and Meta-analysis

Version: 2 Date: 27 April 2010

Reviewer: Lucky Saraswat

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The manuscript aims to assess the effectiveness of preconception care in improving maternal and fetal outcomes for women with pre-existing type 1 or type 2 diabetes. The research question is of public health significance.

Major essential revisions

1. No abstract has been provided

2. All systematic reviews for observational studies should follow MOOSE guidelines. This should be mentioned in the manuscript and I suggest attaching a MOOSE checklist as a supplementary file to ensure that guidelines have been followed.

3. In the data extraction and studies assessment section the authors have not mentioned which statistical software was used for meta-analysis. These details should be provided.

4. In the results section authors have mentioned that 22 reports of 18 studies were included in this review. Could they please clarify whether it was 22 or 18 and explain in more detail what they meant by this?

5. In the section ‘Outcome of PCC’ they have included only 10 studies for meta-analysis. They should provide references for those 10 studies and state the reasons for exclusion of other 8 studies which otherwise initially matched the inclusion criteria.

6. When stating outcome of PCC only the results of meta-analysis should be reported and may I suggest that subgrouping them under separate heading of maternal and neonatal outcome would make it more clear and comprehensible. In addition under the heading ‘Outcome of PCC’ the second last paragraph starting ‘one study evaluating……congenital malformation OR 4.2’ is stating the results of that individual study only and not of meta-analysis. Moreover I see that this study has not been included in the meta-analysis of congenital malformations (Figure 2). The authors need to explain the reason for exclusion. They should avoid reporting results of individual studies together with meta-analysis results as it quite confuses the issue.

7. Table 1 has multiple issues that need to be addressed
The table is incomplete. Only details of 5 out of 9 studies are given, the fifth one incomplete as well. A complete table with details of all studies should be submitted.

The first study by Dicker looks at different types of PCC. This should be excluded as the original research question posed was PCC versus no PCC.

The key at the end mentions abbreviation RR = Odds Ratio as opposed to OR.

8. Table 5 has multiple issues as well. The data provided in the table does not match with the forest plots in Figure 2 and appendix 2.

For instance the forest plot for macrosomia has only 3 studies with risk ratio of 1.03(0.81, 1.30) as opposed to information in table 5 where 6 studies have been included with RR 0.78(0.55, 1.11).

There are similar discrepancies in data provided for caesarean section, prterm delivery, pre-eclampsia and glycosylated haemoglobin.

The authors should clarify further what they mean by metabolic disorder – is it maternal hypoglycaemia or neonatal hypoglycaemia?

Minor essential revisions

1. The English in this manuscript suffers on occasions and further proof reading is encouraged. For example, (Introduction, line 3) did you mean ‘many’ instead of ‘may’. Similarly (Introduction, second paragraph) the abbreviation is CEMACH instead of CEMCH. Under the heading ‘exclusion criteria’, in the first line it should be ‘were’ instead of ‘are’.

There are similar grammatical and spelling errors throughout the text which need revision.

2. The authors have provided an exhaustive report on assessment of the methodological quality of included studies which is of little use to general readers. Instead of descriptive report a table of quality assessment of studies using Newcastle-Ottawa scale as a supplementary file should suffice for those readers wanting to review in more detail. Some of this information is already available in Table 1 to 4 and reiteration is completely unnecessary.

3. Perhaps a few words about the limitations of their study should be added in the discussion.

Statistical Review: The information provided to review statistics is not sufficient. The authors should provide details of the statistical software used and how data was pooled.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Declaration of competing interests:

I declare that I have no competing interests.