Reviewer's report

Title: Q fever infection and pregnancy outcome during the 2007-2008 outbreaks in the Netherlands

Version: 1 Date: 26 August 2010

Reviewer: Conall McCaughey

Reviewer's report:

General Comments:

The reported effects of Q fever infection in pregnancy are undoubtedly over-estimated due to various types of selection bias in reported studies.

This is an important paper, well written and will be of considerable interest. The conclusions are sound.

Serological definitions and cut-offs used seem reasonable to me. Inevitably there will always be criticism from individual referees and correspondents regarding these matters in a paper such as this. However there are no internationally agreed definitions and the approach in this paper should be considered to be a pragmatic and mainstream approach.

Discretionary Revisions:

1) To me, a key weakness of this study is that the antenatal booking blood based study design approach is confined to detection of seroconversion in early pregnancy. The authors do acknowledge and discuss this but feel that seroconversion after 12 weeks is unimportant in terms of adverse outcome. I feel that the evidence that later infection in pregnancy is unimportant is sparse. We simply do not know enough about Q fever infection in pregnancy to dismiss this weakness in the study as being unimportant. I feel that the authors should change the discussion to acknowledge that this is an important (but inevitable) weakness. Clearly to have a study design that looks at samples at the end of pregnancy (non routine samples collected specifically for a study) would have been very difficult with considerable logistical problems, very increased cost, ethical implications and many subjects might decline to be involved. However this should be stated and discussed.

2) On a related theme, I feel it would be useful for the authors to discuss/speculate on the utility and practicality of looking at stored blood spot samples from neonatal testing (Heel prick PKU screening) by IgG. Such samples when eluted can readily be tested by standard serological assays. This would be a useful way of numerating infection in later pregnancy.

3) It would be interesting to have the serological data presented a little more thoroughly- what was the range of phase I titres in the past infections? -this is not
currently included in the results presented. Where the recent infections tested for phase 1 antibody & if so what were the results/titres? There is interest in phase I antibody pregnancy and this dataset would be of interest to other workers.

4) It might have been useful to apply PCR to the isolated IgM phase II positives to clarify specificity status of these results. The authors might want to mention in the discussion if they feel this would have been useful (presumably this was not done).

5) A couple of sentences explaining the nature (study design) of the large-scale prospective screening and treatment study which started in March 2010 would be useful.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests