Reviewer's report

Title: The effect of antenatal care on perinatal outcomes in Kwale district, Kenya: cohort study

Version: 1 Date: 8 June 2007

Reviewer: Jos van Roosmalen

Reviewer's report:

General
The paper is an interesting paper on an important aspects of maternity care

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. The paper uses 'behavioural outcomes (e.g. in abstract) and behavioural variables (e.g. in methods, results and discussion) which first of all confuses the reader and secondly is not correct. Then in the discussion the authors talk of 'behavioural decisions', which I accept and understand to say something of the client's behaviour.
TT and SP doses, use of an ITN cannot be labelled as 'behavioural variables', these are components of antenatal care. Decisions regarding the place of delivery and who assists the delivery have 'behavioural aspects', but these are not researched in the paper.
2. There were enumerators visiting the women 'with a view to encouraging them to go to health facilities for delivery'. When one takes this into account, the extreme low degree of birth in health facilities 'as a result from this intervention', not in place in most other areas where more women deliver in health facilities, should be addressed somewhere (may be in discussion).
3. Results, the effect of ANC on different components of ANC-care: looking into figure 2 I do not see statistically significant differences in the number of ANC-visits between groups for the person assisting delivery: the mean (95% CI) of number of ANC-visits are almost similar in figure 2 (approx 2). May be I did understand figure 2 wrongly, if so the figure should be made much more clear.
4. Results, determinants of pregnancy outcome: 'This may be because increased visits etc' should be in the discussion section (is not a result)
5. results, determinants of birthweight (which is one word): "This apparent 'diminishing returns' to ANC etc' again is no result, but discussion.
6. Discussion and tables and figures: 'doctor or nurse' ignores the fact that nurses in many African countries are nurse-midwives, and in this paper they are addressed as midwives, so please call them midwives or nurse-midwives.
7. Discussion: discusses the effect of ANC on "behavioural decisions". What is meant, I guess, is the question wether during ANC a birth plan was made and what has been done for 'birth preparedness'. This relates to whether the health worker has been addressing the issue and secondly what type of decision the client with her network has been made. The authors rightly argue that qualitative research is needed in this area. They could refer to studies which have dealt with this. I just give two: J. Stekelenburg et al. Waiting too long: ... Trop Med Int Health 2004; 9: 390-8 and J. van Roosmalen et al. Editorial in Trop Med Int Health (2005; 10: 393-4) where the second author is from Aga Khan Health Services. The authors should address a.o. the role of maternity waiting homes when as in this study, distance is involved.
8. Table 2: the extremely low percentages of LBW are not easy to believe to be true (3.4 and 2.9 and 6.4%). Even the somewhat higher % of 11.6 and 13.6 are not extremely high. The authors should address this, because it casts serious doubt on how the babies were weighed.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. Methods: did the study run from 1-8-2004 till 1-8-2005, if so please state that
2. Results: under detemrainers of attendance for ANC: remove the sentence: 'Results are shown as odds ratios (OR) with 95% CI' and place this in the methods section.
3. Figure one does not give much information (even Nairobi is not on the map!): improve or omit
4. Figure 2: change 'behavioural variables); TT/SP injections: SP is not an injection; Doctor/nurse change in Doctor/midwife
5. reference 18 is not complete

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Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**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