Reviewer's report

Title: Predictors for health facility delivery in Busia district of Uganda: a cross sectional study

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Reviewer: Abel NTAMBUE

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Major Compulsory Revisions

The study raises some significant problems for which the precise details must be given:

- The investigation relates to the period between November 14/2005 and November 15/2007. It is supposed that it is into 2008 that it was carried out (2 years previous). It is desirable that the authors also specify which time the study was carried out, instead of limiting itself to the period which was concerned with the study.

- How the authors controlled the impact of this significant time between the delivery and the beginning of the study on the recall bias.

- Among the 505 selected women, it is desirable that the authors specify how much had a last delivery into 2006, and how much had it into 2007, and how they took care that this variation of years does not differentiate the women.

- The authors give only the number of the surveyed women. How much were visited during the same period, and who had died for example?

- The district counts 474 villages, 60% of its population are in a ray of 5 km, however the authors selected 200 villages. Can have to admit that the 200 villages account for the 60% of the population?

- The authors give the procedure of sampling of the villages whereas the primary units of the study are the women. It is significant that they also describe why have selected only 505 women. The details miss on the way in which the 505 women were selected;

- The majority of the collected variables contain a great potential of recall bias, insofar as they are primarily based on the declarations of the women (attendance of antenatal care, number of times of attendance of antenatal care, time from onset of labour to delivery, distances to health facilities). It is difficult to show that certain events which have occurred after delivery did not influence the opinions of the women concerning the health facilities.

Because it is about a cross-sectional study, the authors would make better add the percentages of the delivery in the health facilities instead of limiting itself to the absolute frequencies.
In the presentation of OR, the authors could keep one decimal. In the presentation of the results (text), it is desirable that the authors accompany the % by their manpower (for example p8, line 4 of the second paragraph: “Women who had more than one pregnancy (...) were asked”

The results presented in the various tables are less consistent. For example:

1. In table 1, 45 women were not married; therefore they did not have a husband; however in the variables level of study, occupation of the husband, they are included. The authors could give more precision by creating a category separately (for example: without husband).

In the same way, because 45 women were not married, they could be in the parental roof; in the socio-economic variable level of the household, which was taken into account?

2. In table 2

- Variable 5-6 of the table: the class of reference for the comparisons is "was not told "and not "abnormal"[(16*132)/(105*6)]. Like consequence, the comments do not correspond to the data of the table. Moreover, manpower of the total of the variables: condition of baby during ANC, condition of mother during ANC, birth plane and knew expected date of delivery are not correct since 24 women had not followed the ANC. They can constitute a class with share.

3. In table 3, the results present a problem of sampling. For example, 23 women had undergone the Caesarean with the past immediate delivery. What could represent a rate of Caesarean to the past immediate delivery of 5.7%. But if it is supposed that 47-50% of the women are confined in a health facility, this rate reaches 12%. This is not very probable for a completely rural medical district where only 47% of the pregnant women are confined in the health facilities.

4. In table 4. The studied variables relate to only one group of the women (delivery in a structure of health or with residence), not both at the same time. It is the case of the variables: time, means of transport, adequate supply of drugs, a number of the health worker, satisfaction with the privacy at the nearest maternity facility, the cost of delivery.

5. Table 5: On the variable: “decision to seek ANC”, 24 women had not followed the ANC; they were not to be concerned.

1) The time between delivery and beginning of the study, which creates two groups of women, 2) the recall bias, 3) the possible subjectivity of the judgement of the women related to occurred of events between the delivery and the investigation, are not discussed like limits of the study; including the way in which the authors reduced their impact.

Minor Essential Revisions

Because the authors do not know the proportion of delivery in the health facilities,
they were not to give a figure which poses problem of checking, even if it is presented like a limit to the study. They would make better use even the data of routine of course the health system if they exist. Will have to be re-examined after the taking into account of the various modifications in the results.

The first section related to "study area" has only one reference, whereas it presents several data (textual or numerical). It is desirable that the authors support these data. Although the type of study carried out appears at the end of the discussion, it is always desirable to give the type of study in the methodological part of study.

2. In table 2: To avoid the redundancy, the authors can keep only ANC presented in the form of their frequency instead of presenting the two possibilities at the same time;

The authors could supplement in the results, the place of delivery to the past immediate delivery.

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interest in this.