Reviewer's report

Title: Individual and health facility factors and the risk for obstructed labour and its adverse outcomes in south-western Uganda

Version: 1 Date: 8 March 2011

Reviewer: Matthews Mathai

Reviewer's report:

This is an important and interesting report on obstructed labour in Uganda. Obstetric records of women admitted in the maternity wards of six hospitals during a one year period were reviewed. Data collectors were trained to validate the diagnosis of obstructed labour. The authors then studied individual and health facility factors related to risk for obstructed labour and its adverse outcomes. As expected, individual and health system factors are associated with obstructed labour and its consequences.

Some issues to be considered that may strengthen the paper:

Major essential revisions

1. Obstructed labour is the result of mechanical obstruction i.e. the fetal presenting part is too big for the maternal pelvis. The criteria for clinical diagnosis used in the study appears to be broader and likely to include "non-obstructed" labour. Operative vaginal delivery is usually not recommended and successful operative vaginal delivery is highly unlikely in the presence of true mechanical obstruction. Assisted breech delivery is usually not considered "obstructed labour". Thus the prevalence rate for obstructed labour in the study may be an overestimate. Also it is important to note that the rate observed in the study apply only to women who sought care in hospital. Is it possible that some women with obstructed labour may not have reached facilities in time and had adverse maternal and perinatal outcomes? Case fatality rate for obstructed labour would be more appropriate that maternal mortality ratios.

2. It is unclear why the reference groups for comparison vary among the tables. For example, in Table 4, the reference age group for women with obstructed labour is 25-29 years, while in Table 6, the reference group for women with obstructed labour who had perinatal deaths (presumably from intrapartum asphyxia) is 15-19 years. Maternal age of 20-24 and 25-29 in general carry lowest risks of adverse maternal and perinatal outcomes when compared to younger and older age groups. Why not use the same comparator in all the tables? Also one can justify use parity of 1 or 2-3, salaried employee/business and possibly Bushenyi with its three hospitals, as reference groups. A reanalysis of the data using appropriate reference groups would provide better information.

Minor essential revision:
Information obtained from records appears to be incomplete for nearly all variables of interest - age, parity, number of fetuses and occupation. Given that this study included a review of records, one would have expected some more clinically relevant information on the care provided in hospitals. For example, how long were these women in labour before a diagnosis of obstructed labour was made? Was the partograph used? Was labour augmented? What proportion of admissions had absent fetal heart sounds? and so on. If this information was not collected, at least some information on practices should be provided in the introduction. (Minor essential revision)

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests