Reviewer's report

Title: A population-based surveillance study on severe acute maternal morbidity (near-miss) and adverse perinatal outcomes in Campinas, Brazil: The Vigimoma Project

Version: 1 Date: 26 September 2010

Reviewer: Olufemi Taiwo Oladapo

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Major Compulsory Revisions

Introduction: There is a disparity between the objectives in the introductory part of the paper and that in the abstract. The ‘question’ posed in the latter part of the objectives in the last paragraph of the introduction is not well defined; "...to evaluate the feasibility of a shared process of confidential enquiry...". It appears unlikely that the researchers set out to perform a feasibility study as there is little in the Methods section to describe how this could be achieved. It looks redundant and is better deleted.

Results

The authors need to differentiate between the denominators used for maternal death, near miss and perinatal death rather than lump them together as adverse perinatal events. Usage of total adverse perinatal events as the denominator as performed in many instances is confusing. For instance in the second paragraph of the result, references were made to the total number of women in percentages while the denominator also included fetuses who died in utero and those that suffered early neonatal death. These corrections need to be made in the result section.

Is the potential preventability scoring method validated? If not, it should be stated as such. The methods used by the committee to arrive at PPS for fetuses could be questioned. Considering the cause of death described as ‘intrauterine anoxia’ for most of the cases; intrauterine anoxia has numerous causes and one wonders if the committee took all their preventabilities into account. The true cause of intrauterine anoxia can only be confirmed after several investigations which include that on the mother, placenta and fetal autopsy.

Tables:

Table 1: Can the authors explain what they meant by and how they came about "figures expected by the project design" and its importance? Percentage contribution of maternal death is also 2.5% as against 1.9% in the text and this should be corrected.

Table 2: Needs to be clarified; the title noted that the figures were for women involved in adverse perinatal events (n=99; NM+MD) but the figures reported came from women, dead fetuses and neonates combined e.g. 93/99 is not equal
to 58.1%. In the same vein, 136 that ‘received prenatal care’ also included the fetuses and neonates. This is assuming that mothers who suffered perinatal adverse events are completely separate from fetuses and neonates who suffered the same fate. Whereas, there were women with NM or MD whose babies also died. Therefore saying 136 received prenatal care would mean the fetuses and neonates received prenatal care regardless of that received by their mothers who have already been counted. The denominator for women needs to be separated from that of fetuses and neonates.

Table 3: Maternal deaths are missing from the table. Near miss cases adds up to 80 rather than 95 while percentages were calculated using 95 as its denominator. Similarly, END adds up to 23 as against 28 reported in Table 1 and in text.

Minor Essential Revisions
In the text of the paper, authors should please describe the following items in detail; Vigimoma, CAISM/UNICAMP, SINASC

The reference to Safe Motherhood Initiative failures in the introduction should be deleted as it is less relevant today.

Too many references overall. Authors should streamline them to 20 to 25 important and recent ones. Referring to a 2003 publication (Jamtredt et al) as recent needs to be corrected.

Result, last paragraph, ‘a quarter’ should be corrected to ‘a third’ since 34% is not a quarter.

Is ‘Puerperal haemorrhage’ meant to represent postpartum haemorrhage?, please correct where it appears in the text.

Table 6 can described in the text and should therefore be deleted.

References, there are two redundant references numbered 1 & 2 at the bottom of the reference list. Was this intentional or erroneously done? Authors should please amend as appropriate.

Discussion: Recommending an audit process where the loop is not yet closed may be misleading and should be done with caution. Having conducted a rigorous fact finding exercise and making recommendations based on some newly devised scores may not necessarily translate to improvement in maternal and perinatal outcomes. Such recommendation can only be backed by improvement in maternal and perinatal profile that follows implementation of the suggestions that emanate from the audit process.

Minor issues not for publication
The paper requires significant copy-editing specifically regarding style and certain medical terms.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published
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