Reviewer's report

Title: Still births, neonatal deaths and neonatal near miss cases attributable to severe obstetric complications: a prospective cohort study in two referral hospitals in Uganda

Version: 1  Date: 17 February 2015

Reviewer: Cynthia Pileggi-Castro

Reviewer's report:

- Major Compulsory Revisions
  (which the author must respond to before a decision on publication can be reached)

42 Neonatal
43 near miss cases were defined according to the World Health Organization (WHO) criteria (which
44 employs clinical features, management given and presence of organ-system dysfunction).
Reviewer: To my knowledge, this concept is not correct. There are three proposed definition in the literature, two of them developed based on secondary analysis of WHO data, however WHO did not pronounced officially about this subject.

80 As a related concept, a neonatal
81 near miss case refers to a neonate that presents with a severe life-threatening complication during
82 the neonatal period but survives [11]). They include newborns with very low Apgar score, very
83 low birth weight or prematurity, and newborns with neonatal convulsions, septicaemia, or severe
84 jaundice. Such babies require admission to the neonatal intensive care unit [NICU].
Reviewer: The authors can decide on what definition to use in their study, but this definition is a proposition that requires referencing and, not less important the description of each criteria used should be precise. If the reader sees very low Apgar score, very low birth weight, or prematurity as pragmatic criteria or the described management criteria (sepsis, surrogates of asphyxia…) he/she won’t be able to classify their own cases.

86 Like for maternal near miss, three types of criteria are used to diagnose a neonatal near miss.
The clinical criteria include features such as lethargy, failure to suckle, prematurity, low birth weight, respiratory complications and hypothermia. The laboratory criteria assess evidence of organ-system dysfunction (metabolic, respiratory, neurological or cardiovascular). The evidence includes severe hypoglycaemia, severe jaundice, encephalopathy, sepsis, electrolyte imbalance or thrombocytopenia. The management-based criteria include, among others, total parenteral feeding, tracheal intubation, continuous positive airway pressure, surgery or blood transfusion.

Reviewer: Line 86: “types” should be replaced by “categories of criteria”
As above, requires referencing. 12-14 is not precise which definition or criteria proposed is used.


The challenge of determining effective neonatal near miss indicators lies in the fact that these conditions are rarely diagnosed. Secondly, many indicators are not routinely registered in medical records, especially in low and middle-income countries.

Reviewer: Actually, the near miss concept is a proposal for epidemiologic studies to use as simple as possible criteria for identifying severe neonatal morbidities, targeting quality assessment of neo and perinatal health either in high complexity health facilities or at lower levels.

A prospective cohort study performed on 341 newborns with severe perinatal morbidity (secondary to severe obstetric complications) admitted to the neonatal intensive care unit found an incidence of early neonatal death of 109 deaths per 1000 live births [15]. In this study, 111
respiratory distress
112 (adjusted risk ratio [aRR] 31.29, 95% CI, 4.17-234.20, p=0.001) and inadequate fetal heart
113 monitoring during labor (aRR 6.0, 95% CI 1.40-25.67, p=0.016) were significantly associated
114 with early neonatal death.
Reviewer: Unclear which criteria was used for case definition and measures of health indicators.

114 birth survey in Brazil [16],
115 show that obstetric complications have a significant impact on the risk of perinatal and neonatal
116 deaths.
Reviewer: This study proposed another case definition criterion, slightly different, considering congenital malformation. Each study used different criteria for case definition which makes difficult to compare.

116-118
Reviewer: Unclear if this objective is from the commented paper or the current manuscript.

METHODS SECTION
Reviewer: The inclusion of an analysis flowchart is required to make easier for the reader to understand what has been done by the authors.

129 Data collection
Reviewer: Please include time period of data collection.

134 classified using the respective WHO criteria for maternal and neonatal near misses [7, 15].
Reviewer: Reference 7 is not the WHO criteria for maternal near miss definition, mistyped reference 6 (?) and, does not exist a WHO criteria for neonatal near miss cade definition. Very important: the authors must state clearly which criteria they used for case definition, wasn’t the Avenant’s proposed criteria? It should be referenced (lines 136-146).

148
Reviewer: Khan’s formula requires reference.

155 We further analyzed the risk factors
Reviewer: Unclear which risk factors were explored.
158 minimal complications
Reviewer: Unclear what the authors considered as minimal neonatal complications.

RESULTS SECTION
411 * The remainder of still births and neonatal deaths were from other causes;
Reviewer: This numbers must be included in the table, seems at first read that there are missing numbers there.

202 gravidity,
Reviewer: Unclear how maternal gravity was measured

Level of interest: An article of importance in its field

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