Reviewer’s report

Title: On-site clinical mentoring as a maternal and new-born care quality improvement method: Evidence from a nurse cohort study in Nepal

Version: 0 Date: 19 Mar 2019

Reviewer: Fiona Nolan

Reviewer's report:

This paper is well written and flows easily.

The tools used by the mentors were 'nationally approved'. Given the poor outcomes for Nepal in this area can the authors indicate whether internationally approved tools had been considered? Please provide some information as to how the tools may reflect those used in other countries.

Separating the data into registered and non-registered staff is essential and would facilitate accurate economic analyses and projections - can the authors please do this, and if not possible, please state reasons in the limitations.

In the abstract (and throughout the paper), please be consistent in placing the N before the percentage in brackets.

Page 3

Line 14: Please give a brief outline of previous mortality rates, and indicate whether the initiatives described in the next paragraph impacted on these.

Line 29: Do the authors mean that prior to 2005 Nepalese governments had made no efforts to improve population health? Please provide clarification as to the time period.
Line 41: This indicates that the healthcare system is not public. Please provide clarification as to how healthcare is provided, whether recipients pay and in what way (e.g. through insurance, cash)

Line 51: Please describe the organisation Deutsche Gesellschaft fur International Zusammernarbeit (GIZ)

Line 56: Was the decision to implement the programme based on any preceding evidence as to its effectiveness? If not, what influenced the decision to use this programme?

Page 5

Please provide information as to what proportion of the total national districts and birthing centres (approx.) were included in this study

Lines 53-54: some of the topics weren't included in the mentorship sessions- was this taken into consideration in the analysis (e.g. mentees examined only on the work they had covered with their mentors)?

Please provide information as to the duration of each mentorship session- e.g. one hour, one day, one week?

Page 6

Line 15: Semi-colon missing after 'as follows'

Line 46: How were the mentors selected? Did they fulfil any specific competencies? Having extensive experience does not mean they were good practitioners, nor does it indicate that they would have mentorship skills.
Line 51: Please explain what is meant by 'backstopped'.

Page 7

First paragraph: There is a lack of clarity here as to how the mentorship was carried out. Did the mentors spend time (how long) with individual mentees going through a training programme?

Page 9

Line 35: Were data on topics covered in the mentorship sessions recorded? Do we know the exposure of each mentee to mentorship around specific topics?

Page 10

Table 2: It's not clear how many assessments each mentee undertook. Were they at the beginning and end of each mentorship session? This seems to be the only way in which mentees who had one mentorship session could have demonstrated change. Please clarify.

Page 11

In order to interpret these data we need to understand the responsibilities of each role- e.g. would a support worker have been expected to manage an eclampsia case to the same degree as a registered nurse?

Separating out the registered and support nurses data is important. Changes following mentorship would then be clearer for each group, and the baseline needs of each identified correctly.
Page 12:

The poor results at baseline are concerning but the improvements are heartening. However it is important to identify the proportion of registered nurses who were lacking in knowledge as opposed to support staff. The discussion should include a more extensive commentary on the quality of pre-registration training with recommendations as to how this might be addressed.

Page 16

The assertion that mentoring 'builds teamwork, staff confidence, motivation and a sense of ownership' appears to be the views of the authors presented as fact. No data are presented to substantiate the claim. Please evidence or take out the sentence.

No comment is provided in relation to the cost of euros per year for four nurses. How does this relate to local salary costs, for example?

Page 18

Please move the information on ethics to the methods section.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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