Author's response to reviews

Title: Determinants of facility delivery after implementation of safer mother programme in Nepal: a prospective cohort study

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Author's response to reviews: see over
Dear Ms Janelyn Ann Cruz,

Below are responses to the comments of reviewers.

Reviewer 1

Page 4: First sentence: three-delay model refers to maternal mortality and morbidity rather than access to EmOC services. Please double check appropriate reference (preferred WHO).

RESPONSE: Thank you for your suggestion. In addition to maternal mortality and morbidity, the three-delay model has also been used in the context of maternity service utilisation, as explained by Gabrysch and Campbell [9].

In Kaski district, there are some delivery options: regional hospital, teaching hospital, and birth centre. Could authors give more information on:
- Type of deliveries (e.g. normal vs complicated deliveries) in different type facilities

RESPONSE: Agreed. Additional information is now provided in the Study setting and location subsection:
“The majority of deliveries took place in the public hospital (80%), followed by private hospitals (16%) and birth centres (4%). In the year July 2011 to August 2012, the public hospital received about 7500 delivery cases, of which 350 (4.6%) involved complications and 1700 (22.6%) underwent caesarean section.”

- No information/data on maternal waiting home presented, but is rather clearly discussed in Discussion Section. Could authors give data on the attendance of maternal waiting home of studied women.

RESPONSE: There were no maternity waiting homes in the Kaski district during the study period so that no data was available.

In Discussion Section, please give one more paragraph to discuss on preparedness for maternal deliveries and role of ANC’s counseling on different delivery options

RESPONSE: Following your suggestion, we have added a paragraph in the Discussion section:
“Birth preparedness was high in the study district and almost all women made at least one antenatal visits. Health workers at the birth centres and hospitals counselled women about preparation activities and danger signs of pregnancy and delivery. Female community health volunteers provided information to pregnant women in the communities and encouraged them to use the nearest health facility for delivery [23].”

Reference: of 30 references cited in the paper, about 20 on Nepal. Authors are recommended to further review updated literature on utilization of maternal services in other countries to enrich the discussion part.
RESPONSE: Agreed. We now cite our recent article [22] which provides an updated literature review of the topic.
Reviewer 2

- It would be desirable to present place of delivery of this cohort (hospital or birthing centres). Women may give birth at facility other than the nearest health facility. The distance to nearest facility and distance to the facility she gave birth might be different.

RESPONSE: Agreed. We now add information on place of delivery of the study participants in the Facility delivery subsection: “Among the 547 facility deliveries, 77 (14%), 419 (76.6%) and 51 (9.3%) women delivered at birth centres, regional public hospital and private hospitals, respectively.”

This study result of 78% of rural women gave birth at health facility seems a bit higher than expected.

RESPONSE: The rural areas in the Kaski district are accessible and connected to Pokhara valley. Besides, birth centres are functioning in every rural Illaka, which explains the high facility delivery rate for rural women.

The institutional delivery coverage for Kaski district is high (>90% for 2011/12 – unpublished HMIS data). However, a study conducted recently to investigate overcrowding at 6 referral hospitals in Nepal found that 80% of recorded institutional deliveries in the Kaski district took place at one hospital (western regional hospital), 16% at private hospital and 4% at birthing centres in the rural areas. More than 55% of deliveries at the western regional hospitals are from out of district (not from Kaski district) in 2011/12. 50% of populations in Kaski district are from rural areas.

RESPONSE: Agreed. Additional information is now provided in the Study setting and location subsection:
“The majority of deliveries took place in the public hospital (80%), followed by private hospitals (16%) and birth centres (4%). In the year July 2011 to August 2012, the public hospital received about 7500 delivery cases, of which 350 (4.6%) involved complications and 1700 (22.6%) underwent caesarean section.”

Considering this recent study result, I think some women may deliver at facility other than the nearest health facility.

RESPONSE: We agree that some women in rural areas delivered at hospital because the majority (76.6%) of deliveries occurred at the regional public hospital.

- Discussion on – maternity waiting home need more evidence considering history of MWH in Nepal.

RESPONSE: Agreed. Additional comment is now provided in the Discussion section: “Improving and increasing maternity waiting homes may be an acceptable and affordable way to enhance the facility delivery rate and should be further investigated.”