Preliminary Findings
A total of 10,085 mothers who delivered at the selected facilities were screened in this study, which included 7,500 from PMWH and 2,585 from TUTH. A total of 90% provided written informed consent to participate in this study (Table 1).

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<tr>
<th>Hospital</th>
<th>Total Number of mothers screened</th>
<th>Total number of women who provided consent</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>N (%)</td>
</tr>
<tr>
<td>PMWH</td>
<td>7,500</td>
<td>6,761 (90)</td>
</tr>
<tr>
<td>TUTH</td>
<td>2,585</td>
<td>2,280 (88)</td>
</tr>
<tr>
<td>Total</td>
<td>10,085</td>
<td>9,041 (90)</td>
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1. Social support during childbirth
Figure 1 shows the level of satisfaction among mothers on having a companion at the time of child birth in the birthing centers of both the hospitals. The results show higher level of satisfaction among women in the birthing centers of TUTH. The results of PMWH show fluctuations but an increasing trend of social support towards the end of intervention.

Figure 2 shows the trend of allowing companions in the labor rooms of both facilities. The graph shows remarkably increased level of satisfaction among mothers who delivered in labor ward of TUTH in post intervention.

2. Promotion of early initiation of breastfeeding
Figure 3 shows the trend of breastfeeding rate within an hour after delivery as documented in the hospital records in two hospitals. The results reflect that early initiation was being promoted in both the hospitals at higher rates. PMWH showed in slight improvement in documenting the practice after the intervention.

3. Prophylactic use of antibiotic before caesarean section
Figure 4 shows that both the facilities provide prophylactic antibiotic before caesarean section at 100% rate. However, based on hospital records documenting the time of antibiotic provided, TUTH shows remarkable improvement in documenting and providing the antibiotic prior to the incision (Figure 5).

4. Kangaroo mother care (KMC) for preterm and low birth weight babies
Figure 6 shows higher rates of KMC provided in TUTH, however the trend is in fluctuating order. There were almost no KMC recorded except in initial phase of the study.

The preliminary findings of this study showed better results in prophylactic use of antibiotics and promotion of early initiation of breastfeeding in both the facilities. The social support, in terms of having a companion is better in birthing centres than in labour wards for both the facilities. The remarkable improvement in the labour wards of TUTH post-intervention highlights the fact that despite the logistical challenges, allowing a companion in the labour wards is possible. KMC intervention results highlight areas of improvement needed in both the facilities. There were not much improvement recorded for KMC in PMWH and it was mainly because of damage of KMC ward during earthquake. KMC services was restarted only towards the end of intervention in PMWH.

The preliminary results are descriptive in nature and there could be many confounding factors for which further statistical analysis are necessary. Moreover, three months of intervention is a short time to truly assess the significant changes in the study settings. Thus, a follow-up study of longer duration is necessary to provide longitudinal perspectives of the real changes taking place.

Conclusion
This is the first joint research initiative that has formalised the systems and structure for joint working between obstetricians, paediatricians and midwives to improve the quality of care for mothers and babies. Despite the limitations and shorter duration of the interventions, this study provides preliminary information on the effects and effectiveness of the multifaceted intervention and the impact of joint working on the use of essential interventions.

Recommendation
To improve and sustain quality of care for MNH through joint working between different health professional groups, it is important to consolidate and further refine the implementation model through joint working for its replicability in other facilities in African and Asian contexts.
Methods:
This was a quasi-experimental uncontrolled before and after study, which evaluates the effect and the effectiveness of the intervention implementation to increase the use of the Essential Interventions relating to the Child Birth and postnatal care. Ethical approval was obtained from Nepal Health Research Council and written informed consent from all the eligible mothers and health providers from both the facilities for this study. Data was collected for a baseline period of 3 months (June 13 to September 12, 2016) and a post intervention period of 3 months (September 13 to December 12, 2016).

Data was collected through the following tools:
- Records of all women who gave birth during the study period and their new-borns,
- Survey among the mothers after their consent
- Survey of the health care providers (obstetricians, midwives and paediatricians) on their experiences with and effect of the package of activities on quality of care.

Data trends and process measures of joint working between the professions were measured and compared between a pre-intervention baseline period and post interventions in two selected hospitals in the country.

Research Intervention:
The research intervention was a multifaceted approach to disseminate, implement, and improve practice on the selected 4 essential interventions. It has been designed to promote joint learning, quality improvement and a motivated health workforce. It was implemented after the baseline period. The international team had trained the HCPA leaders who in turn trained the facilitators to cascade this package of activities to the health providers in both facilities.

The quality of data and the coverage of the health providers to the package of activities were monitored through data analysis, reports from national and facility coordinators and a visit to the facilities by international consultants. The package of activities that were conducted by the facilitators for the health providers in each facility included the following components:
1. Workshop for dissemination: These were primarily theoretical workshops where relevant topics on Essential Interventions were discussed in large groups.
2. Use of reminders: Health providers were encouraged to develop reminders to share and reinforce what they learnt about the Essential Interventions. The reminders included, quotes, sketches, notices, posters and educational videos.

Setting:
Two health care facilities were chosen in Kathmandu, Nepal
- Paropokar Maternity and Women’s Hospital (PMWH), Thapathali
- Tribhuvan University Teaching Hospital (TUTH), Maharajgunj

Objectives of the joint research initiative:

<table>
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<tr>
<th>Childbirth</th>
<th>Newborn</th>
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<tr>
<td>General</td>
<td>Promote and support for early initiation and exclusive breastfeeding (within the first hour)</td>
</tr>
<tr>
<td>Specific</td>
<td>Kangaroo mother care (KMC) for preterm and &lt;2000gm babies</td>
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- Primary – To increase the use of the four selected essential interventions
- Secondary – To increase the capacity of the participating obstetricians, midwives and paediatricians to integrate the selected WHO essential interventions into clinical practice.

3. Academic visits to discuss guidelines: It was a follow up visit to discuss knowledge and practice on EIs depending on clinical setting with the health provider.

4. Use of Simulators:
It was designed to build skills and capacity on identified essential interventions using Mama Natalie birth simulator models provided by Laerdal.

5. Case reviews: These are platforms to discuss results and practice related to Essential Interventions built on existing system to introduce another dimension on discussing “near miss” where health providers saved life through their exemplary practice.

6. Team building: This is a platform to reflect on shared learning, discuss challenges and develop creative ideas to demonstrate everyone’s voice is reflected.