Improving utilisation of maternal and newborn health care services in remote areas

from Taplejung District of Nepal

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Family Health Division
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Outline of Presentation

• Context
• Objective
• Methods
• Results
• Conclusion
• Bibliography
Context

- Maternal Mortality Ratio decreased from 539/100,000 live births in 1996 (NHFS) to 258 in 2015 (WHO)
- Inadequate attention in improving maternal and newborn health services in remote or mountainous areas of Nepal.

Inequalities in service coverage and health outcomes (NDHS 2011)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Terai</th>
<th>Hill</th>
<th>Mountain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn mortality rate</td>
<td>35</td>
<td>33</td>
<td>46</td>
</tr>
<tr>
<td>Caesarean section rate</td>
<td>9.7</td>
<td>8.9</td>
<td>1.7</td>
</tr>
<tr>
<td>4 antenatal care visit</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Institutional delivery</td>
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<tr>
<td>Institutional delivery coverage by distance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Regmi et al., 2013)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District head quarter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;8 hrs. travel</td>
<td>49%</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>&gt;8 hrs. travel</td>
<td>48%</td>
<td>32%</td>
<td></td>
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</tbody>
</table>
Objectives

Whether a **supply-side interventions** of health facility level and **district-wide interventions** would result in improved use of MNH services when compared with the same combined with demand-side community interventions.
Methods

Study design:
- Quasi-Experimental Design

Data collection:
- Surveys
- Key informant interview

Sampling method:
- Stratified two stage cluster sampling
Methods - Program designing

Cluster “A”
- District-wide interventions

Cluster “B”
- District-wide interventions
  + Supply-side interventions

Cluster “C”
- District-wide interventions
  + Supply-side interventions
  + Demand-side interventions
Progress evaluation based on result framework: Outcomes

1. Increased and more equitable use of MNH services
2. Increased adoption of healthy maternal and new born health practices
3. Reduced cultural and economic barriers to accessing maternal and new born health care services
Results on **outcome 1**: Increased and more equitable use of MNH service

% of pregnant women attending 4ANC, receiving IFA and Institutional delivery

- **Cluster A**
  - Baseline (N=60): 42% 30% 30%
  - Endline (N=56): 54% 46% 38%

- **Cluster B**
  - Baseline (N=48): 42% 25% 38%
  - Endline (N=42): 62% 53% 62%

- **Cluster C**
  - Baseline (N=71): 25% 10% 25%
  - Endline (N=52): 48% 39% 62%

Legend:
- Blue: Four ANC visit as per protocol
- Red: IFA intake among RDWs during pregnancy and after delivery
- Green: Institutional delivery among recently delivered women
Results on outcome 2: Increased adoption of healthy maternal and new born health practices

Proportion of newborn with colostrum fed and breastfed within an hour

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Baseline (N=282)</th>
<th>End-line (N=279)</th>
<th>Baseline (N=268)</th>
<th>End-line (N=285)</th>
<th>Baseline (N=295)</th>
<th>End-line (N=272)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Fed colostrum/first milk to baby</td>
<td>% of newborn breastfed within an hour</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cluster A</td>
<td>95 70</td>
<td>89 80</td>
<td>96 73</td>
<td>88 86</td>
<td>93 62</td>
<td>92 86</td>
</tr>
<tr>
<td>Cluster B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cluster C</td>
<td></td>
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</tbody>
</table>
Result on outcome 3: Reduced cultural and economic barriers to accessing maternal and new born health care services

% of recently delivered women having birth preparedness practices

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Baseline (N)</th>
<th>Endline (N)</th>
<th>Baseline (N)</th>
<th>Endline (N)</th>
<th>Baseline (N)</th>
<th>Endline (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>55 (N=48)</td>
<td>60 (N=42)</td>
<td>75 (N=56)</td>
<td>76 (N=52)</td>
<td>54 (N=71)</td>
<td>67 (N=52)</td>
</tr>
<tr>
<td>B</td>
<td>55 (N=56)</td>
<td>54 (N=60)</td>
<td>76 (N=56)</td>
<td>76 (N=52)</td>
<td>48 (N=56)</td>
<td>51 (N=60)</td>
</tr>
<tr>
<td>C</td>
<td>48 (N=60)</td>
<td>51 (N=42)</td>
<td>76 (N=56)</td>
<td>67 (N=52)</td>
<td>75 (N=71)</td>
<td>67 (N=52)</td>
</tr>
</tbody>
</table>

- Discuss with HW for place of delivery
- Discuss with family who would accompany to HF
- Discuss with family who would be companion at birth
Result on outcome 3: Reduced cultural and economic barriers to accessing maternal and new born health care services

% of delivery in health facility by caste/ethnicity

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Baseline</th>
<th>Endline</th>
<th>Baseline</th>
<th>Endline</th>
<th>Baseline</th>
<th>Endline</th>
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</thead>
<tbody>
<tr>
<td>Cluster A</td>
<td>Janjati</td>
<td>36</td>
<td>Janjati</td>
<td>61</td>
<td>Janjati</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Brahmin/Chhetri</td>
<td>0</td>
<td>Brahmin/Chhetri</td>
<td>50</td>
<td>Brahmin/Chhetri</td>
<td>42</td>
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<tr>
<td></td>
<td>Dalit</td>
<td>0</td>
<td>Dalit</td>
<td>50</td>
<td>Dalit</td>
<td>20</td>
</tr>
<tr>
<td>Cluster B</td>
<td>Janjati</td>
<td>54</td>
<td>Janjati</td>
<td>55</td>
<td>Janjati</td>
<td>21</td>
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<tr>
<td></td>
<td>Brahmin/Chhetri</td>
<td>0</td>
<td>Brahmin/Chhetri</td>
<td>33</td>
<td>Brahmin/Chhetri</td>
<td>0</td>
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<tr>
<td></td>
<td>Dalit</td>
<td>20</td>
<td>Dalit</td>
<td>0</td>
<td>Dalit</td>
<td>0</td>
</tr>
<tr>
<td>Cluster C</td>
<td>Janjati</td>
<td>100</td>
<td>Janjati</td>
<td>60</td>
<td>Janjati</td>
<td>57</td>
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<tr>
<td></td>
<td>Brahmin/Chhetri</td>
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<tr>
<td></td>
<td>Dalit</td>
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<td>Dalit</td>
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<td>Dalit</td>
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</tbody>
</table>
Summary findings

- All MNH services (4ANC, IFA and HF delivery) has been significantly increased in cluster “C” from baseline to end line.

- Healthy practices of new-born breast feeding within an hour has significantly increased in all 3 clusters although cluster “C” has greater degree of change.

- The birth preparedness practices on accompany to HF and companion at birth had significantly increased and greater degree of change in cluster “C”.

- Percentage of delivery at HF has increased in all 3 ethnic groups in all clusters but greater degree of change found in cluster “C”.
Both demand-side and supply-side combined package of intervention has greatest improvement in use of maternal and new born health services in remote areas.
References