What is the minimum exposure to mobile messaging needed to improve maternal and newborn health knowledge, practices and demand for services in Bangladesh?

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Study design

A retrospective observational study with propensity score matching (PSM)

Mothers with babied <=6 months of age with access to mobile phone

- Used Aponjon >=3 months n=255
- Never used Aponjon n=2970

After applying PSM

- Selected Aponjon users n=255
- Selected Aponjon non-users n=389

Mothers with babies 7-12 months of age with access to mobile phone

- Used Aponjon >=3 months n=345
- Never used Aponjon n=2528

After applying PSM

- Selected Aponjon users n=345
- Selected Aponjon non-users n=484
Why PSM?

Bangladesh

Aponjon mHealth intervention

What is PSM?

Selected best matched samples

Aponjon user

Aponjon non-user

Aponjon non-user

Aponjon non-user

Variables used for PSM

Women’s age

Women’s education

Husbands’ education

Household asset quintile
Data analyzed in four domains

- **Knowledge on maternal health**
  - (22 outcome variables)

- **Practice of maternal health care**
  - (19 outcome variables)

- **Knowledge on newborn health**
  - (23 outcome variables)

- **Practice of Newborn health care**
  - (12 outcome variables)
Variations in obtaining high composite score in different domains related to duration of use of Aponjon

### Knowledge on Maternal Health Care
- Never used: 45%
- Used for 3-5 months: 50%
- Used for 6-9 months: 71%

### Practice for Maternal Health Care
- Never used: 45%
- Used for 3-5 months: 48%
- Used for 6-9 months: 75%

### Knowledge on Newborn Health Care
- Never used: 46%
- Used for 3-5 months: 51%
- Used for 6-12 months: 57%

### Practice for Newborn Health Care
- Never used: 48%
- Used for 3-5 months: 41%
- Used for 6-12 months: 54%

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Variations in obtaining high composite score in different domains related to duration of use of Aponjon

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### Adj. ORs (95% CI) of obtaining high composite score in different domains for duration of use of Aponjon

<table>
<thead>
<tr>
<th></th>
<th>Maternal health care</th>
<th>Newborn health care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge</td>
<td>Practice</td>
</tr>
<tr>
<td><strong>Used 3-5 months</strong></td>
<td>1.09 (0.67 - 1.76)</td>
<td>1.17 (0.73 – 1.87)</td>
</tr>
<tr>
<td><strong>Used 6-9/12 months</strong></td>
<td>2.37 (1.25 - 4.52)</td>
<td>2.68 (1.25 – 5.74)</td>
</tr>
</tbody>
</table>

Reference group: Non-users of Aponjon

- **Not significant**
- **Significant**
Conclusions

• At least 6 months of use of Aponjon intervention was required for improved knowledge and practice of mothers on maternal health care

• The intervention also had an effect on improved knowledge on newborn health care with at least 6 months of exposure

• Further investigation is needed to detect if there is any association of Aponjon intervention with the newborn health care practices
Acknowledgements

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