Mobile Video Dissemination for Community Health

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Joint work with Neha Kumar, Anil Mishra, and Richard Anderson
99% of all maternal deaths occur in developing countries

A Cartogram showing the maternal mortality rate for 2000
Community-led Video Education

Projecting Health

Production

Dissemination

Dissemination strategy reduces the reach of these videos
In this talk

How could we distribute health videos on an offline network of personal mobile phones?
Distribution Channels

Mobile Shop Owners (MSOs)

ASHAs

Laptop Owners (LOs)
Video Tracking Scheme Using Missed Calls and Callbacks

• 3 videos each from 2 blocks
• Edited to begin and end with a plea from a local doctor

*If you like this video, please send us a missed call on phone #.*
Video Tracking Scheme Using Missed Calls and Callbacks

• 3 videos each from 2 blocks
• Edited to begin and end with a plea from a local doctor

If you like this video, please send us a missed call on phone #.

• Different callback number for each distribution channel

<table>
<thead>
<tr>
<th>Distribution Channel</th>
<th>Block 1</th>
<th>Block 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Phone #</td>
<td>Participants</td>
</tr>
<tr>
<td>MSOs</td>
<td>-------3618</td>
<td>50</td>
</tr>
<tr>
<td>LOs</td>
<td>-------3619</td>
<td>35</td>
</tr>
<tr>
<td>ASHAs</td>
<td>-------3620</td>
<td>55</td>
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</table>
Video Tracking Scheme Using Missed Calls and Callbacks

- **MSOs**
- **LOs**
- **ASHAs**

Missed Calls to evaluate effectiveness of distribution channels

Callback by us to understand reach, geographic spread and distribution strategies

Community
Seeding the Videos and Training
Mixed-methods Approach

Formative research
- 7 focus groups
- 27 interviews

Sampling
122 survey of MSOs and LOs

Designed the intervention

First trial run
- 16 interviews
- 6 focus groups

Deployment

Summative research
- 47 interviews
- 378 surveys
- 2 focus groups
- Missed-call analysis
- Geographic analysis
## Missed Calls

436 unique missed calls & 378 callbacks

<table>
<thead>
<tr>
<th>Location</th>
<th>Medium</th>
<th>Unique Calls</th>
<th>Normalized</th>
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</thead>
<tbody>
<tr>
<td>Block 1</td>
<td>MSO</td>
<td>23</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>LO</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ASHA</td>
<td>131</td>
<td>2.7</td>
</tr>
<tr>
<td>Block 2</td>
<td>MSO</td>
<td>41</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>LO</td>
<td>84</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>ASHA</td>
<td>121</td>
<td>3.8</td>
</tr>
</tbody>
</table>
Missed Callers

- Beneficiaries & family: 52%
- Pregnant woman or new mother: 20%
- In-laws: 14%
- Others: 14%
- Husbands: 14%

Women's family
Geographic Spread
Motivation to Distribute Videos

This is important for the health of the mothers and newborn. This is a humanitarian effort and we all have to come together. It is impossible for anyone to distribute the videos door-to-door but much easier for me as I can transfer the videos on phones of customers by spending an extra two-minutes.

- P1 (MSO)
Distribution Scenarios

• Videos were introduced as “something new, different & useful.”
• MSOs -> customers and family members
• LOs -> door-to-door, social gatherings & screened it in outdoor areas
• ASHAs -> mothers group meetings, health centers & home visits
Technologies for Distribution

- Bluetooth: 172
- Memory card transfer: 98
- Watched on others' phone: 49
- Watched on others' laptop: 43
- USB Drive: 5
- WhatsApp, YouTube: 2
Challenges in Distribution

I borrow my husband's phone to transfer the videos during house visits. He always asks me to come home as soon as possible because he needs the phone. I am tense during the visits and this has compromised the time I spend in house visits.

- ASHA

Many people ask me “Why are you asking me to give a missed call? What do you get?” I ask them to go to the end where the doctor asks people to send a missed call. I tell them that I don't get anything and they can go to the hospital to verify with the doctor.

- MSO
Distribution vs. Viewership

A person with a mobile phone goes to a shop for getting mobile content. If he won't come to my shop, he will go to another shop. If all of us start transferring the videos then he will have no option but to watch them.

- MSO

People owe us a lot as we transfer mobile content for free on their phones.

- LO

We are social servants and years of community service make us trustworthy. People respect us and know that they do not have an ulterior motive.

- ASHA
Need for Extrinsic Motivation

9-Day Fasting Period

Follow-ups with Distributors

Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14

Block 1

Block 2

Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14

MSO
LO
ASHAs
Effectiveness of Video Tracking

**Sending missed-calls was non-trivial**
- Unable to remember the phone number
- Unsure about the questions that will be asked in follow-up call
- Did not have sufficient balance to place even a missed call

**Other limitations**
- Unable to identify whether they actually watched a video
- Unable to unearth exact distribution by each participant
Conclusion

• Mobile video dissemination in resource-constrained rural settings using three distribution channels comprised of different community actors.

• Methodological contribution by implementing a simple video tracking mechanism comprised of missed calls and callbacks
Thank You!

@adityavash
Extra Slides
Challenges in Video Tracking

Infeasible solutions

- Smartphone application that could monitor and self-report mobile media transfers
- Feature phone application that could use device logging and/or watermarking

Designed a simple measurement technique

1. Missed calls to signal that people watched videos
2. Callbacks to evaluate the reach and geographic spread of distribution, and understand strategies
Intradependence & Interdependence

- Involvement of people outside the study
  - One-of-a-kind training was lucrative
  - Wanted to be a part of the movement
  - Wanted to help a friend or family member

- Mixing of distribution channels
  - Participants capitalized on the strengths of other channels
How to disseminate these videos?