Gyan Jyoti: Empowering Community Health Workers with ‘The Light Of Knowledge’

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Objective

• Introduction to Gyan Jyoti application
• Findings from proof of concept study
• Discuss challenges experienced
• Future opportunities for mHealth initiatives
Project Ujjwal
Reproductive Health Project (2013-2015)
Reaching Bihar

- Despite India’s TFR at 2.7, Bihar is still struggling with 3.4 TFR (source: NFHS-3 / NFHS-4)
- Skew towards female sterilisation (20.7%) puts the burden of FP on woman (source: NFHS-4)
- Social taboos, incorrect information coupled with myths, fears and concerns regarding side effects, negative word of mouth adversely affect acceptance
- Frontline Health Workers or ASHAs in India need adequate support in order to motivate young and low parity couples to adopt modern contraceptives
mHealth Game Changer: $ 40 Smartphones

- In the next 2 years, whether subsidized or not, most health workers will own smart phones
- Even disconnected from the Internet these phones are basically small computers with entertainment systems
- Need to plan and design mHealth solutions around this trend
- Exploit growing community networks based on smart phone digital transfers
Gyan Jyoti: A Powerful SBCC Tool

Self-Learning Tool:
Easy access to technical content

Counselling Tool:
Decision support tool, offering need specific counseling using AV content that is standardized, motivational and persuasive

Monitoring Tool:
Provides usage statistics; client-specific counselling sessions tracked
360° communication materials for family planning

Doctor Speaks

Role Model Film

TV Spot

Soap Opera based Film

My name is Nishu and he's my husband, Jitendra Kumar.
Pairing Individual Counselling and Persuasive Audio-Visual Communication

- **Personal Counseling by ASHAs**
  - Flexibility to seek clarifications
  - Human Intervention makes it personal and relatable

- **Persuasive SBCC Films**
  - Audio-visual format engages audience
  - Message delivery is entertaining and easy to understand

*Doubts and Queries Addressed by a Trusted person at source*
ASHA selects the client to be counseled which opens the case profile.

Virtual Tour

mlearning and client counselling interfaces

Counselling materials accessible by contraceptive method

4 kinds of films available by method by information need – Doctors films, Role Model films, Entertaining films and TV PSAs

Watching persuasive films

Frequently asked questions by contraceptive method
Key Features

- **Built for Sustainability:**
  - Developed as part of an evolving global Digital Content Delivery System that supports creation, curation, localization, packaging and distribution of health content (India, Ethiopia, Nigeria and Pakistan)

- **Ease of Content Management:**
  - Integrated with Moodle most common open source Learning Management System allowing for low cost development and deployment of content

- **Analytics:**
  - Usage statistics collected by the app and uploaded to the admin server whenever there is a connection. Statistics reflect what resource was used and when and for how long.

- **Works Offline:**
  - No internet connection necessary to run the app once it is fully registered and media loaded

- **Open Source:**
  - No licensing requirements
  - Code and functionality can be freely shared

- **Easy Access:**
  - Available for download from Google Play

- **Adaptable To Many Languages:**
  - Gyan Jyoti available in Hindi and English
  - Adaptable to any language for an Android based device
**Proof of Concept Study**

**Objective:** To provide proof of concept for Gyan Jyoti App

- Post Only: 2 arms; Gyan Jyoti & SD Cards
- Focused on FP acceptors and current users in the past one year
- Sample drawn from married women (18-49 years) including those sterilized in the past year
- Study conducted during May-June 2015

Diagram:
- **Bihar, India**
  - **Arm 1**
    - Gyan Jyoti
    - Samastipur (N=406)
    - Married women (18-49 years) including sterilized < 1 year
  - **Arm 2**
    - SD Card
    - Darbhanga (N=406)
    - Married women (18-49 years) including sterilized < 1 year
Current Use of Modern FP Methods

Percentage of Women using Modern FP Methods


Samastipur Modern Method
Darbhanga Modern Method
Family Planning Method Mix

Darbhanga SD card
- Female sterilization: 20.35%
- IUD: 17.7%
- Injectables: 4.425%
- Condom: 4.425%
- Pill: 8.85%
- LAM: 35.4%
- Other tra. method: 5.31%
- Withdrawal: 1.77%

Samistipur Gyan Jyoti
- Female sterilization: 3.409%
- IUD: 34.09%
- Injectables: 11.36%
- Condom: 12.5%
- Pill: 9.091%
- LAM: 9.091%
- Std days method: 14.77%
- Other tra. method: 2.273%

Darbhanga N = 357
Samistipur N = 339
Current Modern Contraceptive Use by District

Darbhanga SD card

- Yes: 87.11%
- No: 12.89%

P < .01
Darbhanga N = 357

Samistipur Gyan Jyoti

- Yes: 78.47%
- No: 21.53%

Samistipur N = 339
Exposure to ASHA Home Visit & Gyan Jyoti Films

**Darbhanga SD Card**
- No exposure: 52.96%
- Home visit: 44.58%
- Home visit + film: 2.463%

**Samistipur Gyan Jyoti**
- No exposure: 44.33%
- Home visit: 38.18%
- Home visit + film: 17.49%

_N = 406 for both groups_

***P < 0.0001***
### Logistic Regression: Current Use of Modern FP in 2 districts in Bihar

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Odds Ratios (95% CI)</th>
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<tbody>
<tr>
<td><strong>Exposure to Gyan Jyoti Intervention</strong></td>
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</tr>
<tr>
<td>No exposure</td>
<td>1</td>
</tr>
<tr>
<td>ASHA home visit</td>
<td>1.9** (1.2 -3.2)</td>
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<tr>
<td>ASHA home visit + films on mobile phone</td>
<td>4.5*** (2.4-8.5)</td>
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<tr>
<td><strong>District</strong></td>
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<tr>
<td>SD Card District</td>
<td>1</td>
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<tr>
<td>Gyan Jyoti District</td>
<td>1.5* (0.98-2.4)</td>
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<tr>
<td><strong>Media Exposure : TV, radio, magazine or newspaper</strong></td>
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<tr>
<td>No Exposure (0 Media)</td>
<td>1</td>
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<tr>
<td>Low Exposure (1 Media)</td>
<td>.80 (.39-1.6)</td>
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<tr>
<td>High Exposure (2+ Media)</td>
<td>2.5* (.80-8.1)</td>
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<tr>
<td><strong>Has trust in family planning</strong></td>
<td></td>
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<tr>
<td>Low</td>
<td>1</td>
</tr>
<tr>
<td>High</td>
<td>1.7* (1.0-2.7)</td>
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</tbody>
</table>

Adjusted for age, education & SES

* P < .05 **P < .01 *** P < .001

+ Excludes currently pregnant women

Pseudo R² 0.082
Implementation Challenges

- Implementation period was shorter than anticipated
- Gyan Jyoti deleted from the phones by family and ASHAs
- Low mobile literacy of a few ASHAs
- Routine technical support to ASHAs for troubleshooting for phone and app related problems
Conclusion

• Gyan Jyoti helped bridge the knowledge gap by providing ready access to correct and credible information.

• Increased ASHAs credibility in her community, empowered her to confidently promote modern contraceptives.

• Enabled informed decision making by the clients.
Way Forward

• Convergence with other health behaviors across the RMNCH+A spectrum
• Integration with service delivery platforms to develop an integrated client tracking, counseling and follow-up mechanism