Scaling Up: Digital innovations that are Scientifically Driven and Practice Ready: Lessons from the Field

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Disclosures

• **Funding Source:** No funding was secured.

• **Financial Disclosure:** No financial relationships relevant to this presentation.

• **Conflict of Interest:** No conflicts of interest.

• **Disclaimer:** The views expressed in this presentation are those of the authors and do not reflect the views, official policy, or position of the University of South Florida.
Description

The focus of this interactive symposium is to discuss and to describe the science guiding the implementation of digital innovations and the lessons learned from the field. Evaluation frameworks will be described as well as potential pitfalls and alternate solutions.
Presentations

Real-Time Text4baby Informs Community Partners

Gamification Approach to Improve Self-Managing Behavior in Head and Neck Cancer Patients

Evaluating Digital Interventions: Generally & Specifically
Real-Time Text4baby Informs Community Partners: A domestic mHealth program for pregnant women and new moms

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Objectives

• Describe the Text4baby program, the intended audience and how it works
• Discuss the Conceptual Framework
• Discuss the Text4baby Logic Model
• Discuss Key Research Questions & Outcomes of Interest
• Describe data sharing
Text4baby:

- A free national mobile information service that provides pregnant women and new moms with information to help them care for their health and give their babies the best possible start in life.
- The largest national mobile health initiative to date.

Program Goals:

- Demonstrate the potential of mobile health technology to:
- address a critical national health priority: maternal and child health.
  - reach underserved populations with critical health information.
- Develop a base of evidence on the efficacy of mobile health interventions.
- Catalyze new models for public-private partnerships in the area of mobile health.
Use of texting for health care information delivery

Courtesy of New Yorker Magazine
How it works

User registration via text or website

User gives zip and due date/DOB

If pregnant, starter-pack of 6 key messages

Free tips 3x/week

Ends if text STOP or baby’s 1st b-day
Content Reviewers

- OB/GYN
- Nurse-Midwife
- Pediatricians
- Medical epidemiologists
- Mental health professionals
- Nutritionists
- Nurses
- Lactation Consultant
- Clinical geneticist
Theory-based Evaluation

- Text4baby is a health brand
- Based on behavior change theory, so is evaluation
- Health Belief Model: Texts are a cue to action
- Social influence and diffusion stems from texts
- Social Cognitive Theory: Self-efficacy, outcome expectations, social modeling $\rightarrow$ behavior change
- mHealth is a new level of social ecology, interacts with existing ecologies like family, community
Text4baby conceptual framework

Text4baby Delivery and Exposure

Reactions/Receptivity to Messages (e.g., found text messages useful, credible, etc.)

Mediators (e.g., self-efficacy to navigate health care system)

Behavior Change (e.g., prenatal care seeking)

Social, cultural, & physical environment moderate each pathway

Health Outcomes (e.g., healthy eating, visit adherence, etc.)

Process Evaluation

Outcome Evaluation
## Text4baby Evaluation Logic Model

<table>
<thead>
<tr>
<th>Inputs/Resources</th>
<th>Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Indicators</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Founding Partners:</strong></td>
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<tr>
<td>- HMHB</td>
<td>Brand (Trusted, FTEU)</td>
<td>Total Unique Users since launch (2/2/2010)</td>
<td>Diversity of enrollees (e.g., Spanish vs. English)</td>
<td>Enrollment data</td>
<td>GOAL 1: Increasing enrollment</td>
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<tr>
<td>- Voxiva</td>
<td>Media</td>
<td># of Messages sent</td>
<td>Reaching women early in pregnancy</td>
<td>By Language Protocol - English</td>
<td>GOAL 2: Reaching women in high-risk groups</td>
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<td>- GHG</td>
<td>Marketing/Enrollment</td>
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<td>- Spanish</td>
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<td>- J&amp;J</td>
<td>Coalition Building</td>
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<td>By Message Protocol - Pregnancy</td>
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<tr>
<td>- CTIA – The Wireless Foundation</td>
<td>Digital media including websites, Partner Portal, and social media</td>
<td>Language Protocol - English - Spanish</td>
<td>Reaching women in high-risk Zip codes</td>
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<td><strong>Wireless Carriers</strong></td>
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<td></td>
<td>Develop partner and end-user surveys</td>
<td>Message Protocol - Pregnancy - New Baby</td>
<td>User satisfaction</td>
<td>Variable is stage of pregnancy by weeks and newborn age</td>
<td>GOAL 3: Increasing knowledge, e.g. immunizations</td>
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<td><strong>USG Partners:</strong></td>
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<tr>
<td>- White House</td>
<td>Ongoing product enhancement</td>
<td>Enrollment by Zip</td>
<td>Knowledge change</td>
<td>Increasing use of recommended clinical services</td>
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<td>- OSTP</td>
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<td>- HHS</td>
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<td>- USDA</td>
<td>Data collection and sharing/abstraction of data</td>
<td>End User surveys</td>
<td>Self-reported behavior change</td>
<td>Survey results of enrollees</td>
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<td>- CPSC</td>
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<td>- DoD Military Health System</td>
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<td><strong>Funding</strong></td>
<td>Evaluation/Analysis</td>
<td>Refer-a-friend survey</td>
<td>Disseminate findings and improve activities</td>
<td>Variable: Would you recommend to a friend</td>
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<td><strong>Core Program</strong> (content, service, infrastructure, tools)</td>
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<td><strong>Additional community &amp; local partners</strong></td>
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### Indicators
- GIS mapping
- Enrollment data
- By Language Protocol
- By Message Protocol
- SURVEY:
  - Knowledge change
  - Attitude change
  - Self-reported behavior change
  - Variable: Would you recommend to a friend

### Impact
- GOAL 1: Increasing enrollment
- GOAL 2: Reaching women in high-risk groups
- GOAL 3: Increasing knowledge, e.g. immunizations

### Additional Data
- Total Unique Users since launch (2/2/2010)
- # of Messages sent
- Reaching women early in pregnancy
- Reaching women in high-risk Zip codes
- Enrollment data
- GIS mapping
- By Language Protocol
- By Message Protocol
- SURVEY:
  - Knowledge change
  - Attitude change
  - Self-reported behavior change
- Variable: Would you recommend to a friend

### Additional Community & Local Partners
- HMHB
- Voxiva
- GHG
- J&J
- CTIA – The Wireless Foundation
- White House
- OSTP
- HHS
- USDA
- CPSC
- DoD Military Health System
- Core Program (content, service, infrastructure, tools)
- Additional community & local partners
Text4baby Key Research Questions

**Process**

*Promotion*
- How many people are we reaching with information about t4b?
- How are people finding out about text4baby?
- What promotional strategies/tactics work to get moms to enroll in a texting health service?

*Use*
- How many people are using/have used the service?
- Where are we in progressing towards the 1 million by end of 2012 goal?
- Who is using the service? Are we reaching our target audience?
- How are they using the service?
- What do they think about the service?
- How much information have people gotten from t4b?

**Outcome/Impact**
- Is text4baby improving knowledge around key MCH topics?
- Is text4baby having a positive impact on the behavior of its users?
Outcomes of Interest

Knowledge

• Breastfeeding
• Infant Immunizations
• Flu vaccine
• Well-child visits
• Labor & delivery
• Smoking cessation
• Safe sleep
• Oral health
• Development
• Nutrition

Behavior

• Use of recommended resources (inc. calling hotline #s in the service)
• Infant immunizations
• Flu shot
• Well-child visits
• Safe sleep positioning
• Oral health
• Alert Messages (Car seat recommendation extension; use of crib bumpers; recalls of products)
Text4baby is reaching low income women—

- Approximately 20% of text4baby users in Virginia live in ZIP codes where more than 20% of the residents live in poverty (2010).
- Higher enrollment in Virginia ZIP codes with the highest poverty levels (2010)
Text4baby Enrollment Data Portal

This website provides access to real-time enrollment data for the text4baby program. Outreach Partners with a signed Memorandum of Understanding and a signed Data Use Agreement may obtain access to this site by contacting info@text4baby.org. For more information about the data available here, please visit http://text4baby.ning.com.

Text4baby is a free service of the National Healthy Mothers, Healthy Babies Coalition.
ETJ 24-Jul-19

Text4baby

Fast facts:

- Total number of unique users since launch (2/2/2010): 167,474
- Total number of messages sent since launch (2/2/2010): 12,866,788
- Week-on-week growth rate (week ending 16-23 Apr 13): -27.29%
- Average satisfaction rating for all unique users who responded to survey question (N=119,296): 7.84
- Percent of unique users since launch (2/2/2010) who would refer a friend (N=119,296): 96.18%

Cumulative Number of Unique Active Users of Text4baby since Launch (2/2/2010) by State
FLU MODULE

- Goals of the flu module included:
  - Introduce interactivity into the text4baby system.
  - Gain insights around the barriers users face in obtaining flu shots.
  - Reduce barriers to influenza immunization by providing educational messages and appointment reminders.
Early Results of flu module 10.31.11

Total Number of Unique Users Surveyed 96,070

“Are you planning to get a flu shot this season?”

n=29,316

- Respondents who replied 1 for “YES” 8,656 (29.5%)
- Respondents who replied 2 for “NO” 8,841 (30.2%)
- Respondents who replied 3 for “Already got it” 11,819 (40.3%)
Results of flu module 10.31.11

Unique responses to follow-up question sent to 8,841 who answered “NO”

Please tell us why you’re not planning to get a flu shot:

1 “I think it may give me the flu” = 1,517 (23.5%)
2 “Cost” = 678 (10.5%)
3 “Don’t think it is safe” = 1,863 (28.9%)
4 “Don’t need it” = 1,160 (18%)
5 “Other” = 1,224 (19%)
Results of flu module 10.31.11

Respondents who indicated they were not planning to get a flu shot and received a follow-up message: n=5,300
47% responded to the follow-up flu message n=2,504

“Yes” I want a reminder n=2,551 (55%)
”No” I do not want a reminder” n=2,027 (44%)
The Importance of Partnership
Thank You!

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