

Delivering Mobile Solutions for Global Health Problems through Classroom Partnerships with Universities, Global Public Health Agencies and Technology Companies

Presented by:

James Wolff, Rose Molina, Pawandeep Kaur and Emily George

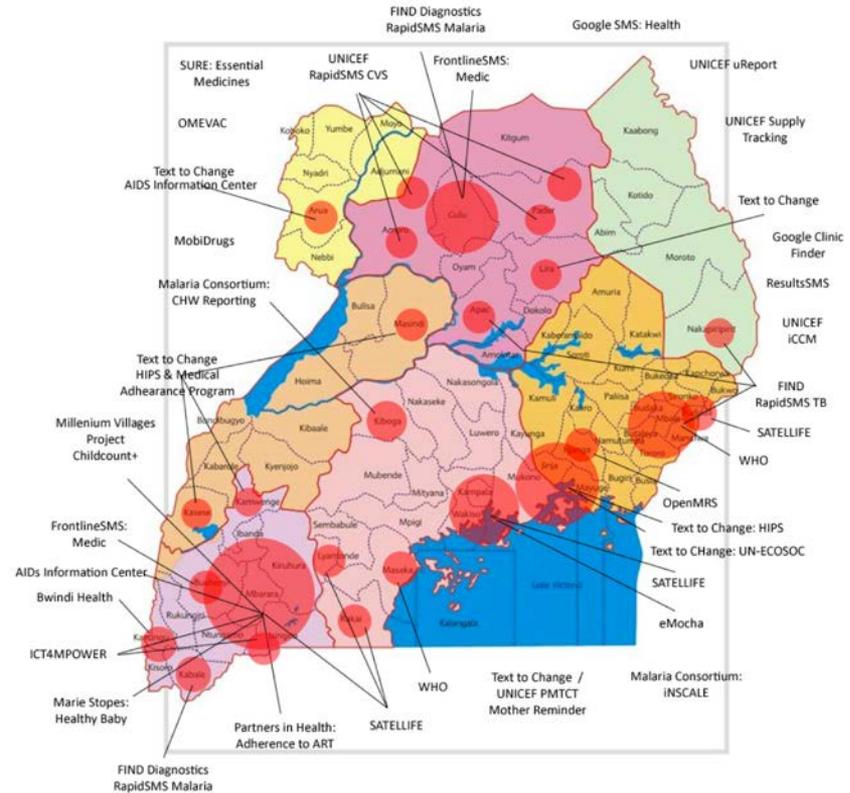
Presenter Disclosures

**James Wolff, Rose Molina, Pawandeep Kaur and
Emily George**

No relationships to disclose

Mobile Technologies are in Demand

- 2012: Rampant pilot projects in Uganda led to a nationwide moratorium on digital health projects
- Great need for public health professionals with the skills and competencies to develop and manage mHealth applications



Using Mobile Technologies to Improve Health Outcomes

- Teams of graduate student consultants work with an organization
- Terms of Reference specify development, testing and implementation for a mobile application





- Socially conscious global software company
- Experience implementing hundreds of projects in 60+ countries
- Makers of CommCare





- Open source platform
- Most widely used platform for frontline workers
- Multiple uses: data collection, case management and counselling
- Flexible and scalable

Our Story

- Engage with the digital health industry
- Provide our students an opportunity to build skills and competencies in digital health
- Work with partner organizations to meet a public health need
- Implement the application and improve health outcomes
- 150 students, 30 organizations, 35 apps, 20 countries

Where We Work



Partners
In Health



Compañeros
En Salud

CHIAPAS



Our Goal:

To improve the quality of care during childbirth and strengthen the roles of professional midwives and obstetric nurses as change agents in this process.

MacArthur
Foundation

SECRETARÍA
DE SALUD

Partners
In Health



Compañeros
En Salud

ARIADNE LABS



BRIGHAM AND
WOMEN'S HOSPITAL

HARVARD T.H. CHAN
SCHOOL OF PUBLIC HEALTH

Challenges in Optimizing Maternal Health

Context:

- MMR 68 / 100,000 in Chiapas
- 60% home birth rate
- Rural communities of subsistence farmers

Health System:

- High medical staff turnover
- Fragile supply chains
- Obstetric violence
- Distrust of health system



Where We Provide Care



Our Intervention



Multidisciplinary Team



Respectful Maternity Care



Safe Childbirth Checklist



Transportation to Hospital



Food and Lodging



Supply Chain Support

World Health Organization Safe Childbirth Checklist

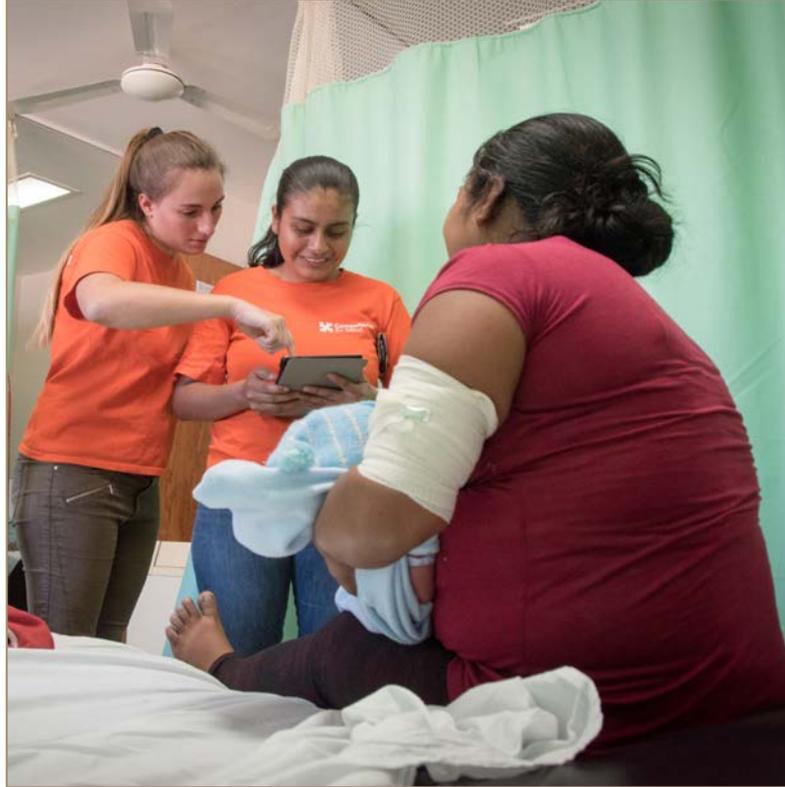
29 essential birth practices across 4
pause points

The image shows a sample of the WHO Safe Childbirth Checklist form, divided into four sections corresponding to the pause points in the diagram below:

- 1 On Admission:** Includes questions about maternal history, current health, and readiness for delivery.
- 2 Just Before Pushing (Or Before Caesarean):** Includes questions about maternal readiness, fetal position, and the presence of a skilled attendant.
- 3 Within 1hr of Birth:** Includes questions about newborn health, including breathing, crying, and temperature.
- 4 Before Discharge:** Includes questions about maternal health, newborn health, and the availability of a skilled attendant for home care.



Why an App?



Our App Development Journey

Terms of Reference

Online Course

Client Meetings

Structured Class Exercises

Eight Weeks



My Courses

BOSTON
UNIVERSITY

CommCare Application Building for
Public Health Students

An App to Improve Childbirth Care in Chiapas, Mexico

Obstetric nurses use a mobile checklist to support evidence-based childbirth practices + respectful birthing practices

Supervisors use information collected through real-time monitoring for continuous quality improvement

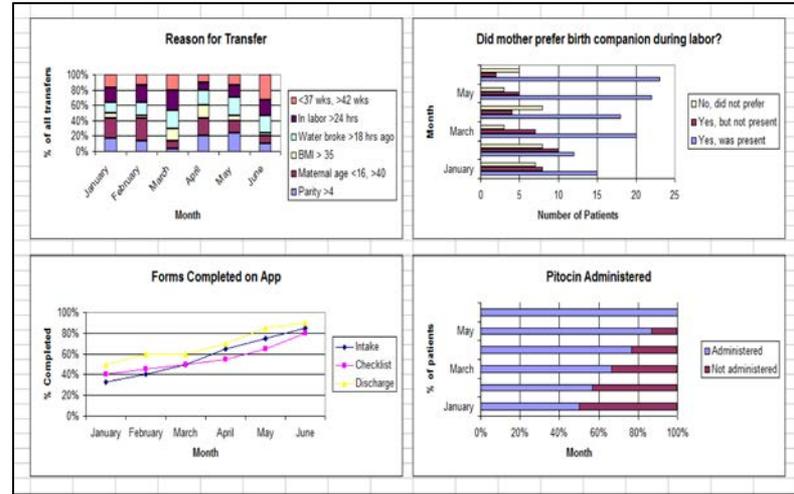
More than the App



- Principles of Digital Design
- Implementation
- Sustainability and Scalability
- Monitoring and Evaluation
- Training

Monitoring & Evaluation- Mock Dashboard

Information collected with the App can be used for monitoring and evaluation

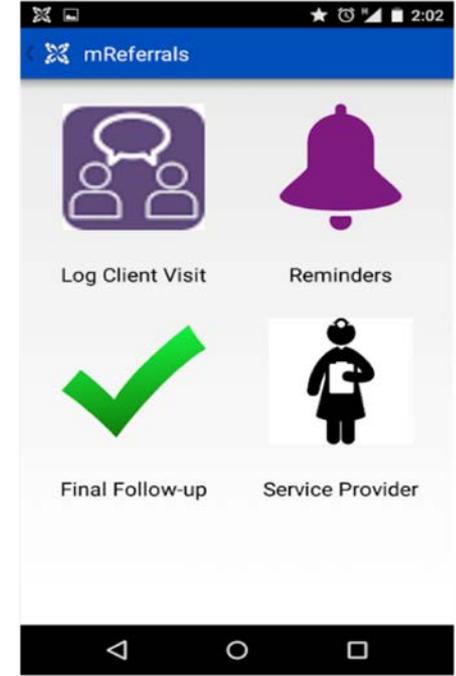
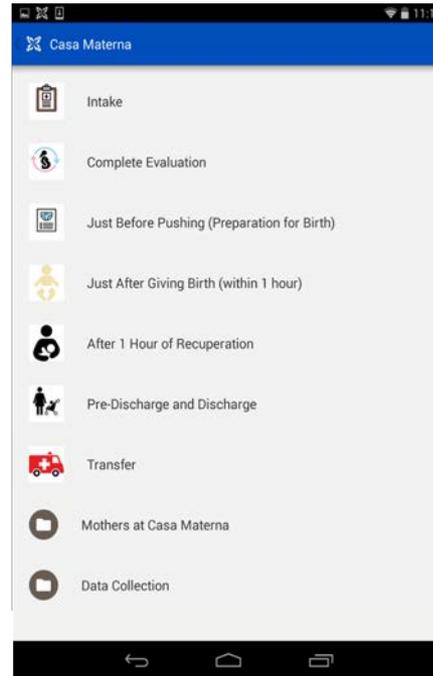


Considerations for Sustainability

- Number of users
- The users and digital literacy
- Languages
- Real time use vs. retrospective use
- Clinic Procedures vs. documentation

Training and User Guide

Creating tools for
a smooth
implementation



Beyond the Classroom

- Utility of user guide
- Adaptations to the App in the field
- Reflections from end users
- Scalability



Acknowledgements

Meryn Robinson
Jonathan Payne



Partners In Health  Compañeros En Salud



Thank you! Questions?

Email: jwolff@bu.edu, kaurp@bu.edu,
rmolina@bidmc.harvard.edu, egeorge@ariadnelabs.org