Using Social Innovation to Keep Women and Newborns Alive: New Case Studies from Africa

Presentation at Global Health & Innovation – 23 April 2017

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Concern is a humanitarian and development organization that has worked with the world’s poorest people for nearly 50 years.

We work in disaster response and resilience, maternal and child health, livelihoods, agriculture and nutrition, WASH, education and more.

Last year we reached 22.7 million people in 29 countries.
Innovations for Maternal, Newborn & Child Health is an initiative of Concern Worldwide.

Innovations pilots creative projects to enable essential health services to reach women, newborns and children. Innovations was funded by the Bill & Melinda Gates Foundation.
Ambitious aims

Can we go to high mortality, resource-poor settings and crowd-source groundbreaking innovations for maternal, newborn and child health?

Can we pull ideas from unconventional places, marginalized voices, people who have never been heard?

What can we learn about innovation processes?
Detailed architecture for ideation

Ambitious sourcing & selection process

12,762 ideas

• Mentorship
• Coaching
• Assessment
• Final judging

pilots
Studying social innovation

Concern did a great deal of reflection and research to see how best to approach our work.

- Theories and processes of social innovation
- Social innovation initiatives of others / other sectors
- Factors linked with the ability to scale
- Our own assumptions as tested by experience
9 Principles of innovation

- Design with the User
- Be Data Driven
- Understand the Existing Ecosystem
- Be Collaborative
- Design for Scale
- Build for Sustainability

- Use Open Source
- Do no harm
- Reuse and Improve

*Endorsed or adopted by: UNDP, UNICEF, USAID, Gates Foundation, UN Global Pulse, WFP, WHO, UN Office of Humanitarian Affairs, SIDA, UN Foundation, UNHCR*
Phase 2 improvements

• Refine the **incubation** process
  – Blend, refine and combine ideas → **comprehensive solutions**

• Integrate **human-centered design thinking** as signature approach
  – Intense user focus: **Empathy**!
  – Rapid **prototyping** up front
  – Purposeful **iteration** during implementation
8 Years, 9 Pilots

**PHASE I**

- Chipatala Cha Pa Foni, Malawi
- Male Health Activists, India
- Quality Circles, Sierra Leone
- Helping Health Workers Cope, Sierra Leone

**PHASE II**

- Care Community Hub, Ghana
- Community Benefits Health, Ghana
- Maker for MNCH, Kenya
- MUM aka PlanWise, Kenya
- Essential Newborn Care Corps, Sierra Leone

Innovations for maternal, newborn & child health
Idea incubation process (revised)

What Inspired This

India
Module-based training for traditional providers in remote areas & equip them with kits to deal with medical emergencies. A group of health students.

India
State-NGO partnership to enable economic empowerment of rural/tribal women. A mixed group of individuals from NGO, corporate, government, and academic sectors, and students.

Malawi
Certify TBAs to perform approved services & procedures; form a TBA association to ensure proper training & equipment. A group of corporate-sector individuals.

Malawi
Facilitate rural health workers to go into small business to supplement their salaries. A group of university students.

Sierra Leone
Formalize integration of traditional providers in modern health care through...incentive schemes for TBAs to bring clients for institutional delivery. A mixed group of local innovators and global domain experts.

Essential Newborn Care Corps
With design thinking can we...

...create better solutions?

- Develop **empathy** with users?
- Engender more **ownership**?
- Increase the pace of **uptake**?
- Increase **success**?
theoretical design pathway
The Essential Newborn Care Corps

• Trains and rebrands non-literate traditional birth attendants as Maternal and Newborn Health Promoters (MNHPs).

• Health Promoters connect communities with the government health system through home counselling and referrals.
Background: Maternal and newborn health in Sierra Leone

- Sierra Leone has among the highest maternal and newborn death rates in the world.

- 40% of births are conducted without a skilled health provider.

- Of those, 90% are assisted by a TBA.
Social enterprise

- The MNH Promoters earn income by selling health and baby products to the mothers they visit.

- Testing whether a small business model can incentivize and sustain their new roles.
Intended outcomes

• Increased use of MNH services and deliveries at government health centers.
• Increased practice of essential MNH behaviors.
• Change in perceptions of the TBAs’ roles.
• Improved trust in the formal health system.
Designing ENCC

- **Rapid Prototyping**: drawing on the use of an iteration cycle to design, test and redesign elements of a program or product.

- 8 workshops with TBAs, community members and project staff
Rapid prototyping: acceptability of the project model

- Scenario Testing
- Role Playing
- Collective Questioning
Rapid prototyping: Branding

• Drawing the Experience
• Quick-and-Dirty Prototyping
Rapid prototyping:
Referral design

- Quick and Dirty Prototyping
- Role Playing
Rapid prototyping: Social enterprise products and loans

- Role Playing
- Product Sorting: 5-bean method
Translating Design into Implementation

“I am happy this helps our pregnant women be taken care of by both nurses and TBAs.”

“It is a [form of] respect that TBAs are working with paper.”
Impact of intervention

Increases in both arms (p<.05):
- Mothers’ knowledge of birth preparedness
- Immediate breastfeeding
- Postnatal care for mothers and newborns

Increases (p<.05) in the promotion + enterprise arm only:
- Health facility delivery
- 4+ antenatal care visits

No effect on antenatal care initiation timing
Qualitative findings

- Promoters energized and motivated by the respect received in their new roles
- Greater trust between communities and formal health system
- Increased husband and community involvement
Influence of Design on Project Achievements

• Almost universal coverage of homes and 98% retention of MNH Promoters
• Steady flow of referrals to health centers (~2000 / month)
• Broad, strong acceptance of the new MNH Promoter role among mothers, communities and health facility staff
• Completed loan repayments with an average monthly reinvestment of $12 USD per MNH Promoter
Reflections on design thinking

• Empowers project participants to contribute to achieving outcomes.
• Gives permission to fail productively and develop better, more sustainable solutions
• Strong link to uptake of new ideas, products, behaviors
• Empathy, iteration are key
• Design influenced the intervention and its designers
• Influence rather than impact
Acknowledgements
concernusa.org/innovations
Innovations Overview video
Project Activities

• Home visits with health messaging
• Referrals to health facilities
• Supportive supervision
• Monthly refresher training
• Quarterly review meetings
• Selling health & baby products
ENCC activities timeline

- **2013**
  - January: ENCC program activities resume

- **2014**
  - February: All TBAs trained & rebranded as MNHPs. 100 TBAs trained in business skills
  - March: MFSE loans distributed & product sales begin
  - June: 1st quarterly review meeting
  - July-September: Rapid prototyping phase
  - July-December: Break in project activities due to Ebola
  - December: MNHPs trained in Ebola sensitization & No Touch policy

- **2015**
  - January: ENCC program activities resume
  - March: Monthly supervision visits begin
  - May: 2nd quarterly review meeting

- **2016**
  - January: ENCC program activities resume
  - May: CHW supervisors participate in MNHP monthly meetings
  - October: 3rd quarterly review meeting
  - June: 1st quarterly review meeting
  - August: Final monthly meetings, supervision, and referral collection
  - September: Project closeout. ENCC handover event
  - December: MNHPs trained in Ebola sensitization & No Touch policy
Methods of evaluation

A mixed-methods approach was used to assess the effect of the ENCC interventions.
Evaluation Scope

- Impact evaluation: 3-arm, quasi-experimental design
- Cost-effectiveness analysis
- Endline qualitative investigation
- Endline Health Promoters survey

Also:
- Process documentation
- Routine performance monitoring
- Application of Human Centered Design
3 Study arms

3 arms: (i) HP group, (ii) HP+ group, and (iii) a comparison group, (no intervention)

The pilot was implemented across nine chiefdoms in Bo District, Sierra Leone. Characteristics considered for the selection of the intervention and comparison arms included (1) total catchment population, (2) density of primary health units (PHUs), (3) average distance between PHU and MCH referral hospital, and (4) number of active MNHPs.

**HP Arm.** 100 MNHPs trained in Valunia, Gbo, Selenga, Kakua,* and Niawa Lenga chiefdoms

**HP+ Arm.** 100 MNHPs trained in Bumpe and Tokonko chiefdoms

**Comparison Arm.** No intervention in Baoma, Kakua,* and Jiama-Bongor chiefdoms

*Some villages in Kakua chiefdom have been assigned to the HP arm and others to the HP+ arm. Because Kakua is so large, crossover between the two groups was estimated to be limited.*
Study outcomes

Both the baseline and endline assessments aimed to provide evidence of ENCC’s effect on the intermediate and final TOC outcomes listed below:

**Intermediate outcomes**

- Women’s knowledge of MNCH
  - Knowledge of dangers signs during labor, after delivery, and in newborns
  - Knowledge of birth preparedness components

- Engagement of MNHPs or TBAs
  - MNHPs’ coverage of households
  - Interaction between MNHPs/TBAs and mothers
    - MNHPs providing increased referrals for four ANC visits
    - Women accepting advice provided by MNHPs
    - MNHPs providing increased referrals for newborns within 24 to 48 hours for birth
    - MNHPs providing increased referrals for facility deliveries within functional EMOC referral network

**Final outcomes**

- Utilization of facilities for at least four ANC visits as recommended by the World Health Organization
- Utilization of facilities for first ANC visit during first trimester of pregnancy
- Utilization of facilities for deliveries
- Utilization of facilities for Postnatal Care
MNHPs and community perceptions of HP+

In general, MNHPs were happy with their business. As previously mentioned in slide 64, the social enterprise component was a great source of satisfaction for 71% of MNHPs. Community members were likewise happy with the business they were doing.

“She gives me good on loan which I pay back later. I may not have money at the time she come with her business.” – Mother, HP+ arm

“Well that is very good, for instance if someone is living in Tikonko which is 7 miles from Bo but at the time of delivery she has to come to Bo to buy the baby items like baby oil but when the health promoter came, women buy the products from them at low cost and they were prevented them from paying transport to Bo. It is a very good thing because they are reducing the burden on the women because they are not moving again to buy things because it is at their door.” – DHMT

A few mothers and MNHPs have indicated that the MNHPs extend credit to some of the mothers to enable them to buy goods and pay the MNHP back over time.

Some MNHPs mentioned that they receive more respect because of their business, whereas others stated they are respected because of the advice that they give and not because they sell products. Women confirmed that the cadre’s status in the community was still high even without selling goods.

“She gives me good on loan which I pay back later. I may not have money at the time she come with her business.” – Mother, HP+ arm

“Even without selling goods their status has been very great in terms of the respect the women and the community give to them. Selling of these goods is just an additional thing because the women have access to these baby items now.” – Community Beneficiary
Effect on key outcome and intermediate indicators

• The HP+ arm had a significant effect on facility-based deliveries. A 12 percentage-point increase in utilization of facilities for deliveries in the HP+ arm was observed over the comparison arm. The HP+ arm had an added gain of 9.5 percentage points over the HP arm.

• There was no effect of the interventions on ANC attendance during the first trimester. However, the HP+ arm had a significant effect on four or more ANC visits during pregnancy (8.8 percentage points over the comparison arm). The HP+ arm showed a 19 percentage-point gain over the HP arm.

• Both interventions showed effects on PNC; the intervention arms demonstrated an additional effect of over 20 percentage points on PNC maternal check-ups by health professionals and over 15 percentage points on PNC newborn check-ups by health professionals.

• The interventions did not improve knowledge of danger signs among mothers. However, there was a significant effect of each arm in improving maternal knowledge of birth preparedness components.
Coverage and engagement of MNHPs with mothers and community

• A high level of interaction was observed between MNHPs and women. Most MNHPs were able to cover the entirety of their catchment area.

• MNHPs were able to see 86% of women in the HP arm and 93% of women in the HP+ arm. This amounted to more than a 40 percentage-point increase for both arms since baseline, which was the coverage when MNHPs were TBAs.

• Counseling and referrals for facility deliveries were done universally by MNHPs in both arms. Household survey results show that between baseline and endline, referrals by MNHPs for institutional deliveries increased by approximately 15 percentage points in the HP arm and 7 percentage points in the HP+ arm.

• Women visited by an MNHP within 24 hours of birth increased nearly 30 percentage points in HP arm and nearly doubled in the HP+ arm.

• Husbands became more involved in decision-making around pregnancy and delivery. The HP arm had a 28 percentage point increase and the HP+ arm increased 19 percentage points. The comparison arm improved 5 percentage points.

• In the HP+ arm, though coverage of MNHP counseling services during pregnancy was over 90%, only 70% of surveyed mothers were aware that MNHPs also sold essential products. Approximately 56% of women who were aware of MNHPs’ social enterprise purchased an item from them.
The MNHPs’ experience

• MNHPs were all former TBAs, with the majority having 5 years of TBA experience. Most had little or no formal education.

• While all the MNHPs received the same training, there was a gap in knowledge of key danger signs between MNHPs in the HP arm and those in the HP+ arm. MNHPs from the HP+ arm showed poorer knowledge on certain knowledge components than their HP counterparts.

• MNHPs generally accompanied women to the health facilities, especially when women were close to delivering or showed danger signs.

• Besides accompanying women to the health facilities for ANC, delivery, and PNC, MNHPs also provided care once at the health facilities. MNHPs in the HP arm overwhelmingly (91% in HP arm versus 61% in HP+) reported that they helped deliver babies at the health facilities.

• There was a culture of families and health staff remunerating the MNHPs. Remunerations most often took the form of small gifts.

• MNHPs were generally happy in their roles. While MNHPs from both arms expressed highest satisfaction when counseling mothers, a higher percentage of MNHPs in the HP arm than in the HP+ arm reported that training was a great source of satisfaction (58.8% versus only 33.3%). Traveling and documenting were the two least satisfying aspects for the MNHPs in the HP arm compared with almost nothing not liked in the HP+ arm.
## Successes

- MNHPs achieved high household coverage and provided extensive support to mothers, helping them access health facilities, prepare for birth, and recognize danger signs even during the Ebola epidemic.
- 100% retention of MNHPs throughout the life of the pilot.
- The cadre was strongly accepted and supported by women and their families, community leaders, health facility staff, and the DHMT.
- The relationship between MNHPs and the health system was formalized, increasing communities’ trust in health facilities.
- All MNHPs participating in the HP+ component were able to repay their loans. Profits from sales were invested into the family’s well-being.
- There was strong support from senior-level DHMT members in ENCC project activities. Key DHMT staff were interested in continuing the MNHP cadre even after the pilot’s conclusion.
- There is potential for all 197 MNHPs to be added to Bo District’s official CHW roster.

## Challenges

- Low literacy made documentation and record-keeping difficult.
- Lack of developed road networks made travel to health facilities difficult for both mothers and MNHPs. Bad road conditions also caused issues for MNHPs to cover their entire catchment area.
- A few community members voiced misconceptions about the new role of MNHPs. Some believed that MNHPs were paid for their work and therefore did not think that the cadre should receive any community assistance.
- Because of Ebola, project activities were halted for six months.
- There is a need for continued funding to sustain the current product supply chain for the social enterprise.

Overall, the MNHPs were relatively well integrated into the formal health system and accepted by the communities, which was a key success and a crucial intermediate step to achieve the final outcomes. However, given the already high baseline coverage levels of certain indicators and a short project timeline, more time and resources were needed to fully observe the cadre’s overall effect on health outcomes.
Lessons and recommendations

- Key to increasing coverage of MNCH services is leveraging TBAs' strength as respected members within the community and engaging them as “agents of change.”

- With capacity-building opportunities such as adult literacy programs, community health members like TBAs and MNHPs can be powerful allies to the formal health services.

- Efforts to improve TBAs’ and women’s knowledge of MNCH should continue for better health-seeking behavior.

- Continue engaging family members, especially husbands, in the discourse and decisionmaking process of utilization of facility-based care.

- Critically further explore what it would require to achieve additional increase in utilization of services given the already high coverage levels of the indicators.

- Focus should also be given on the supply side that is on strengthening quality of care to meet increasing demand for facility-based services. Suboptimum quality of care runs the risk of discouraging women from utilization of care.

- Identify innovative ways to overcome physical barriers (lack of transportation, bad road conditions, etc.) to accessing health facilities on time to avoid delays in obtaining skilled care.