



# CHN on the Go!

Mobile Tools  
for supporting frontline  
health workers

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Grameen Foundation



# Care Community Hub (CCH)

- ▶ One of five projects under the *Innovations for Maternal, Newborn, and Child Health Initiative* (Gates Foundation).
- ▶ Partners:
  - ▶ Concern Worldwide (Prime)
  - ▶ Grameen Foundation (Software development & Implementation)
  - ▶ John Snow Inc –JSI (Research, Monitoring & Evaluation)
- ▶ Targeting 240 nurses (CHNs/CHOs) in 5 districts:
  - ▶ Greater Accra: Ada East, Ada West, Ningo Prampram
  - ▶ Volta : South Tongu and South Dayi
- ▶ Duration: October 2013 – December 2015

# Project Rationale

## FOCUSING QUESTION:

How can we help the Government of Ghana build a more motivated frontline health workforce, resulting in better quality of maternal and child health care for rural women in Ghana, through a mobile technology innovation?

## Task:

**Develop an innovative technology solution to address barriers in health worker motivation**



# CHN on the Go Design Process: Results of needs assessment

## Top 5 drivers

1. Feeling valued by clients
2. Being recognised by supervisors
3. Access to the right information and tools to do the job well
4. Learning about what's new in health
5. Supporting and connecting with peers

## Top 5 roadblocks

1. Lack of appreciation for hard work
2. Limited resources to do job effectively
3. Restricted opportunities for career progression
4. Feeling disconnected from family and friends
5. Being bullied and treated disrespectfully

# Process Summary:

Content Development  
with Stakeholders

- FHD
- RHMTs
- CHNs
- Supervisors



# RESULT

Mobile devices with tools to improve clinical performance, supervision, learning opportunities, wellness and connectedness among health workers

The image displays three mobile application screens. The first screen, titled 'Learning', shows progress bars for 'Diarrheal Disease', 'Emergency Obstetric and Newborn Care', 'Essential Newborn Care', and 'Malaria in Pregnancy'. The second screen, 'CHN On the Go', features an 'Antenatal Care' section with sub-categories: 'Diagnostic Tool' (All ANC), 'Counselling per Trimester' (First, Second, Third Trimester), 'Calculators' (Malaria Treatment Drug Dosage, Estimating Trimester), and 'References' (Tetanus Toxoid Immunisation, Infant Immunisation Schedule, ITP Treatment). The third screen, 'Planner', asks 'What would you like to do?' and offers options: 'Plan an event', 'Set targets', and 'View events/ targets'. A fourth screen, 'My Wellness Worksheets', lists 'Breathing and Relaxation', 'Exercise and Stretches', 'Personal Care', and 'Water, Foods and Diet'.

# CHN ON THE GO

Planning  
Center

*Calendar tool for  
workplanning & target  
setting*

Point of  
Care  
Center

*Support tools for diagnosis  
& treatment support,  
outreach/counseling*

Learning  
Center

*mLearning Platform  
Distance learning courses,  
& exams*

Staying  
Well Center

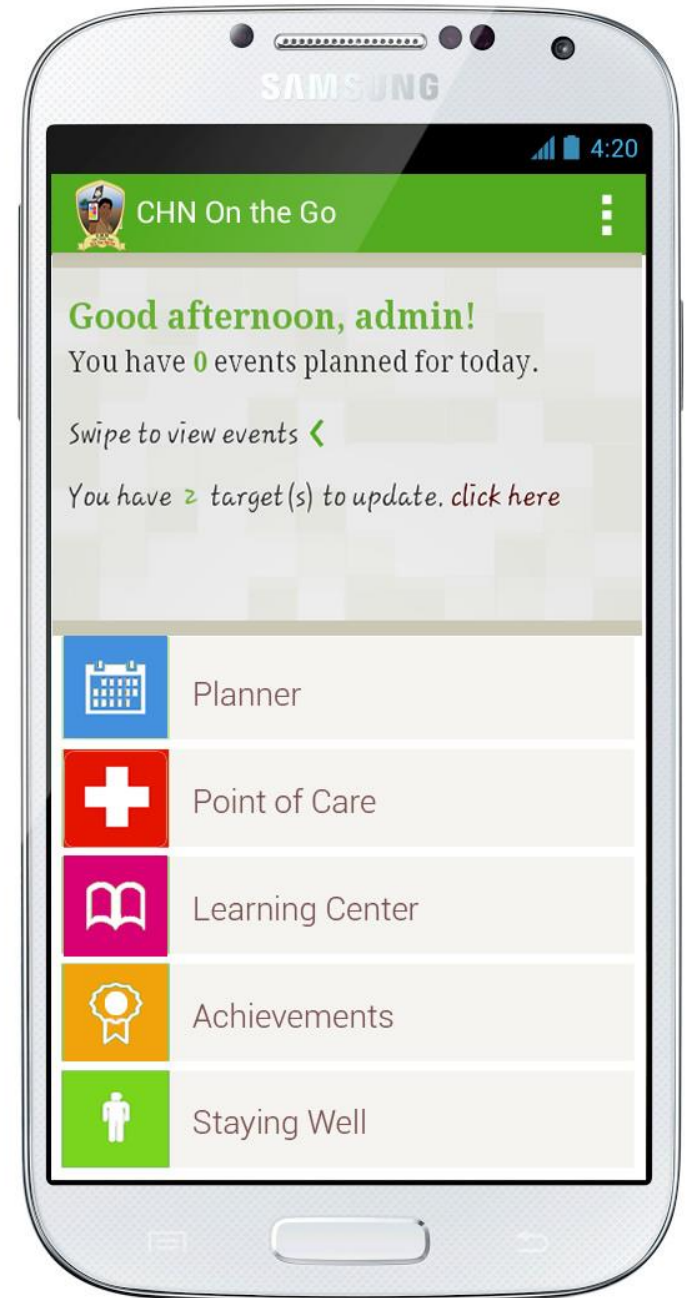
*Wellness & stress-relief  
tips*

Achievement  
Center

*Track progress on targets,  
coursework, other personal  
targets*

Supervisors'  
dashboard

*Supervisors dashboards  
to track nurses' activities  
& achievements*



# Training Summary

Region	District	# CHNs trained	# Supervisors Trained	Total
Greater Accra	Ada East & West	51	14	65
	Ningo Prampram	45	14	59
Volta	South Tongu	66	13	79
	South Dayi	53	10	63
	RHMT		9	9
<b>Total</b>		<b>215</b>	<b>60</b>	<b>275</b>





Point of Care

# Deploy and update protocols to all cadres of Health Workers

- Developed with Family Health Unit & RHMTs
- Antenatal Care & Postnatal Care: Mother and Baby
- Support trainings with step-by-step instructions
- Next: CWC & Family Planning Counseling



## **Sandra, CHN –**

*"With this CHN on the Go mobile app, I know what exactly am doing when counseling on danger signs for the woman and the baby, in fact the point of care tool keeps me on track"*



Point of Care

# Components






# Point of Care

## Directions for care

Point of Care  
PNC Counselling: Breastfeedi...

Do the following:



Ask:

- Is the baby breastfed?
- If yes: how many times in last 24 hours?
- Does the baby usually receive any other foods or drinks?
- If yes: how often?
- If yes: what do you use to feed the baby?

Look, Listen, Feel:

- Determine Weight for Age
- Look for ulcers or white patches in the mouth (thrush)

Next

Point of Care  
PNC Counselling: Brea...

If baby has no indications for urgent hospital referral, then do the following:

Ask To Assess Breastfeeding:

- Has the infant been breastfed in the last hour?
  - If no: ask mother to put her baby to the breast. Observe breastfeeding for 4 min
  - If yes: ask the mother if she can wait and tell you when the infant is willing to feed again

Next

Point of Care  
PNC Counselling: Keepi...

Counsel client on keeping the baby warm on the way to the hospital



Keep baby warm by holding him/her close to your body and covering baby with cloth and a hat



Breastfeed baby every 2 hours while waiting and no the way to the clinic. Or express breast milk and feed baby with a clean cup



# mLearning Platform for Continuing Professional Development

- Offer 12 courses on Family Planning & MNCH
  - From USAID Global Health eLearning K4Health Proj
  - Have received accreditation from Nurse and Midwives' Council for nurse renewal of PIN
- mLearning Platform
  - Deploy GHS workshop and any learning materials
  - Support trainings with pre- and/or post-self learning
  - Deliver academic courses e.g. for CHNs to Diploma: Opportunity for scale and sustainability
  - Low-tech staff for content upload and deployment.



# Self-paced, distance

# Learning for remotely placed CHNs

Learning 8182 0

- Diarrheal Disease
- Emergency Obstetric and Newborn Care
- Essential Newborn Care
- Malaria in Pregnancy
- Postpartum Care
- Preventing Postpartum Hemorrhage

Essential Newborn Care 8182 0

### Newborn Mortality

- Pre-Test Assessment
- Why Provide Essential Newborn...
- Main Newb

### Care During Labor and Birth

- Pre-Test Assessment
- The Need for a Skilled Attendant
- Early D Mana

### Newborn Care Following Birth: Immediate...

- Pre-Test Assessment
- Warmth
- Immed Br

Newborn Mortality

Y PROVIDE ENTIAL MAIN CAUSES OF NEWBORN DEATHS CARE OF THE NEWBORN

### Main Causes of Newborn Deaths

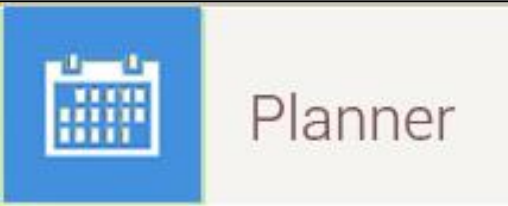
#### The Magnitude of the Problem

Category	Percentage
Preterm	29%
Asphyxia	23%
Infections	29%
Other	11%
Congenital	8%
Neonatal sepsis	15%
Neonatal pneumonia	10%
Diarrhoea	2%
Tetanus	2%

Data source: Based on data from: Child Health Epidemiology Reference Group and I-WC in Black et al. 3

The neonatal or newborn period includes only the first 28 days of life. Yet, globally, deaths during this phase account for as much as 38% of the under-five mortality.

Neonatal sepsis and other treatable infections



# Planning Events & Setting Targets viewable by Supervisors

The screenshot shows a mobile application interface for 'Planner Target Setting'. The top bar is green with a back arrow, a profile icon, and the text 'Planner Target Setting'. Below the bar are four tabs: 'EVENTS', 'COVERAGE', 'LEARNING', and 'OTHER', with 'COVERAGE' selected. The form contains the following fields:

- Name: Family Planning
- Detail: New Acceptors
- Start date: (with a calendar icon)
- Due date: (with a calendar icon)
- Target: (with a blue horizontal line indicating a value)
- Remind me: Daily

At the bottom are two buttons: 'Save' and 'Cancel'.

- Nurses set targets for immunizations and other coverage indicators
- Nurses plan events that are viewable by supervisors as facility calendar.
- Potential as supervisory tool

**Rebecca, CHN Supervisor** - *"The amount of airtime credit I usually spent calling CHNs for their monthly itinerary has reduced as I now use the supervisors dashboard to track CHNs activities and follow up with them to know progress towards monthly service targets"*



# Supervisory Tool:

## Supervisors see all nurse activities, courses taken, progress on targets

Welcome Test Supervisor Ada West

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Facilities 10

Nurses 49

### Facilities

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▲ Ada East

DE - Ada District Hospital	HC
4 nurses; 53 events; No Targets	
DE - Ada HC	HC
14 nurses; 129 events; 20 targets	
DE - Adedetsekope CHPS	CHPS
2 nurses; 18 events; No Targets	
DE - Agorkpo CHPS	CHPS
2 nurses; 19 events; No Targets	
DE - Asigbekope CHPS	CHPS
3 nurses; 3 events; 2 targets	
DE - Azizanyah CHPS	CHPS
2 nurses; 23 events; No Targets	
DE - Dogo CHPS	CHPS
3 nurses; 10 events; No Targets	

# For Further Information

- ▶ CCH Project on *Innovations* Initiative website:
  - ▶ <http://innovationsformnch.org/finding-what-works/technology-as-a-tool-for-health-worker-retention>
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- ▶ Grameen Foundation: <http://grameenfoundation.org/>



Thank you! & Questions?

Innovations for maternal, newborn & child health

an initiative of CONERN worldwide





# Improved Communication

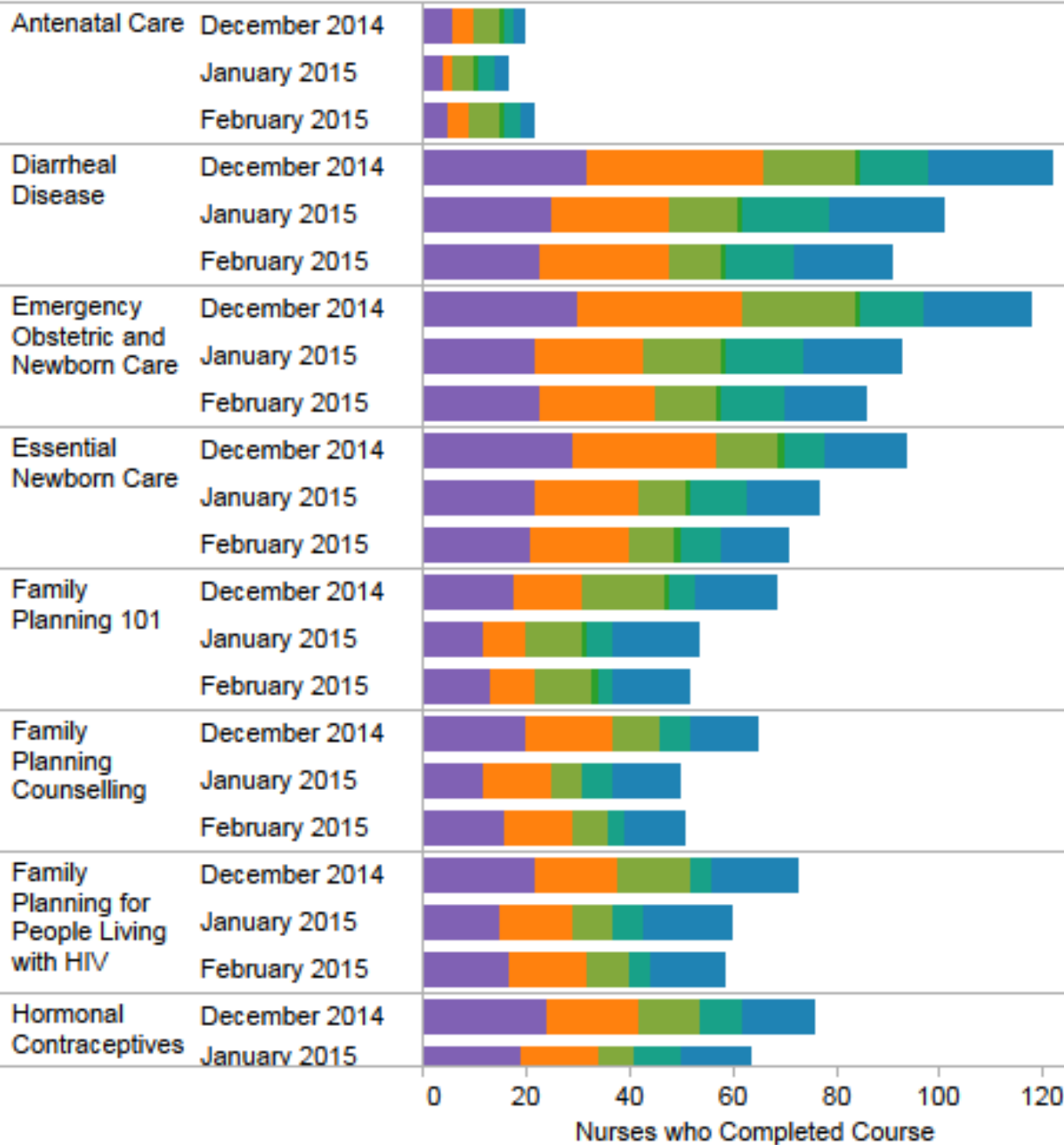
- WhatsApp Groups
  - Formed at Sub-district and District Levels
  - Extended groups for Emergency response: eg Ningo Prampram for Ebola including Assemblyman
  - Reporting on field issues for prompt action from DHMT. Eg Newborn Sepsis in Ningo Prampram
  - Fast, district-wide communication on district activities
- Recommendation:
  - Encourage all districts to use this tool to improve communication. Works on some “YAM” phones



# Way Forward

- Project ends this December 2015
- mLearning Tool
  - Support training eg for task shifting of midwifery using CHNs
- Point of care for deploying protocols uniformly
  - Formed at Sub-district and District Levels
  - Extended groups for Emergency response: eg Ningo Prampram for Ebola including Assemblyman
  - Reporting on field issues for prompt action from DHMT. Eg Newborn Sepsis in Ningo Prampram
  - Fast, district-wide communication on district activities
- Recommendation:
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## Number of Nurses who Completed Course



Topics  
read by  
district,  
Dec-Feb