Health 2 Go

Progress Report through March 31, 2019

6/11/19

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Abbreviations

BCCDP: Barekuma Community Collaborative Development Project

CHPS: Community-Based Health Planning and Services

CBA: Community-Based Agent

CHN: Community Health Nurse

CHO: Community Health Officer

GHS: Ghana Health Services

H2Go: Health 2 Go

ICCM: Integrated Community Case Management

IMCI: Integrated Management of Childhood Illness

MOH: Ministry of Health

SDG: Sustainable Development Goals

UN: United Nations

UNICEF: United Nations Children's Fund

WHO: World Health Organization

H2Go Summary of Accomplishments

For Kpong Pilot Serving 1,500 People (Eastern Region of Ghana)

- 32 months of continuous service in 6 communities in the Lower Many Krobo District
- All 10 CBAs remain active and effective, and all equipment remains operational
- Communities recognize CBAs as front-line service providers
- Procured funding for an additional year to keep the Kpong pilot operational (Dec. 2018)
- 7,672 educational home visits by CBAs on illness prevention, nutrition and health promotion
- Among approximately 200 children under age 5, there were 1,577 illnesses treated in the community setting (Nov. 2016 through Mar. 2019)
    - 873 malaria, 229 pneumonia, 249 diarrhea
    - 105 children referred to collaborating health facilities for serious and life-threatening illnesses
- Engagement of communities through 5 multi-community durbars (Town Hall Meeting) to discuss program (Oct. 2016, Mar. 2017, Sep. 2017, Oct. 2018, Dec. 2018)
- Routine monthly meetings with District Health Leadership to continually improve the program
- 28 monthly Supportive Supervision Visits provided on-site to CBAs (Dec. 2016-Mar. 2019)
- 7 Refresher Trainings including clinical training at collaborating hospitals (Jan. Apr., Jul. 2017; Jan., Aug. 2018.; Mar. 2019)
- Completed GIS Mapping, Census, and Health Behavior Survey in communities (June 2017)
- Launched in 6 communities of the Wawase CHPS zone (Nov. 2016)
- Completed initial basic training for 12 GHS personnel and 10 CBAs (July, Aug. 2016)
    - 5 days Manager/Facilitator training + 3 days supervisor training + 6 days Community Based-Agent training + 2 days community internship; 16 training days total
- Press event at Ensign with coverage from national TV and 12 newspaper journalists
- Identified 6 target communities, received official welcome by chiefs (May 2016)
- Formed direct linkage to hospital and health facility that receive referrals by Health 2 Go
- Established strong relationships with GHS Lower Manya Krobo District Health Director, Kpong sub-District Director, key District Public Health and Community leaders
- Initiated Health 2 Go Program in Ghana with partnership of University of Utah, Ensign College of Public Health, Cast a Pebble Foundation and Ghana Health Service (GHS) in 2015

For BCCDP Serving Approximately 20,000 People (Ashanti Region of Ghana)

- 11 months of continuous service in 20 communities in the Atwima Nwabiagya District
- All 30 CBAs remain active and effective, and all equipment remains operational
- Communities recognize CBAs as front-line service providers
- Procured funding for one-year supply of medicines from Cast-A-Pebble Foundation after previously committed source did not follow through (Dec. 2018)
- 7,432 educational home visits by CBAs on illness prevention, nutrition and health promotion
- Among approximately 2,200 children under age 5, there were 1,935 illnesses treated in the community setting (Oct. 2018 through Mar. 2019)
    - 835 malaria, 537 pneumonia, 563 diarrhea

    - 42 children referred to collaborating health facilities for serious and life-threatening illnesses
- Engagement of communities through 2 multi-community durbars (Town Hall Meeting) to launch program (May 2018)
- 10 monthly Supportive Supervision Visits provided on-site to CBAs (Jun. 2018-Mar. 2019)
- 2 Refresher Trainings including clinical training at collaborating hospital (Oct. 2018, Jan. 2019)
- Launched in 20 communities of the BCCDP in Atwima Nwabiagya District (May 2018)
- Completed initial basic training for 14 GHS personnel and 30 CBAs (Feb, Apr. 2018)
    - 5 days Manager/Facilitator training + 5 days supervisor training + 5 days Community Based-Agent training + 1-day community internship; 16 training days total
- Press event at Ensign with coverage from national TV and 12 newspaper journalists (Jan 2018)
- Established strong relationships with Atwima Nwabiagya District Health, Berekese sub-District, key sub-District Public Health and community leaders in BCCDP in Ashanti Region

Executive Summary

Overview

Health 2 Go is a community-based primary healthcare program that focuses on improving the health of children under 5 years of age, including newborns and pregnant women. The program is currently implemented in two geographically diverse areas in Ghana. While the traditional model of health care requires people to go to facilities to access basic services, Health 2 Go employs the approach of bringing the health system to the doorsteps of the people in their communities. The program is designed to overcome obstacles that cause similar programs to fail and to support countries in reaching United Nations' Sustainable Development Goal (SDGs) targets to reduce child deaths to no more than 25 deaths per 1,000 live births and maternal deaths to 70 or less per 100,000 live births by 2030. Ghana's current rate for child deaths is 59 deaths per 1,000 live births and for 319 maternal deaths per 100,000 live births. The vast majority of both child and maternal deaths are preventable.

Since November 2016, Health 2 Go has had 32 months of continuous service in six small communities, serving 1,500 people in the Kpong sub-District of Lower Manya Krobo District (Eastern Region) in Ghana. In May 2018 Health 2 Go expanded to a larger demonstration site of the Barekuma Community Collaborative Development Program (BCCDP), which consists of 20 communities with approximately 20,000 residents in the Barekese Sub-district of the Atwima Nwabiagya District (Ashanti Region). The overarching goal is for Health 2 Go to be scalable and create a means for country-wide implementation and expansion to other countries.

The Health 2 Go Difference

- High quality training, equipment and supplies
- Effective supervision structure
- Communities are engaged partners
- Clear integration into the health system
- Focus on prevention, health promotion and early treatment

Results to Date (Mar. 2019)

- **Kpong: Among Approximately 200 Children under age 5, (Nov. 2016 - Mar. 2019)**
- 1,351 Illnesses treated: 873 malaria, 229 pneumonia, 249 diarrhea; 105 children referred to hospital for serious illnesses; and 7,672 household health educational visits
- **BCCDP: Among Approximately 2,200 Children under age 5, (Oct. 2018 - Mar. 2019)**
    - 1,935 illnesses treated: 835 malaria, 537 pneumonia, 563 diarrhea; 42 children referred hospital for serious illness; and 7,432 household health educational visits conducted to prevent illness, and improve health and nutrition for children, mothers and families

Vision, Community Capacity, and Impact at Home

A defining principle of the program is the vision to create capacity for communities to be healthy, well, and self-reliant. The real impact of the program is intends to be in the home where inequities of society are most felt, which begin in the first five years when children are developing, including during the mother's pregnancy, affecting long-term outcomes in health and quality of life. Impact at home can impact communities and countries.

Introduction

Making Measurable Impact to Improve Health Outcomes

One of the greatest challenges faced by developing countries today is providing community-based resources to health care which improve outcomes and make a measurable impact. Although substantial progress has been made globally to improve health since the 1990s[1] the traditional model of health care in which the people access resources at a health facility outside of their community hasn't worked well. It is challenging to reach vulnerable populations who frequently live far from health centers, making it difficult to achieve country and global health goals.[2] All countries have committed to achieving the target Sustainable Development Goals (SDG) for reducing child deaths to no more than 25 deaths per 1,000 live births by 2030, yet many developing countries are not currently on track to meet this ambitious goal.[3] Ghana's current rate for child deaths is 59 deaths per 1,000 live births.[3] Attempting to solve the issue of access to health resources, multiple programs have been developed to improve community health. The issue has been that they've often been designed without considering the potential risks that could limit their effectiveness, and then have been implemented poorly, resulting in their impact disappointing stakeholders.[4]

Creating Capacity for Health Development Through Health 2 Go

Having witnessed firsthand the ineffectiveness of poorly designed and implemented community health programs as they worked on global health projects around the world, Professor Steve Alder and Mr. Rick Haskins knew that a better strategy was needed. Drawing on decades of highly successful careers in public health, academia, and business, they committed to take a different approach. With the motto of, *'Let's do community health, but let's do it right,'* Alder and Haskins established the vision of 'creating capacity for communities to be healthy, well and self-reliant.' Believing in the philosophy of community-engagement, they set out to find partners to create a model approach to facilitate capacity for communities to improve the health of their own populations. Thus, Health 2 Go was developed with the mission to change the face of global health starting in Ghana.

Health 2 Go in Ghana

Ghana provides favorable capacity for implementation of the pilot project due to established partnerships, previous experience working in Ghana with communities, and alignment with Ghana Health Services' national strategy of improving access of health services in communities.

The initial Kpong Pilot for Health 2 Go of six small communities in the Wawase CHPS zone in the Lower Manya Krobo Municipality of the Eastern Region, for about 1,500 residents has been successfully implemented since November 2016. In May 2018, the program scaled up to a 'Demonstration Site' of 20 more communities serving about 20,000 people in the Barekuma Community Collaborative Development Program (BCCDP) in the Atwima Nwabiagya District of the Ashanti Region. Lessons learned will be used to inform expansion to a site in the Ho District of the Volta Region and to engage the leadership of Ghana to scale the program country-wide, and then expansion into additional countries.

Child Deaths

It is estimated that 69 million children will die between 2016-2030 unless committed and consistent action is taken.[3] Major killers of children under age 5 are pneumonia, malaria, and diarrhea with malnutrition being an underlying cause in nearly 50 percent of these deaths.[5,9]

Inequities impacting the household level are also determining factors in a child's chance of survival,[3] including:

- Lack of access to health care
  - Children die because they live too far from a health facility[5]
- Poverty
  - Poorer children are almost two times as likely to die before age 5 than wealthier children[3]
- Low maternal education level[3]
  - Children whose mothers have no education are three times as likely to die than children whose mothers received secondary education[3,6]
- Household poor health practices
  - related to behaviors such as delayed care seeking, nutrition, water, sanitation, etc.[3]

Children from households that are poor not only face higher risks of dying, but account for a larger percentage of child deaths than children from wealthy families.[3]

Most child deaths are preventable, and most illnesses are easily treated at low cost if healthcare is accessed early.[5]

Call to Action

The United Nation's (UN) calls upon all countries to reduce under age 5 child deaths to no more than 25 deaths per 1,000 live births by 2030 as part of the UN Sustainable Development Goal (SDG) targets.[1,3]

In order to meet child health targets, UNICEF has called for countries to address inequities which affect health outcomes of the disadvantaged the most, as the poor and marginalized will need to make faster progress since they account for a greater percentage of child deaths.[3]

Ghana Context

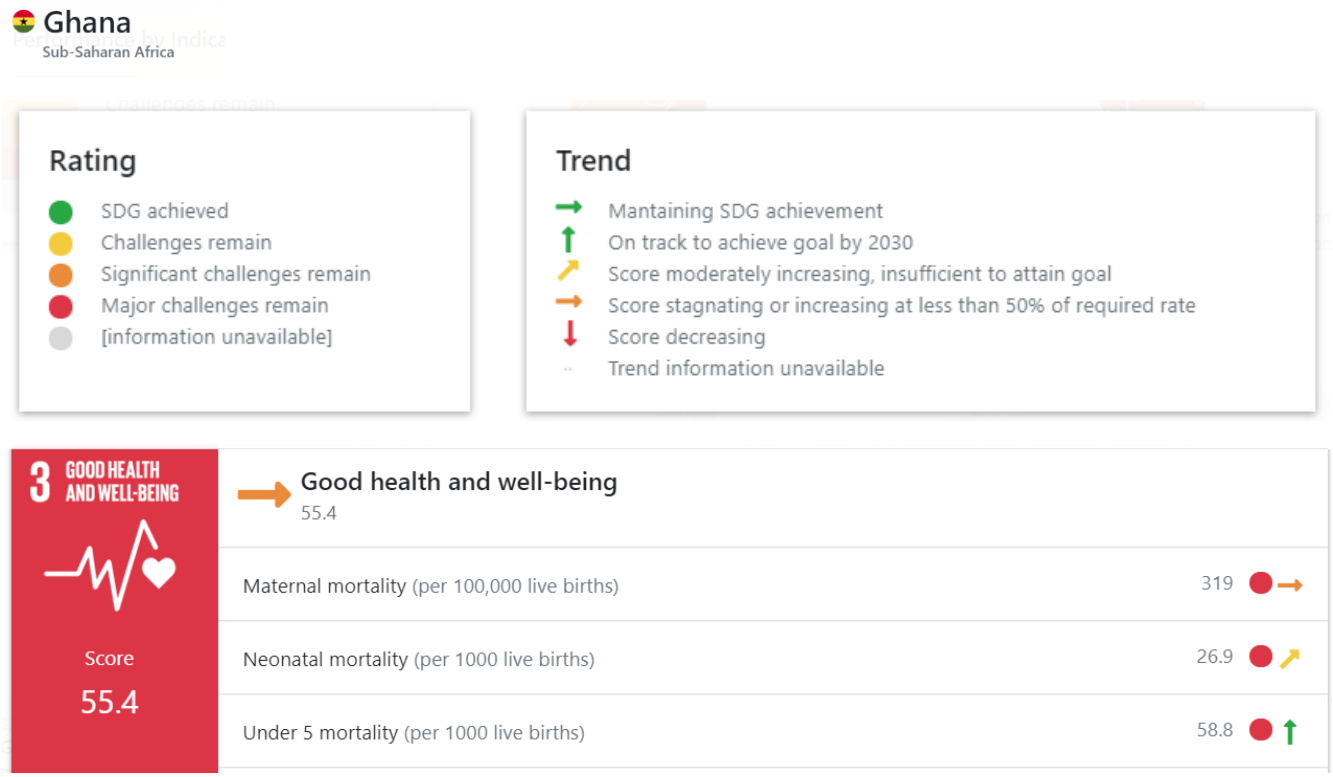
In Ghana, there are 54,000 deaths of children under-5 years of age annually resulting in a child mortality rate of 59 deaths per 1,000 live births.[7] Three preventable causes were responsible for half of deaths of children ages 1-59 months in Ghana during 2015.[7]

Deaths Ages 1-59 Months

- Malaria (22%)
- Pneumonia (17%)
- Diarrhea (12%)
- Malnutrition-a contributing cause in almost health of child deaths[5,9]

Major Challenges Remain

The UN SDG Index Dashboard indicates major challenges remain for Ghana to meet SDG targets by 2030 for child health as depicted below by the red circle rating for under age 5, newborn, and maternal mortality.[10] While Ghana has made significant progress in reducing child (and maternal deaths) since the 1990's., as have other developing countries, substantial efforts still need to be made. Trends indicate that if Ghana's current rate of progress continues, it is on track to achieve the under 5 SDG target by 2030, but not progressing enough to achieve newborn or maternal SDG targets by 2030 However, it is important to realize that the pace needs to be sustained in order to stay on track to meet under age 5 targets for child health and needs to increase to achieve newborn and maternal targets by 2030. Additionally, it is significant to note that It is only recently that Ghana increased progress enough to be reclassified as 'on track' to achieve the SDG target for under age 5 child health, since In a 2016 UNICEF report, Ghana was classified as 'not on track' to reach the SDG of 25 deaths per 1,000 live births by 2030.[3]



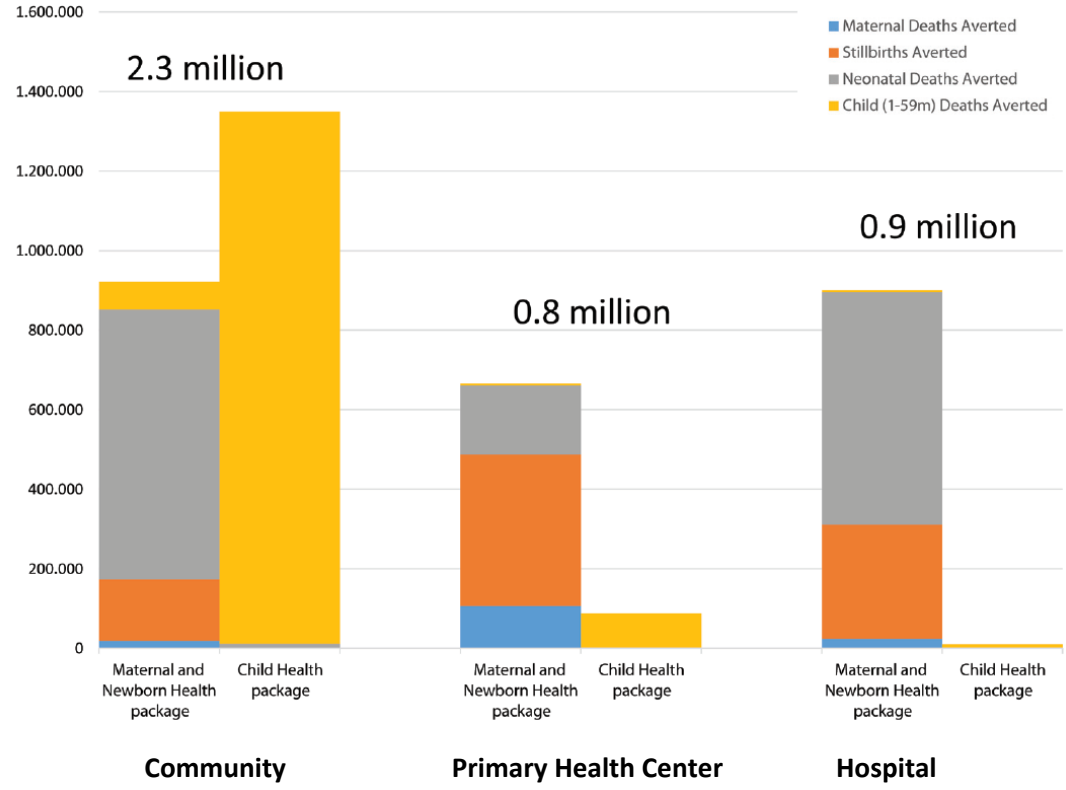
Source: https://dashboards.sdgindex.org/#/GHA

Community Health

Health Care Delivery Platforms

The potential impact community-based primary health care along with engaging with communities in often overlooked, even though research indicates that easily implemented community interventions can increase healthcare coverage and reduce deaths.[11] In a comprehensive review of evidence of effectiveness of community-based primary care to improve child, newborn and maternal health, Black and colleagues report that the community level platform provides the most potential opportunity to prevent deaths, which could be reduced by 2.3 million per year if the total package of evidence-based interventions for communities reached all children and mothers. In comparison, interventions needing implemented at primary healthcare centers and in hospitals would prevent less than half of the total number of deaths (0.8 million, 0.9 million).[11]

Comparison of Maternal, Perinatal, Newborn and Child Deaths that can be Averted by Health–Care Packages through three Service platforms



Source: (Black et al, 2017)

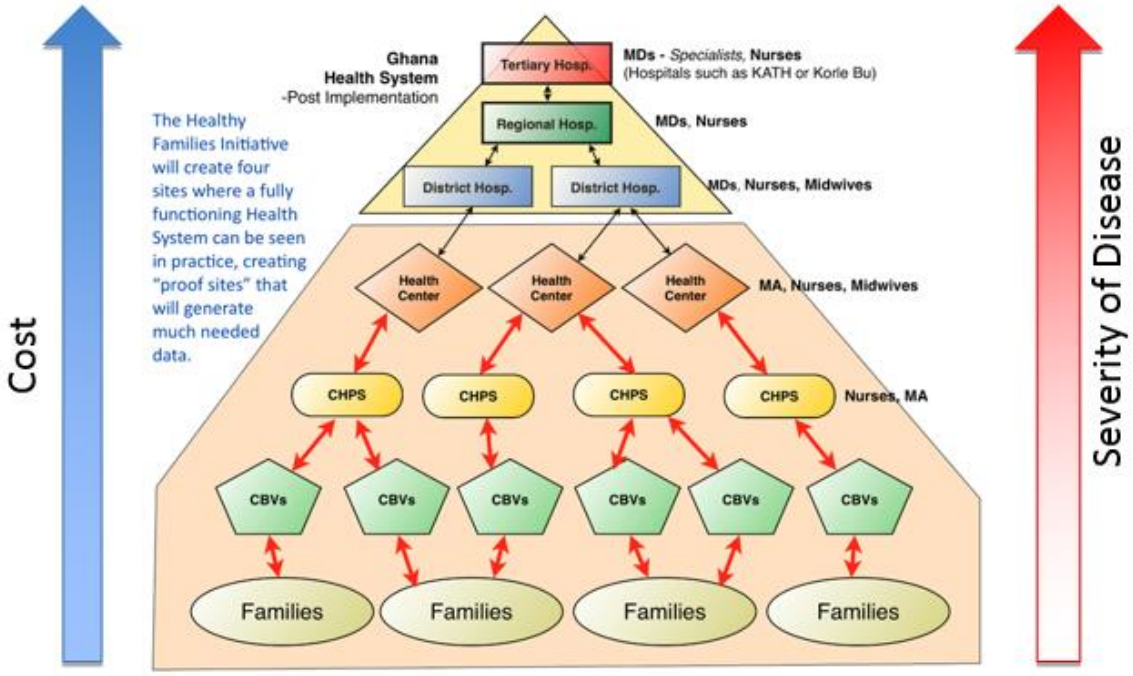
Recommendations from the Expert Panel of Black and colleagues, calls for strengthening health systems through community-based primary healthcare, tracking resources, and recognizing that communities are a valuable resource to bridge the gap between health systems and communities. The community platform can reach people where they live who have the greatest needs to improve health outcomes.[11]

The Health Model, Severity of Disease, and Costs

The significance of the community and household levels in a health care model and their respective potential to prevent illness, improve health, and control costs is underappreciated.

Many resources are allocated to improving health at the top level of the health triangle where costs are highest and outcomes uncertain, yet few resources are invested at the base levels to improve health where the potential returns are greatest. The Ghana Health Systems Model depicted below highlights the relationship between health care access, severity of illness and cost.

If health care is delayed, due to lack of access in the community, severity and cost for each higher-level care accessed increases, and outcomes are uncertain.



If health care is accessed early at the family level and treated in the community, and then managed at home, both severity and costs are lower, and outcomes are generally positive.

Past Efforts of Community-based Programs

Although past efforts have been made to address health at the community level through various programs, problems with such programs have been common[8] including inadequate training, equipment & supplies; lack of effective supervision; failure to engage communities, and disconnection from health system. As a result of these common problems, community health workers are often unable to serve their communities without essential medicines, equipment, ongoing training and supervision. Thus, it is not surprising programs have experienced low demand and uptake of services from residents.

Program Overview

What is Health 2 Go?

Health 2 Go delivers the health system to communities

- Builds community capacity through education and health promotion
- Treats basic illnesses in communities
- Bridges the gap between health system and communities
- Connects complicated illnesses to health facilities

Current System

• People → Healthcare

Health 2 Go

• Healthcare → People

Health 2 Go Mechanisms include

- Appropriate use of the health care system
- Community Health Workers known as Community Based Agents (CBAs)
- World Health Organization (WHO)/UNICEF Integrated Community Case Management of Childhood Illness
- Children under age 5 → mothers → families → communities

Overcomes common challenges of community- based programs:

Common Challenges	Health 2 Go Solutions
• Inadequate training, equipment, supplies	• Quality training, equipment, supplies
• Lack of effective supervision	• Effective supervision structure
• Failure to engage communities	• Communities are engaged partners
• Disconnected from health system	• Clear integration into the health system
• Insufficient focus on prevention	• Focus on prevention, health promotion and early treatment

The Health 2 Go Difference

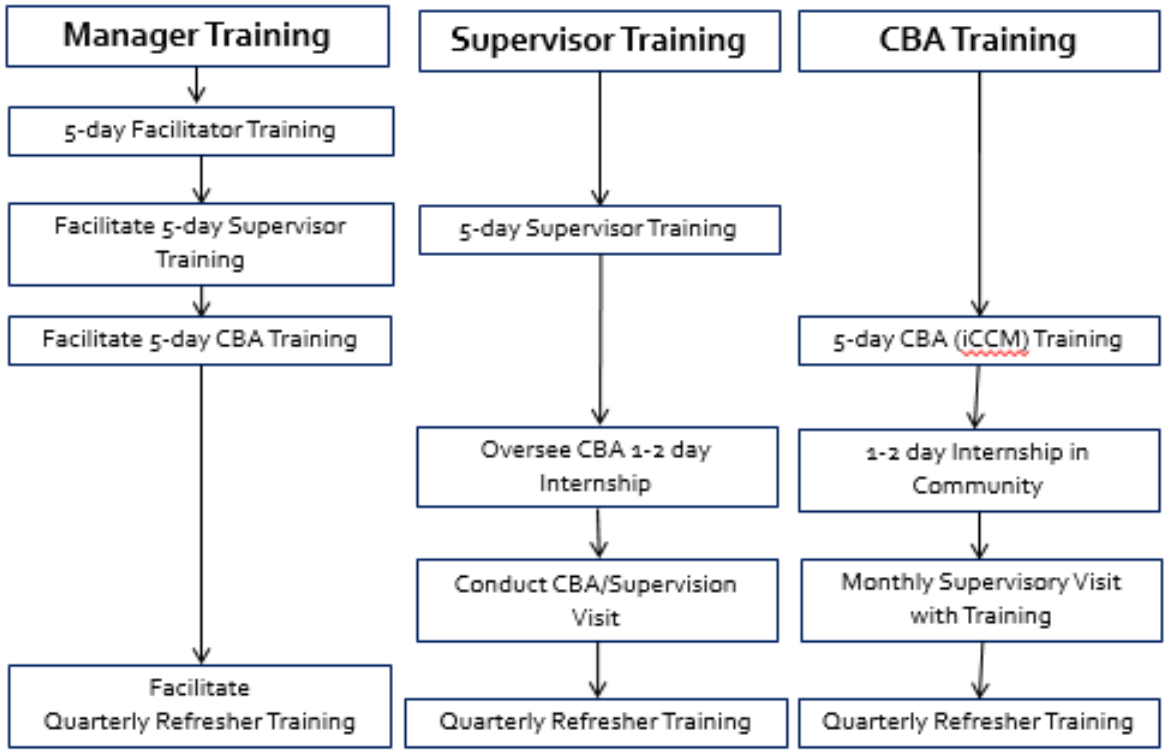
Health 2 Go is unique, in that District and sub-District personnel who oversee the Health 2 Go program as managers are highly engaged in the program and provide direct linkage to health facilities, since they are trained and serve as facilitator/managers. The managers then train supervisors and community-

based agents (CBA) who will serve in communities. The purpose is to provide opportunity so that strong relationships are built among managers, supervisors, and CBAs during the trainings across the levels of health workers. Not only does it ensure that program personnel have deep knowledge of the program, but they take responsibility and ownership of the program as well.

The five differentiating features of Health 2 Go include:

1. **Quality Training, Equipment, and Supplies**
    - **Rigorous Initial Training + Refresher Trainings**
        - Utilizes World Health Organization (WHO)/UNICEF gold standard curriculum
        - Includes classroom and clinical training at selected partnering hospitals within the area
        - Facilitator/Manager: 5-day facilitator/manager training + 5 day supervisor + 5-day ICCM training
        - Supervisor: 5-day supervisor training including iCCM basic training
        - Community Based Agent (CBA): 5-day ICCM basic training +1-2-day community internship
        - Competency exam must be passed by 80% for Health 2 Go certification
        - Refresher Training: 2-day quarterly

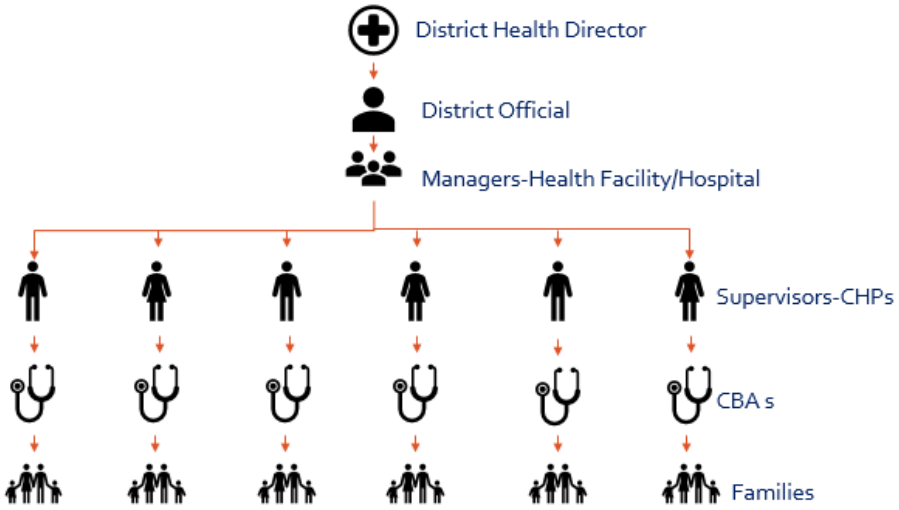
H2Go Training Model



H2Go training topics	
	Introduction of H2Go
	Expectations of participants during training
	Integrated community case management (ICCM) of childhood illness overview
	Hand washing
	Pregnant woman danger sign assessment
	Newborn (0 to 2 months old) danger signs assessment
	General danger signs in children (2 months to 5 years old)
	Fever/malaria in children (2 months to 5 years old)
	Cough/pneumonia in children (2 months to 5 years old)
	Diarrhea in children (2 months to 5 years old)
	Nutrition in pregnant women, infants, and children
	Documentation
	Home visits
	Role of the CBA

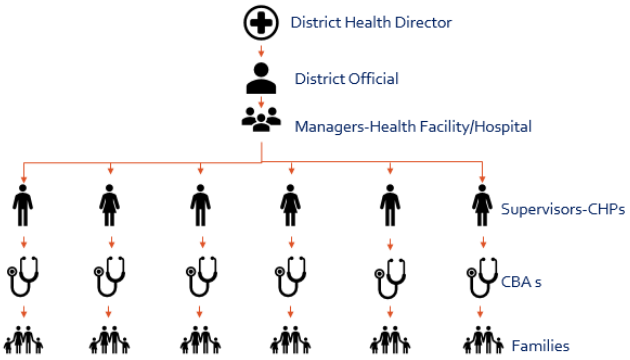
- **Quality Equipment, Medicines and Supplies**
  - Mobility: Bicycle with solid tires, fully enclosed chain; rain coat and boots; light
  - Communication: cell phone
  - Identification: H2Go logo shirts and messenger bag
  - Same brands of medicines and supplies used by GHS
  - Drugs sourced through Regional Medical Stores
  - Restocking occurs during monthly supervision visit
  - Stock out plan in place

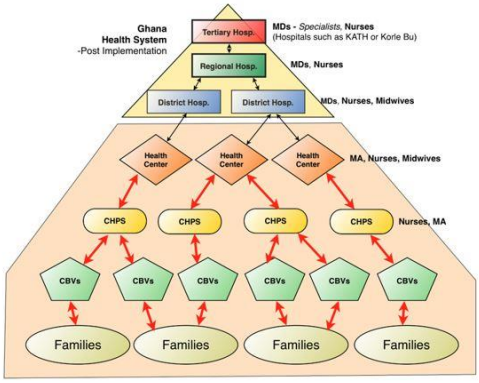
2. **Effective Supervision**
    - Structured to reinforce linkage to health facilities and integration in the health system
    - Supportive supervision (CBAs receive support and develop relationships)
    - Community Health Nurses providing Outreach services in the communities serve as supervisors
    - Routine monthly visits



3. **Community Engagement**
    - Communities are engaged through all stages of H2Go
    - Official entry/welcome into communities
    - Routine durbars (town hall meeting) for feedback on H2Go activities within the communities

4. **Clear Integration into Health System**
    - H2Go structure aligns with the Ghana Health Model
    - Integrated from the District level to sub-district level to CHPs zone down to community level
    - District Health administrators, providers, and nurses serve as H2Go managers and supervisors
    - Strong linkage to health facilities and hospitals that receive referrals by Health 2 Go Community
    - Strong leadership and ownership of program by District Health





5. **Focus on Prevention, Health Promotion, and Early Treatment**
    - Educational home visits are a core program component. CBAs routinely educate mothers/caregivers during monthly household visits on prevention of illness, health promoting behaviors, nutrition and seeking early treatment for illness.
    - CBAs incentives aligned with prevention. CBAs receive performance-based stipend according to the number of household visit. CBAs are required to perform 10 home visits per week for a total of 40 per month to receive entire stipend.

- CBAs support Outreach preventive services. CBAs encourage mothers during home visits to bring their children to Outreach activities where they access life-saving interventions such as immunizations.

"Our dream is to see communities where women are empowered and equipped with basic knowledge on health, especially child health, and continuously strive to improve and reduce child mortality. We believe that we can change our communities by positively impacting them."

Mrs. Irina Ofei, Municipal Director of Health Service, Lower Manya Krobo Municipality

Health 2 Go Kpong Pilot

Implementation

Overview

Health 2 Go launched in six (6) small communities serving approximately 1,500 people in the Wawase CHPS zone in the Kpong sub-district of the Lower Manya Krobo District in the Eastern Region of Ghana on Oct. 24, 2016. It is approximately 3 hours to the nearest health facility, which includes walking long distances, then obtaining public transportation.

Communities include:

1. Aplah
2. Abobeng
3. Wawase
4. Piengua
5. Obelemanya
6. Atotorsi

Preceding the official program launch in the Wawase CHPS Zone, initial training took place for 12 GHS Personnel and 10 CBAs which occurred at Ensign College with clinical sessions held St. Martin's Hospital and Atua Hospital during July and August of 2016. Following initial basic training, CBAs performed a 2-day community internship in their respective communities during Aug 2016, which was overseen by H2Go Supervisors and Managers. In conjunction with the introduction of the program, two multi-community Durbars were held in which residents expressed gratitude for the program being implemented in their communities. CBAs were given bikes, medicines, cell phones, rain gear and solar torches. CBAs began serving their communities on Nov. 1, 2016.

The communities continue to receive services from H2Go CBAs and supporting Ghana Health Services (GHS) personnel trained as H2Go Managers and Supervisors, with no interruption of continuity since implementation began in November 2016.

Recent H2Go Kpong Activities

In addition to ongoing service by CBAs to treat common child illness in the community, refer serious life-threatening illness, and conduct monthly home visits to educate mothers, two H2Go formal events took place. A multi-community Durbar was held in December 2018 to engage communities and discuss the H2Go program, and a 2-day Refresher Training occurred in March 2019 to ensure CBA clinical competencies. Descriptions of these events are below.

Durbar (Community Engagement)

A durbar was held at the Oblemanya cluster of schools (Wawase CHPS Zone) for the Atortosi, Piengua and Oblemanya communities on December 11, 2018. A total of 41 community members were present, including the chiefs from the three communities.

Mrs. Joyce Adjei of Asitey Health Centre, trained as a H2Go Manager, moderated the program and outlined the purpose of the program. She outlined the purpose of the durbar, which is to present to the community the activities Community Based Agents (CBA) have been carrying out since the inception of the H2Go program. Another objective of the program was to identify challenges that have arisen in the process while taking feedback from community members on how to improve Health2Go.

The CBA's made presentations on their role as CBAs, services provided, and reported the number of cases they have recorded since the beginning of the program. Additionally, CBAs highlighted the number of cases of priority illnesses recorded among under-5 age children of malaria, diarrhea and pneumonia cases. CBAs thanked the community members for their support.

In discussing the H2Go program, community members indicated they would like the H2Go team to extend coverage of the program to adults to promote better healthcare and quality of life. Additionally, a community member implored the H2GO team to facilitate the establishment of a health facility in Abobeng. Community leaders expressed appreciation to CBAs for their service and gratitude for the H2Go program.

Left; Durbar, Oblemanya
Right: H2Go CBA Amos from Atortosi presenting to the audience

Refresher Training

A 2-day Refresher Training was held at Ensign College with clinical sessions taking place at St. Martin's Hospital and Atua Hospital in Kpong on March 7-8, 2019. Catherine Asare, the District CHPS Coordinator trained as a H2Go Manager served as the lead facilitator.

Clinical Session

The training began with clinical sessions at St. Martin's and Atua Hospitals. CBAs and supervisors were divided into two groups and assigned to go to one of the above-mentioned hospitals. CBAs assessed hospital admitted children for 'danger signs' of life-threatening illness and severe malnutrition at the Inpatient Children's Ward in order to recognize cases CBAs would refer to the hospital if they saw the child in the community. Additionally, CBAs assessed children for malaria, pneumonia, diarrhea and malnutrition, and signs of serious illness at the Outpatient Clinic, conducting malaria tests if indicated. A Manager or Supervisor evaluated CBA performance using a H2Go checklist.


H2Go Kpong CBAs at Atua hospital (far left) and St. Martin's Hospital (middle left, middle right, far right)

Classroom Sessions

Thursday afternoon and Friday sessions were held in a classroom at Ensign College. Reviews of cause and prevention of major killers of children in Ghana were facilitated by H2Go Manager/Facilitators.

The standard process H2Go uses during training to cover each of the priority illnesses of malaria, pneumonia, and diarrhea was followed:

- Cause and prevention
- Assessment
- Danger signs of serious illness
- Treatment
- Referral to health facility (and pre-referral treatment)
- Nutrition during and following illness
- Counseling the mother/caregiver
- Follow-up visit
- Documentation

Practical sessions CBAs participated in include counting respiratory rate, performing rapid diagnostic tests (RDT) for malaria on a partner, reading RDT results, reading drug expiry dates, tepid sponging for fever, administering suppository, assessing for malnutrition, and documentation.

Additional sessions were held on identifying danger signs of life-threatening illness in children, newborns and pregnant women using videos, video exercises, and case studies.

Nutrition for pregnant women, infants under 6 months, and children over 6 months was covered. CBAs practiced assessing for severe malnutrition using the MUAC tape and assessing for pedal edema during clinical sessions and in the classroom. The facilitator emphasized the importance of assessing each child in the community from age 6 months to 59 months for severe malnutrition during routine home visits and during illness.

At the end of the training sessions, CBAs took a competency exam that included: identifying danger signs in children, neonates and pregnant women; performing RDTs and reading results; assessment and treatment of illness; and documentation.

While CBAs took the competency exam, a breakout session was conducted for Supervisors to review the process of Supportive Supervision, the components of the supervisory visit, record keeping and challenges.

Impact of Health 2 Go

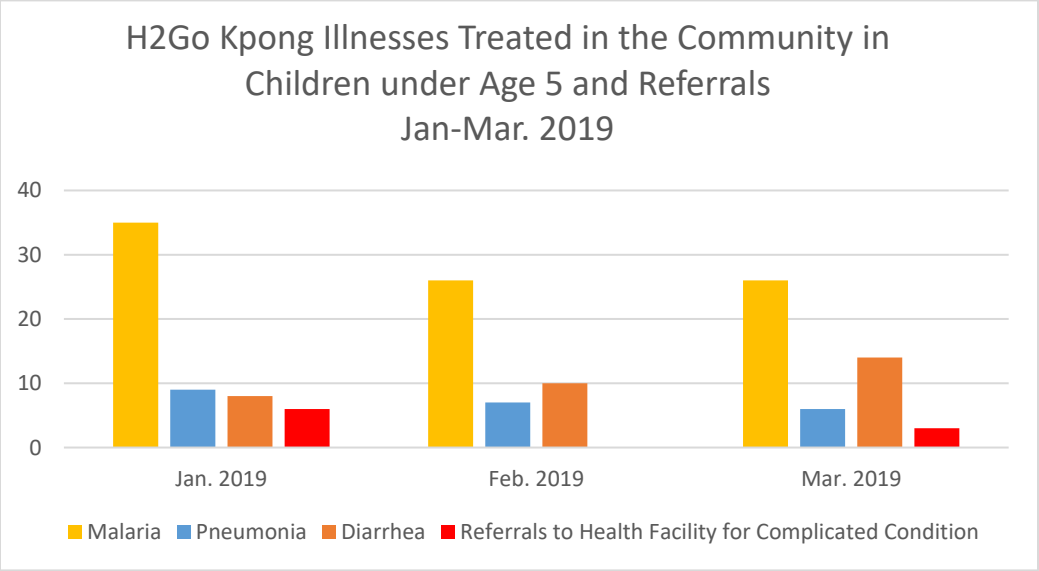
The Impact of the H2Go Kpong Pilot and the service of CBAs to families in their communities cannot be overstated. All CBAs are actively engaged in serving families through conducting routine household visits to educate mothers and caregivers on nutrition, preventing illness, and promoting health through behaviors such as handwashing.

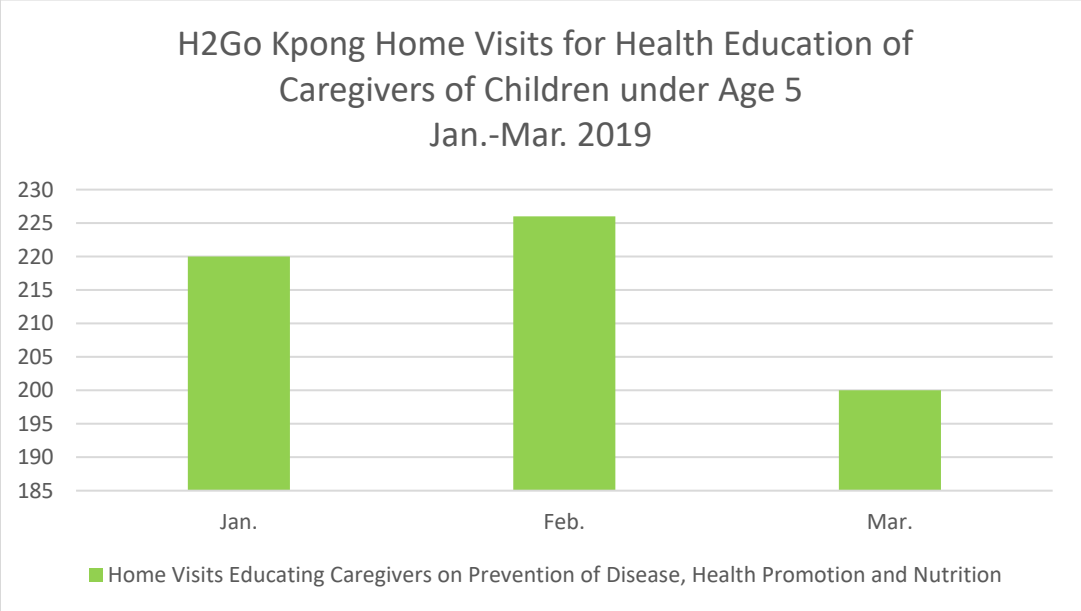
Results

From January to March 2019, results are as follows:

Among approximately 200 children under age 5,

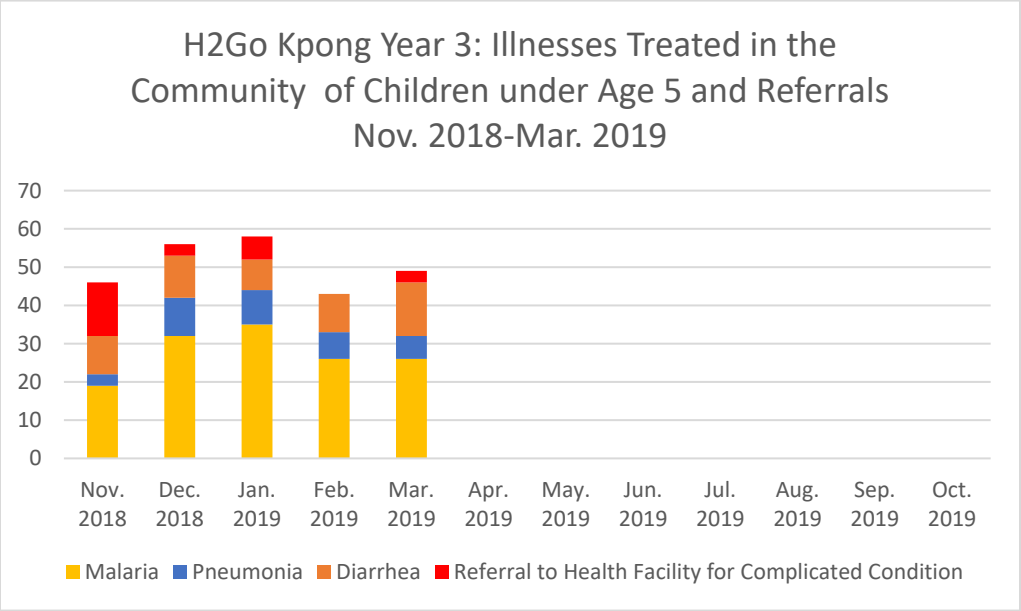
- 141 Illnesses treated in the community by H2Go CBAs
  - 87 malaria; 22 pneumonia; 32 diarrhea
- 9 referrals were made to hospital for serious illness and life-threatening illness
- 646 Home Visits





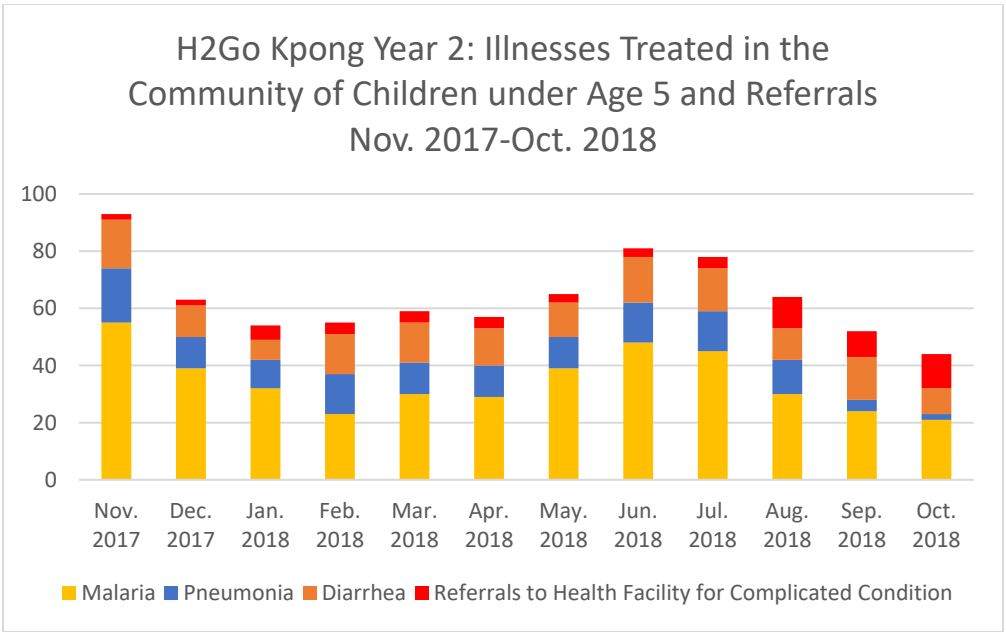
Year 3 to date Mar. 2019, Among approximately 200 children under age 5:

- 226 Illnesses treated in the community by H2Go Kpong CBAs
    - 138 malaria; 35 pneumonia; 53 diarrhea
- 26 Referrals to health facility for serious and life-threatening illnesses
- 1,111 Home Visits



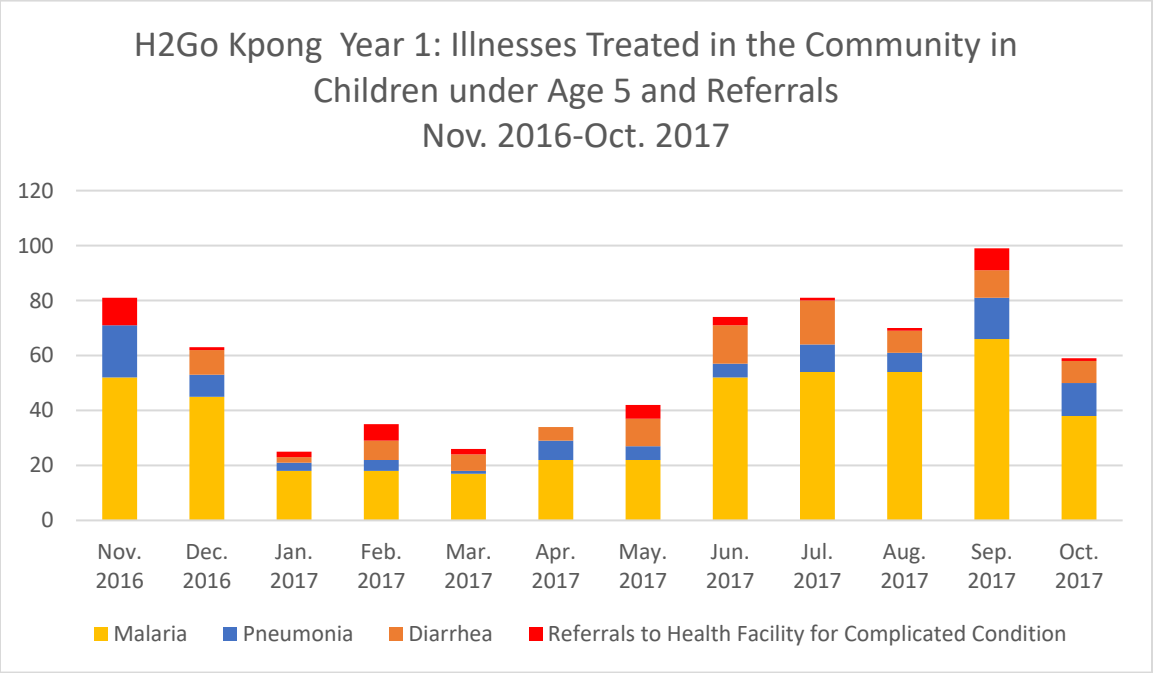
Year 2: Among approximately 200 children under age 5: (Nov 2017-Oct. 2018):

- 702 Illnesses treated in the community by H2Go Kpong CBAs
    - 415 malaria; 133 pneumonia; 154 diarrhea
- 63 Referrals to health facility for serious and life-threatening illnesses
- 3,197 Home Visits



Year 1: Among approximately 200 children under age 5: (Nov 2016-Oct. 2017):

- 649 Conditions treated in the community by H2Go Kpong CBAs
    - 458 malaria; 96 pneumonia; 95 diarrhea
- 42 Referrals to health facility for serious and life-threatening illnesses
- Home Visits: 3,364

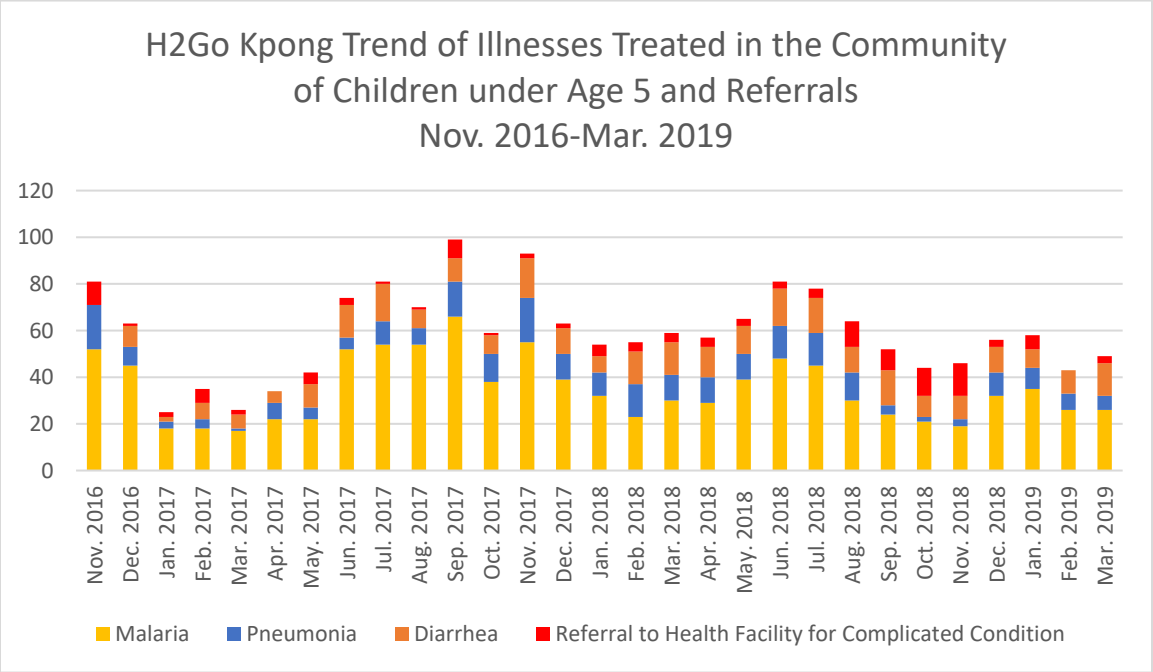


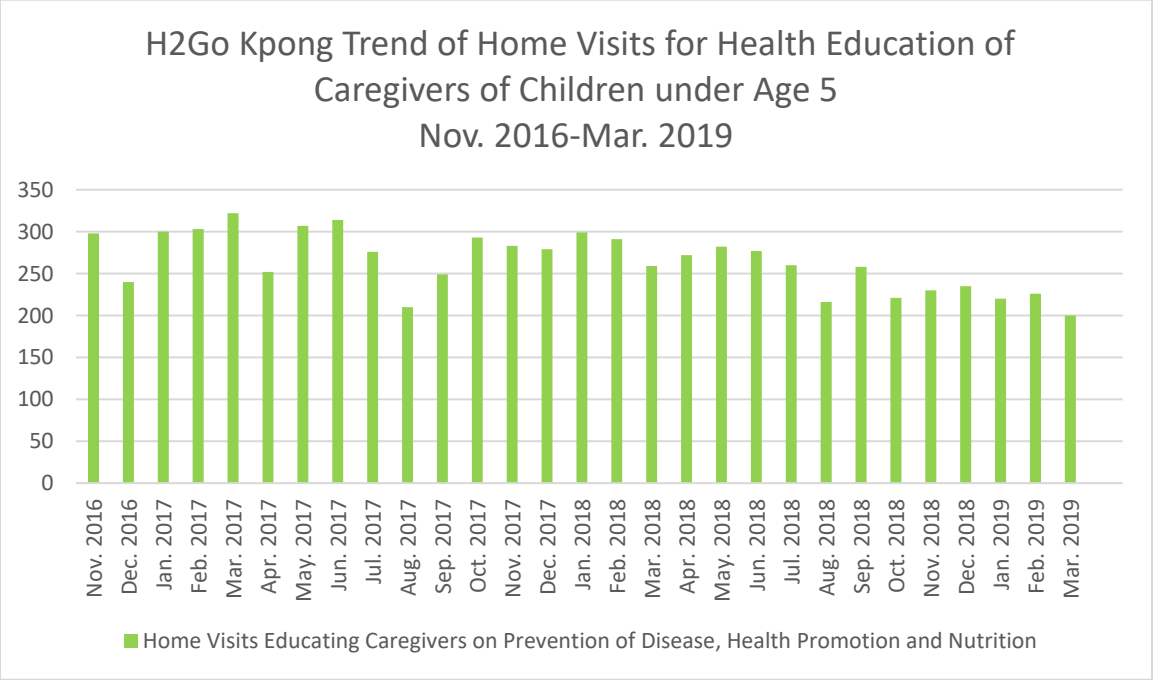
CBA Abednego Mensah counsels a mother on the results of malaria test in Piengua.

Trends to date (Nov 2016-Mar. 2019):

Trend-Project total: Among approximately 200 children under age 5:

- 1,577 Illnesses treated in the community by H2Go Kpong CBAs
  - 873 malaria; 229 pneumonia; 249 diarrhea
- 105 children referred to collaborating health facilities for serious and life-threatening illnesses
- 7, 672 Home visits





Health 2 Go BCCDP Demonstration Project

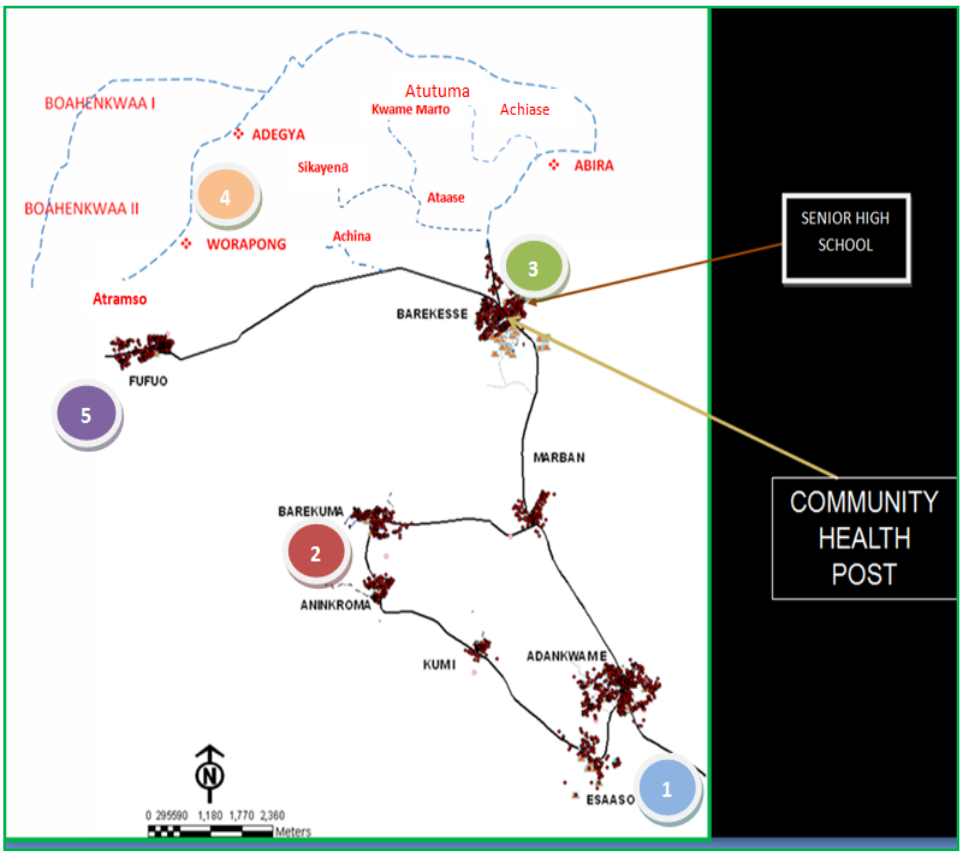
Implementation

Overview

The expansion of Health 2 Go into a larger Demonstration project for the BCCDP follows the success of the Kpong Pilot, launching in May 2019. Approximately 20,000 people in 20 rural communities in the Atwima Nwabiagya District near Kumasi in the Ashanti Region are being served by 30 H2Go CBAs.

Communities include:

1. Boahenkwaa I
2. Boahenkwaa II
3. Adegya
4. Worapong
5. Atramso
6. Sikayena
7. Achina
8. Atutuma
9. Kwame Marto
10. Ataase
11. Achiase
12. Abira
13. Berekesse
14. Marban
15. Fufuoo
16. Barekuma
17. Aninkroma
18. Kumi
19. Adankwame
20. Esaaso



Initial Training

Preceding the launch of the H2Go BCCDP Demonstration Project in communities, initial training was completed for 14 GHS Personnel and 30 CBAs which occurred at Ensign College with clinical sessions held St. Martin's Hospital and Atua Hospital in Kpong during February and April of 2018.

Community Internship

Following initial basic training, CBAs performed a 1-day community internship on April 25,2018 in three communities. The primary purpose is to provide CBAs an opportunity to repeatedly practice newly learned clinical skills, particularly performing rapid diagnostic tests (RDT) for malaria and reading results, while receiving supportive supervision by Managers and Supervisors. Additionally, the community

internship engages communities and introduces them to the H2Go program. Communities included Barekese, Barekuma, and Fufuo.

Turnout of mothers with children was high, as the H2Go Community Internship had been announced in communities the week prior to the event. Over 250 children were tested for malaria and treated if results were positive by CBAs. In addition to testing for malaria, CBAs assessed children for pneumonia, diarrhea, danger signs, and malnutrition. Children were treated for respective conditions or referred. Newly trained H2Go BCCDP Managers and Supervisors provided oversight and mentoring.

H2Go BCCDP Demonstration Project Launch and Press Event

BCCDP was launched on April 26, 2018 in two multi-community Durbars. Press coverage was provided by national TV and radio stations, including Metro TV and UTV.

- Adegya Community
- Fufuo Community

In attendance were Ashanti Regional Director of Health Services (Dr. Tinkorang); Atwima Nwabiagya District Director of Health Services (Dr. Kingsley Osei-Kwakye); H2GO Team (Dr. Manortey, Gideon Acheampong and Daniel Opoku Agyemang); Prof. Steve Alder; Traditional leaders, Assemblymen and women, H2Go BCCDP Manger/Facilitators, Supervisors, and CBAs. Speakers included Prof. Ansong, Dr. Manortey, Dr. Osei-Kwakye, and Dr. Tinkorang. Traditional leaders also spoke to show appreciation and support for the project. CBAs were given their certificates and logistics following the durbars.

Recent H2Go BCCDP Activities

Health 2 Go procured medicines for CBAs, after receiving additional funding from Cast a Pebble Foundation, who agreed to provide a 1-year supply of medicines for H2Go BCCDP CBAs, after the original promised source did not follow through. CBAs are routinely treating common child illnesses in the community, referring serious life-threatening illness, and conducting monthly home visits to educate mothers on prevention of illness, health promotion and nutrition. Additionally, a 2-day Refresher Training occurred in January 2019 to ensure CBA clinical competencies.

Refresher Training

A 2-day Refresher Training was held at with clinical sessions taking place at the SDA Nursing Training School and St. Patrick's Hospital in Barekese, Kumasi January 17-18, 2019. Shaibu Mohammed. the Berekese sub-District Directed, trained as a H2Go Manager, served as the lead facilitator.

Clinical Session

A practical session occurred at Saint Patrick's Hospital. Inpatient and outpatient clinical sessions were organized for all the participants. Four groups of 7 volunteers were formed with the groups alternating between the Inpatient and Outpatient wards at regular intervals. The CBAs led by a manager and a supervisor were taken to the children's ward where their capacity to assess children was examined. Each CBA was assigned at least three children (child or newborn) to carry out a general assessment. The illnesses that were assessed for include: malaria, pneumonia, diarrhea and malnutrition. CBAs practiced assessing breathing rate, stiff neck, fever and chest in drawing. After each participant finished attending to a child, the facilitator identified comings of the participant and addressed them.

Right, A section of facilitators, supervisors and CBAs at the St. Patrick's Hospital, Offinso,
Left- Samuel Abage evaluating a CBA during clinical session

Classroom Sessions

The following topics were addressed:

- Documentation and record keeping
- Pregnant woman danger signs
- Newborn danger signs
- General danger signs (in children)
- Reading RDT results and drug expiry quiz
- Nutrition
- Fever and malaria review
- Cough and pneumonia review
- Diarrhea review
- Review of treatment for malaria, pneumonia and diarrhea

Practical sessions included: Performing RDTs, tepid sponging, giving suppository, counting respiratory rate and assessing for malnutrition.

As part of the refresher training, CBAs were expected to take a competency exam to evaluate their knowledge. CBAs were examined on all the training sessions they were taking through including; RDT results reading, drug expiry date reading, breathing rate, chest in drawing determination, case studies and treatment regimen. This session lasted for almost 3 hours.

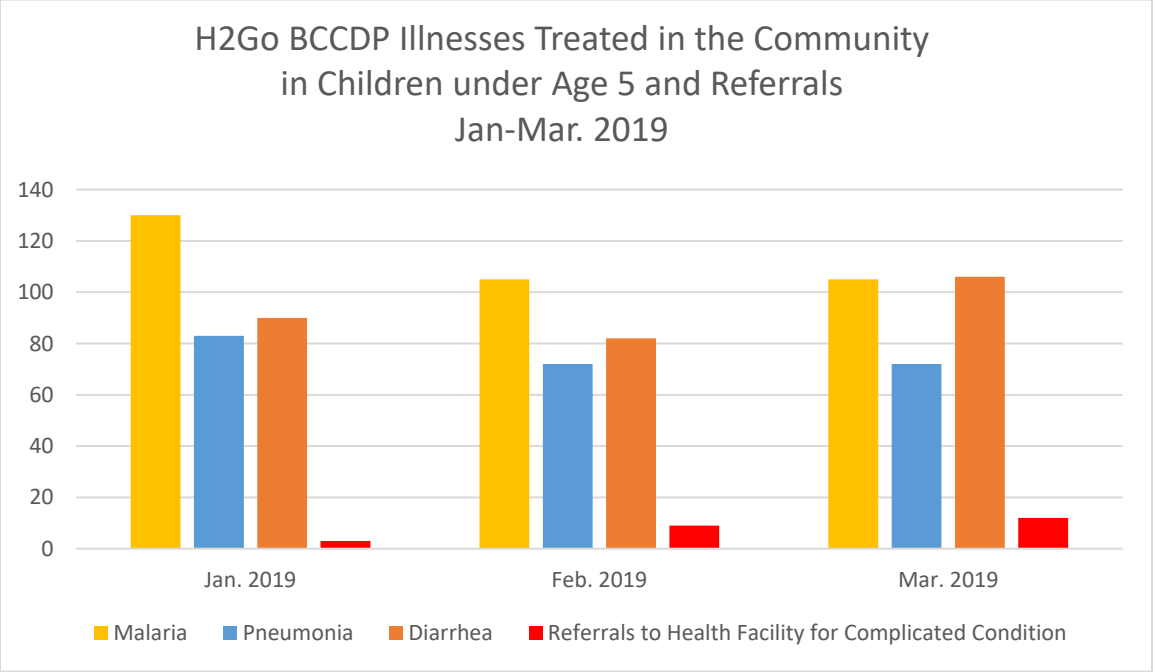
At the end of the session, Mohammed Shaibu led a session on the training evaluation from all participants. Participants shared their views on how the training was conducted overall. They agreed it was successful and very beneficial to their field practice. They subsequently shared their views on how they think the training and program can be improved. Suggestions are as follows:

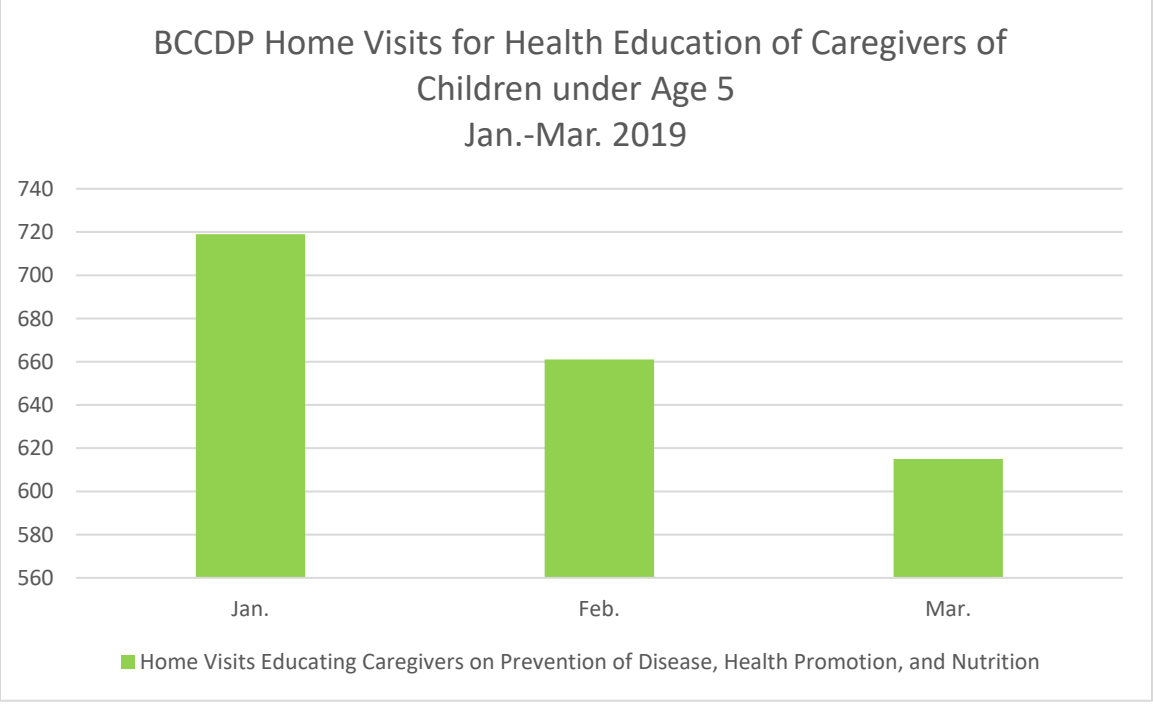
- CBAs monthly allowance should be reviewed upwards
- Medication for field work should be in constant supply
- Durbars should be organized to strengthen the bond between the CBAs and community members and to promote community integration of Health2Go.
- Refresher trainings should be frequent
- Medication for adults should be considered
- The SDA Nursing Training School has a students' hostel. The possibility of having some CBA's from far communities' lodge there should be explored to ensure all CBA's are present on time.
- Explore the possibility of one-on-one telephone call assessments (using two or three clinical vignettes)

Results

Among approximately 2,200 children under age 5, (Jan. – Mar. 2019):

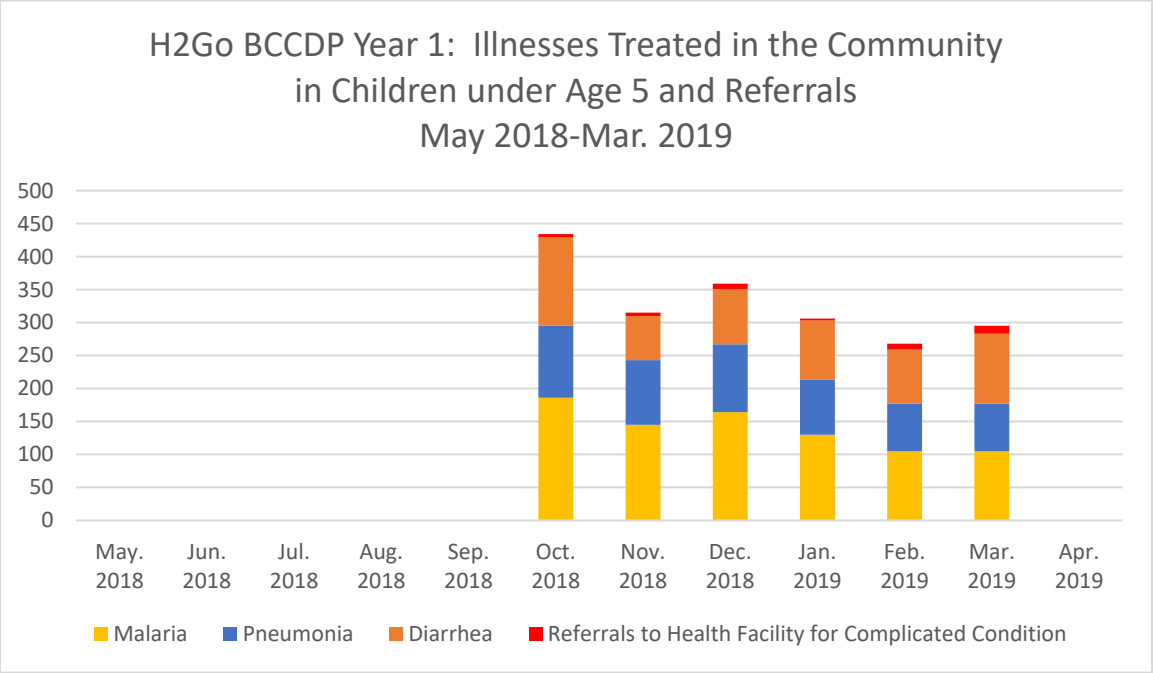
- 845 illnesses were treated in the community by H2Go BCCDP CBAs
    - 340 Malaria; 227 Pneumonia; 278 Diarrhea
- 24 Referrals were made to health facilities for serious illness
- 1,995 Home Visits were conducted



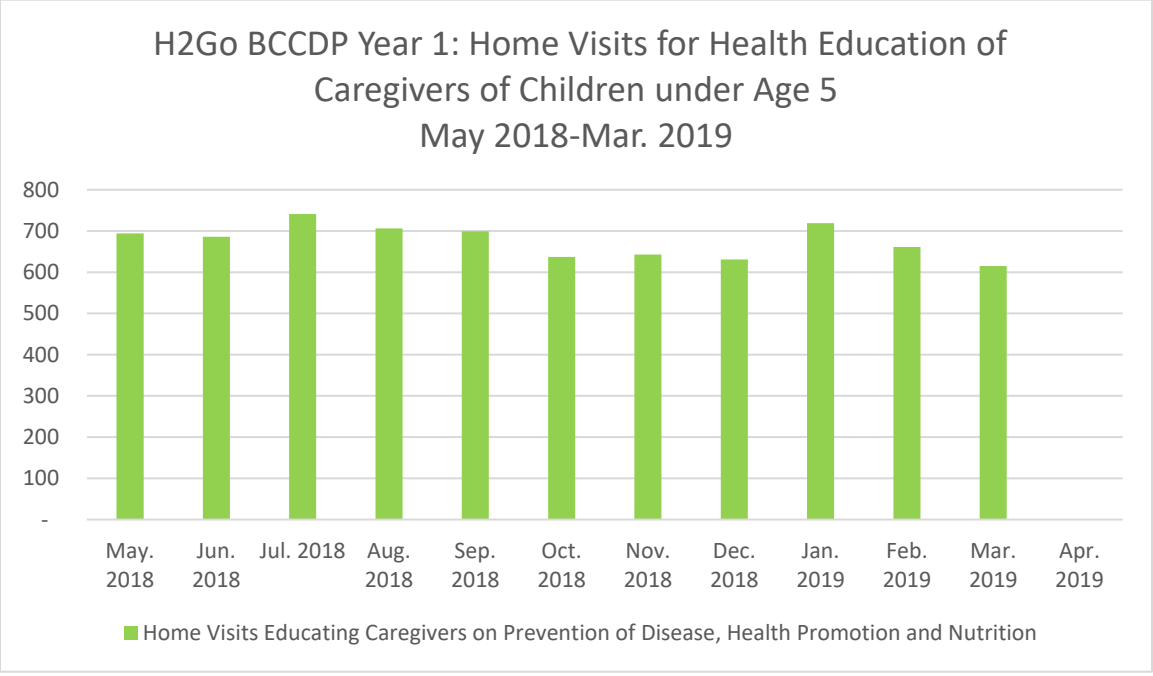


Year 1: Among approx. 2,200 children under age 5, (May 2018 -to date Mar. 2019):

- 1,935 illnesses were treated in the community by H2Go BCCDP CBAs
    - 835 Malaria; 537 Pneumonia; 563 Diarrhea
- 42 Referrals were made to health facilities for serious illness
- 7,423 Home Visits were conducted



CBAs did not have medicines until Oct. 2018, but began conducting home visits in May 2018



Lessons Learned

Kpong Pilot

Lessons learned from the Kpong Pilot have been significant as H2Go has tested Training, implementation and Monitoring and Evaluation processes in a limited population and a manageable geographically defined site. Key learning includes:

Training

- CBA low literacy level is a challenge
- Poor vision of CBAs needs addressed
- Routine refresher training is key
- Competency exam to inform training

Implementation

- Appropriate equipment-what works
- Transportation needs are substantial
- Community internship and supervision processes

Monitoring & Evaluation

- Frequent monitoring through supportive supervision is essential
- Supervision needs to be linked to training
- Represents a tremendous opportunity to share knowledge and improve outcomes

BCCDP Demonstration Project

Key lesson learned thus far include:

- Medicine supply should be procured prior to training
- Refinement of training model for adaptation in the community
- Reinforcing training skills with community internship
- Sub-district Director can effectively run program

Next Steps

With the implementation of the Kpong Pilot the expansion to the larger BCCDP Demonstration Project,

- Evaluate impact of the H2Go program and cost analysis
- Engage GHS to supply H2Go BCCDP medicines
- Ensure program sustainability of H2Go Kpong Pilot and BCCDP Demonstration Project
- Seek additional funding (USAID grant)
- Prepare for future scale up to a District level in Ho (Volta Region)

CHPS Zone (Kpong Pilot < 2,000 pop.) → Sub-District (BCCDP Demonstration Site, approx. 20,000 pop.) → District Level (Approx. 100,000 pop.) → Country-wide

Appendix 1: Health 2 Go Timeline

2015

January -June

- Extensive research conducted on community-based programs
- Determined to begin with child and maternal health with the concept of eventually expanding to address other populations within the community
- Program outcomes and objectives identified
- Selected evidence based gold standard curriculum WHO/UNICEF Integrated Community Case Management, 'Caring for newborns and children in the community.'
- Connected with World Health Organization, UNICEF, Ghana MOH, and Child health leaders to obtain relevant program information and resources
- Health 2 Go logo designed

July-December

- Ghana visit to Kumasi and Kpong for needs assessment and site research (July 2015)
- Established and worked with a planning group
- Initiated Health 2 Go Program in Ghana with partnership of University of Utah, Ensign College of Public Health, Cast a Pebble and Ghana Health Service (GHS)
- Worked with Lower Manya Krobo Municipal Health to identify administrative personnel and site
- Identified a cluster of 6 small communities in the Wawase CHPs zone for Kpong Pilot
- Research and test equipment for program

2016

January – June

- Sourced CBA equipment in Ghana and US
- Worked with Municipal Health to identify 10 CBAs in communities in Wawase CHPS Zone
- Prepared material for Manager, Supervisor and CBA training
- Developed launch promotional materials, including press kits
- Engaged communities; received official entry and welcome by chiefs (May)
- Formed direct linkage to hospital and health facility that receive referrals by Health 2 Go

July – December

- Manager/Facilitator Training (5-days) conducted by former Ghana national (iCCM) facilitator to train 6 GHS administrators and providers as H2Go Kpong Managers and Facilitators held at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (July 4-8)
- Press event at Ensign with national TV and regional newspaper coverage to promote H2Go Kpong Pilot (July 14)
- Supervisor Training (3-days) to train 5 GHS Community Health Officers as H2Go Kpong Supervisors; held at Ensign College, St. Martin's and Atua Hospitals (July 25-27)

- CBA training (6-days) to train 10 community members as H2Go Kpong CBAs held at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (Aug. 1-6)
- CBA Community Internship (2-days) in CBAs communities in Wawase CHPS Zone (Aug. 23, Aug 30)
- Engagement of communities through multi-community durbars (town hall meeting) to introduce H2Go in Wawase CHPS Zone (Oct. 24)
- Official H2Go launch in 6 communities in the Wawase CHPS Zone; total pop. 1,500 people (Oct. 24)
- H2Go BCCDP CBA bikes, medicine boxes and supplies delivered (Oct. 24)
- CBAs begin service in H2Go Kpong Pilot (Wawase) communities (Nov. 1)
- Supportive supervision provided for H2Go Kpong Pilot CBAs beginning this month (Dec.)

2017

January – June

- First Kpong Refresher Training (1-day) held at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (Jan.)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss program (Mar.)
- Kpong Refresher Training (2-days) at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (Apr.)
- Completed GIS Mapping, Census, and Health Behavior Survey in communities (June)

July-December

- H2Go Kpong Refresher Training (2-days) at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (Jul.)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go Kpong program (Sep.)

2018

January – June

- H2Go Kpong Refresher Training (2-days) at Ensign College with clinical sessions at St. Martin's and Atua Hospitals, included press coverage as part of H2Go BCCDP promotion (Jan. 18-19)
- Press event was held at Ensign College with Ghana National TV and regional newspaper coverage to promote H2Go expansion to BCCDP (Jan. 19)
- Met with Ghana Health Service (GHS) regarding medicine supply to ensure program's sustainability (Jan.)
- Established strong relations with Regional, District, sub-District, and community leaders associated with BCCDP (Jan.)
- Formed direct linkage to health facilities (Berekese Heath Center and St. Patrick's Hospital) that will receive H2Go referrals (Feb.)

- Completed the initial H2Go BCCDP 5-day training for 6 GHS administrators and providers trained as H2Go Managers/Facilitators (Feb. 19-23)
- Completed the initial H2Go BCCDP 5-day training for 7 GHS community health officers trained as H2Go supervisors (Apr. 16-20)
- Completed the initial H2Go BCCDP 5-day training for 30 community members trained as H2Go community-based agents (CBAs) (Apr. 16-20)
- 1 day H2Go Community Internship at 3 BCCDP communities (Berekese, Barekuma, and Fufuo) (Apr. 25)
- Engagement of BCCDP communities through 2 multi-community Durbars (town hall meetings) (Apr. 26)
- Press event at durbars with Ghana National TV, radio and newspaper (Apr. 26)
- H2Go BCCDP CBA bikes, medicine boxes and supplies delivered (Apr. 26)
- CBAs began service in H2Go BCCDP communities (May 1)
- Supportive supervision provided for CBAs beginning this month (Jun.)

July-December

- H2Go Kpong Refresher Training (2-days) at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (Aug.)
- H2Go team have agreed on supplying medicines for CBA's on-the-job training, scheduled to occur in September
- H2Go BCCDP CBA equipment and supplies such as torchlight, raincoat, and rainboots delivered (Sep.)
- 1-day H2Go BCCDP Refresher Training and distribution of 1-month medicine supply for Fufuo, Barekuma, and Maban Zones at Berekese (Sep. 27)
- 1-day H2Go BCCDP Refresher Training and distribution of 1-month medicine supply for Abira and Warpong Zones (Oct. 2)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go Kpong program at Abobeng and Wawase (Oct. 9)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go Kpong program held at Abobeng and Wawase (Dec. 11)
- Cast-a-Pebble agreed to fund H2Go BCCDP CBA medicines for one year (Dec.)
- Cast-a-Pebble indicated they would fund H2Go Kpong Pilot for an additional year

2019

January –to date March

- H2Go BCCDP Refresher Training held in Kumasi and clinical session at hospital (Jan 17-18)
- Kpong Refresher Training (2-days) at Ensign College with clinical sessions at St. Martin's and Atua Hospitals (Mar. 7-8)

*A H2Go BCCDP Refresher Training is scheduled for June 27-28 in Kumasi.

Appendix 2: Budget

Kpong Pilot

Health 2 Go: Kpong (Pilot) Expenses				
10 CBAs serving 6 communities				
Costs	**Budget**	**Actual Expenditures through 3/31/19**	**Amount Remaiining (4/1/19-12/31/19)**	**Reason for Variance ($5,000 or more)**
Medicines	$ 7,062.02	$ 3,061.43	$ 4,000.59	
Program Equipment and Supplies	$ 38,252.56	$ 25,937.32	$ 12,315.24	Replacement or repair of CBA equipment occurs June 2019
Training (Initial Basic + Refresher)	$ 52,270.24	$ 26,635.93	$ 25,634.31	We found ways to reduce costs, and 2 Refreshers have yet to occur
Supervision	$ 9,843.72	$ 7,251.35	$ 2,592.37	
CBA stipends	$ 9,260.00	$ 5,636.52	$ 3,623.48	
Community Engagement (Durbars)	$ 525.64	$ 724.59	$ (198.95)	
Press Events	$ 1,801.44	$ 1,779.97	$ 21.47	
International Travel	$ 13,000.00	$ 16,182.53	$ (3,182.53)	
Faculty/Staff	$ 134,507.00	$ 141,203.40	$ (6,696.40)	Funds will be reallocated to this category from another area
Monitoring & Evaluation	$ 13,477.38	$ 227.85	$ 13,249.53	Scheduled to begin June 2019
Total	**$ 280,000.00**	**$ 228,640.88**	**$ 51,359.12**	

BCCDP Demonstration Project

Health 2 Go: BCCDP (Demonstration Project) Expenses 30 CBAs serving 20 communities				
Costs	**Budget**	**Actual Expenditures through 3/31/19**	**Amount Remaining (4/1/19-12/31/19)**	**Reason for Variance ($5,000 or more)**
Medicines	$ 32,000.00	$ 4,997.70	$ 27,002.30	Cast a Pebble donation of $32,000 for CBA medicines
*Program Equipment and Supplies	$ 7,923.80	$ 8,593.11	$ (669.31)	
Initial Training	$ 42,984.00	$ 27,855.74	$ 15,128.26	Trainings held simultaneously reduced costs
Refresher Training	$ 98,980.00	$ 7,353.41	$ 91,626.59	Due to lack of medicine supply full trainings not held
Supervision	$ 5,076.92	$ 1,720.40	$ 3,356.52	
CBA stipends	$ 18,461.54	$ 7,057.47	$ 11,404.07	Stipends will be paid as the program continues
Community Engagement	$ 779.49	$ 524.14	$ 255.35	
Press Events	$ 2,000.00	$ 2,606.90	$ (606.90)	
International Travel	$ 26,844.25	$ 3,349.02	$ 23,495.23	Combined trips & all trainings not yet occurred
Faculty/Staff	$ 90,950.00	$ 37,439.02	$ 53,510.98	Project start was delayed
Monitoring & Evaluation	$ 6,000.00	$ -	$ 6,000.00	Evaluation will begin June 2019
Total	**$ 332,000.00**	**$ 101,496.91**	**$ 230,503.09**	

In general, costs are shifted a few months later than originally projected in this project due to the later than anticipated start date and the initial challenge of a medicine funding source, after the first committed source did not follow through. Therefore, key activities such as refresher trainings have shifted forward. Since Cast a Pebble recently provided funding for medicines, the project is advancing as planned.

*CBA equipment (bicycles and accessories) was donated by Cast a Pebble and not reported in this budget.

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