Health 2 Go

Progress Report through June 30, 2022

8/30/22

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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

IHA: Interethnic Health Alliance

IMCI: Integrated Management of Childhood Illness

MOH: Ministry of Health

PI: Principal Investigator

RDT: Rapid Diagnostic Test (malaria)

SDG: Sustainable Development Goals

UN: United Nations

UNICEF: United Nations Children's Fund

WHO: World Health Organization

H2Go Summary of Accomplishments

Wawase CHPS Zone Pilot - Serving 1,500 People (Kpong, Eastern Region of Ghana)

- COVID-19 response in communities: Training of H2Go CBAs on COVID-19 health education and risk communication, procurement, and distribution of personal protective equipment; CBAs educate their communities on prevention of community transmission (beginning March 2020)
- Collaborative COVID-19 research study initiated aimed at effecting community behaviors/practices to mitigate COVID-19 community spread (April 2020)
- Continuous service in 6 communities in the Lower Manya Krobo District since November 2016
- All 10 CBAs remain active and effective, and all equipment has been well utilized
- Communities recognize CBAs as front-line service providers
- 16,210 educational Home Visits by CBAs on illness prevention, nutrition, and health promotion
- Among approximately 200 children under age 5, there were 4,356 illnesses treated in the community setting (November 2016 – June 2022)
    - 2,708 malaria; 870 diarrhea; 778 pneumonia/Acute Respiratory Illness (ARI)
    - 205 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 (October 2016, March 2017, September 2017, October 2018, December 2018)
- Routine monthly meetings with District Health Leadership to continually improve the program
- 62 monthly Supportive Supervision Visits provided on-site to CBAs (December 2016 – June 2022)
- 10 Refresher Trainings (January, April, July 2017; January, August 2018.; March, November 2019; August 2020, April 2021, January 2022)
- Completed GIS Mapping, Census, and Health Behavior Survey in communities (June 2017)
- Launched in 6 communities of the Wawase CHPS zone (November 2016)
- Completed initial basic training for 12 GHS personnel and 10 CBAs (July, August 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 Global College (formerly Ensign College of Public Health) 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 Global College, Cast a Pebble Foundation and Ghana Health Service (GHS) in 2015

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

- COVID-19 response in communities: Training of H2Go CBAs on COVID-19 health education and risk communication, procurement and distribution of personal protective equipment, CBAs educate their communities on prevention of community transmission (beginning March 2020)

- Collaborative COVID-19 research study initiated aimed at effecting community behaviors/practices to mitigate COVID-19 community spread (April 2020)
- Continuous service in 20 communities in the Atwima Nwabiagya North District since May 2018
- 30 CBAs remain active and effective, and all equipment remains operational
- Communities recognize CBAs as front-line service providers
- Procured funding supply of medicines from Cast-A-Pebble Foundation after previously committed source did not follow through (December 2018)
- 25,977 educational Home Visits by CBAs on illness prevention, nutrition, and health promotion
- Among approximately 2,200 children under age 5, there were 11,050 illnesses treated in the community setting (October 2018 – June 2022)
    - 5,491malaria, 2,546 diarrhea, 3,013 pneumonia/Acute Respiratory Illness (ARI)
    - 536 children referred to collaborating health facilities for serious and life-threatening illnesses
- Engagement of communities through 2 multi-community durbars (Town Hall Meeting) (May 2018, October 2019)
- 44 monthly Supportive Supervision Visits provided on-site to CBAs (June 2018 – June 2022)
- 6 Refresher Trainings including clinical training at collaborating hospital (January, June, October 2019; September 2020; March, November 2021)
- Launched in 20 communities of the BCCDP in Atwima Nwabiagya North District (May 2018)
- Completed initial basic training for 14 GHS personnel and 30 CBAs (February, April 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 Global College with coverage from national TV and 12 newspaper journalists (January 2018)
- Established strong relationships with Atwima Nwabiagya North 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 communities. 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 families. 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 48 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 continuous service in the six small communities of the Wawase CHPS Zone, serving 1,500 people in a remote area of the Kpong sub-District of the 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 North District (Ashanti Region). The overarching goals, which we are actively pursuing are for Health 2 Go to be scalable to a level that allows for country-wide implementation and to be able to adapt and expand this program to other countries.

The Health 2 Go Difference

- Ongoing High-Quality Training
- Consistent Provision of Durable Equipment, Medicines, and Supplies
- Regular Supportive Supervision
- Continual Community Engagement
- Clear Integration into Health System
- Focus on Prevention, Health Promotion, and Early Treatment
- Effective Consumer Branding

Results

Wawase CHPS Zone: Among approximately 200 children under age 5, (November 2016 – June 2022**)**

- 4,356 illnesses treated; 2,708 malaria; 870 diarrhea; 778 pneumonia
- 205 children referred to hospital for serious illnesses; 16,210 Home Visits

BCCDP Demonstration Project: Among approximately 2,200 children under age 5, (October 2018 – June 2022)

- 11,050 illnesses treated: 5,491 malaria; 2,546 diarrhea; 3,013 pneumonia
- 536 children referred to hospital for serious illnesses; 25,977 Home Visits

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 intended 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 has not 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 48 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 have 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 Stephen 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 Implementation

The initial Wawase CHPS Zone Pilot for Health 2 Go was implemented in the six small communities of the Wawase CHPS zone in the Lower Manya Krobo Municipality of the Eastern Region in Ghana, for about 1,500 residents and 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 North District of the Ashanti Region. Lessons learned will be used to inform expansion to other district-level sites and to engage the leadership of Ghana to scale the program country-wide, and then used for expansion into additional countries.

Health 2 Go, Sustainability and Expansion Horizons

H2Go is currently based at the UU Center for Business, Health and Prosperity in the David Eccles School of Business and the Institute for Community Health and Development at Ensign Global College (formerly Ensign College of Public Health), Ghana. To ensure sustainability, expansion, and maximum impact of

Health 2 Go, we continue to develop a social franchise model led by Prof. Stephen Alder. We are pursuing expansion with potential partners using the social franchise model into other areas of Ghana and are exploring launching into other countries. Dr. Gloria Asare, former deputy of Ghana Health Service is serving as a consultant on program expansion. Additionally, we are evaluating the impact of the program in currently implemented areas.

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

UNICEF reports 41,354 deaths of children under-5 years of age in Ghana during 2018 resulting in a child mortality rate of 48 deaths per 1,000 live births.[7] The most recent available data on cause of death (updated by UNICEF in 2018) indicates that three preventable causes were responsible for half of deaths of children ages 1-59 months in Ghana during 2016.[7]

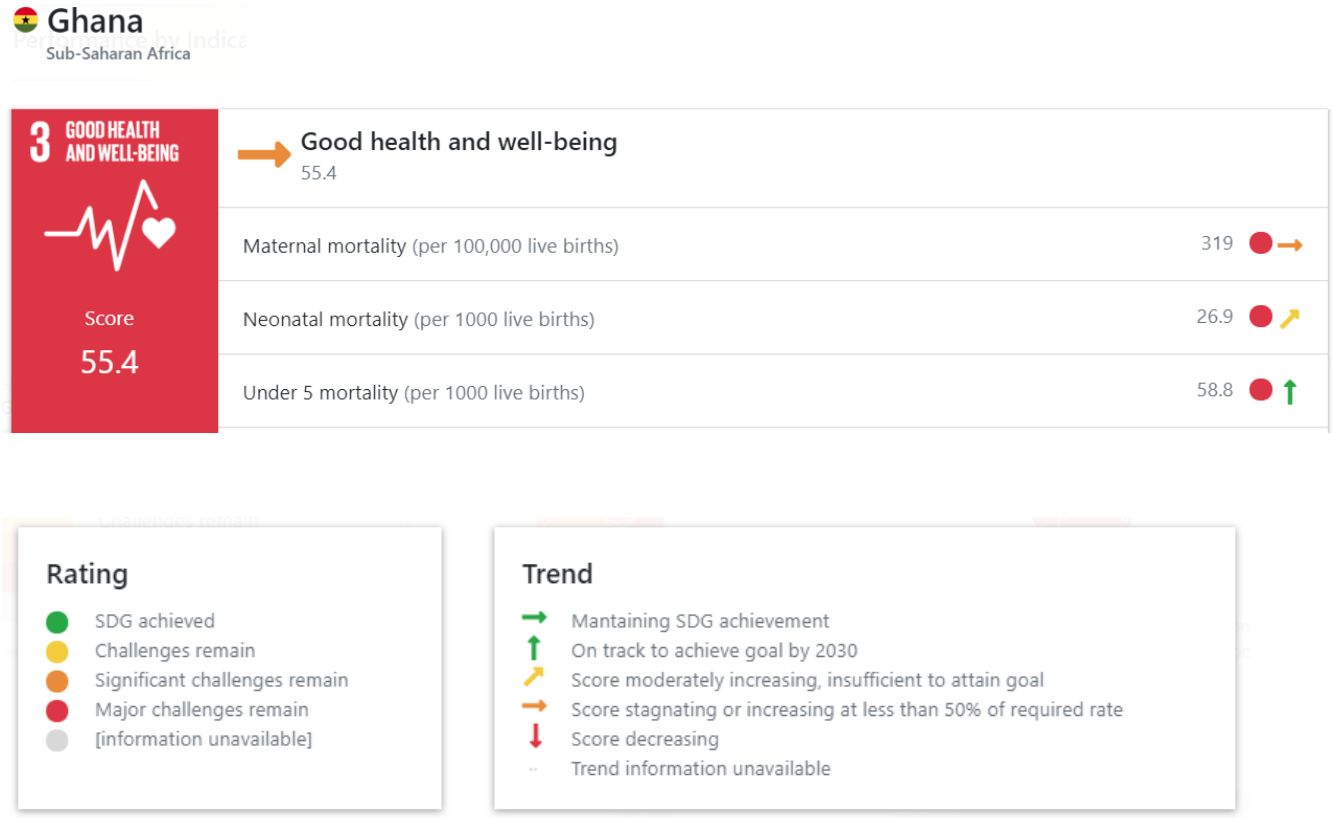
Causes of Death Ages 1-59 Months (2016):[7]

- Malaria (21%)
- 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 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. Ghana was classified as 'not on track' to reach the SDG of 25 deaths per 1,000 live births by 2030 in a 2016 UNICEF report.[3]

Figure 1: SDG Dashboard for Maternal and Child Health



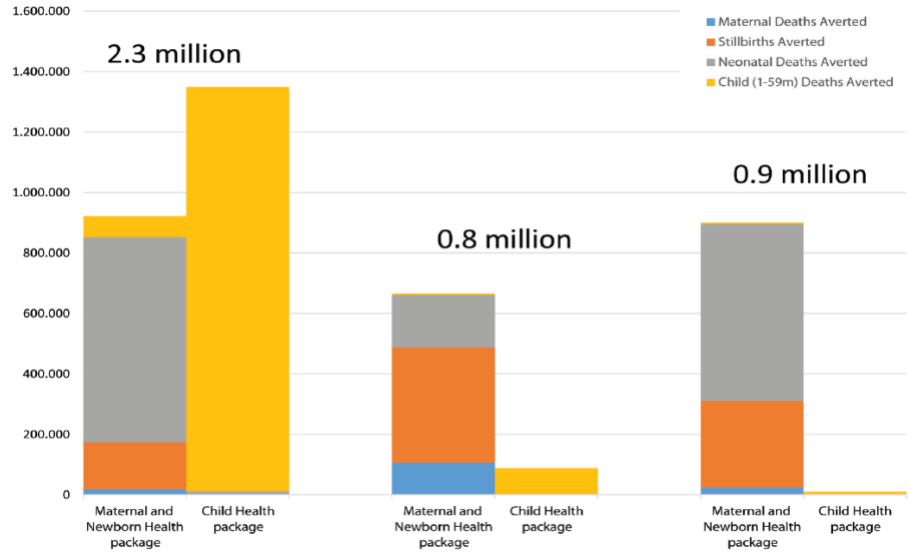
Source: https://dashboards.sdgindex.org/#/GHA

Community Health

Healthcare Delivery Platforms

The potential impact of community-based primary health care along with engaging with communities is 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 to be 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]

Figure 2: Comparison of Maternal, Perinatal, Newborn and Child Deaths that can be Averted by Health–Care Packages through three Service platforms[11]



Community **Primary Health Center** **Hospital**

Source: (Black et al, 2017)[11]

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

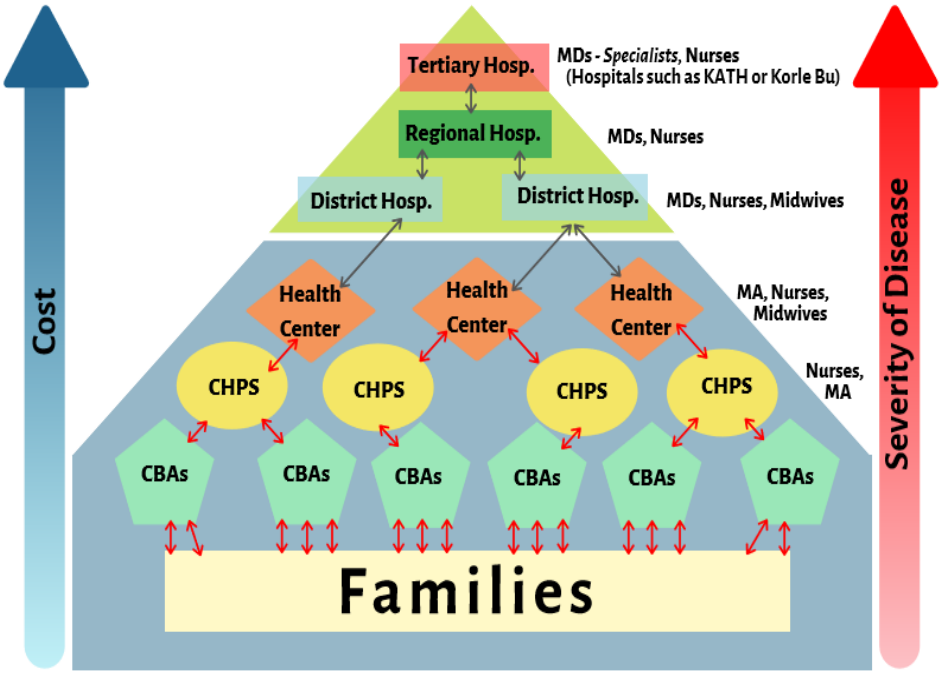
The significance of the community and household levels in a health care model and their respective potential to prevent illness, improve health, and control costs is underappreciated.

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.

Figure 3: Ghana Health Systems Strategy: Severity of Disease and Costs

If health care is delayed, due to lack of access to services 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

Health 2 Go overcomes common challenges of community- based programs:

Common Challenges

- Inadequate suboptimal training
- Inconsistent provision of equipment, medicines, and supplies
- Sporadic, ineffective supervision
- Failure to engage communities
- Disconnected from health system
- Insufficient focus on prevention
- Ineffective consumer branding

Health 2 Go Solutions

- Ongoing high-quality training
- Consistent provision of durable equipment, medicines, and supplies
- Regular supportive supervision
- Continual community engagement
- Clear integration into the health system
- Focus on prevention, health promotion and early treatment
- Effective consumer branding

The Health 2 Go Difference

H2Go 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 to serve as H2Go facilitators/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 seven (7) differentiating features of H2Go include:

- Ongoing High-Quality Training
- Consistent Provision of Durable Equipment, Medicines and Supplies
- Regular Supportive Supervision
- Continual Community Engagement
- Clear Integration into Health System
- Focus on Prevention, Health Promotion, and Early Treatment
- Effective Consumer Branding

Ongoing High-Quality Training

H2Go training follows a comprehensive curriculum consisting of rigorous initial and routine refresher trainings, which utilize the gold standard curriculum from the World Health Organization (WHO) and United Nations Children's Fund (UNICEF). In addition to classroom training, clinical sessions are conducted in partnership with selected hospitals in the area. Figure 4 illustrates how trainings for managers, supervisors, and CBAs are structured. All CBAs take a competency exam and must have a passing score of at least 80% for CBAs to achieve the H2Go certification.

Figure 4: Health 2 Go Training Model

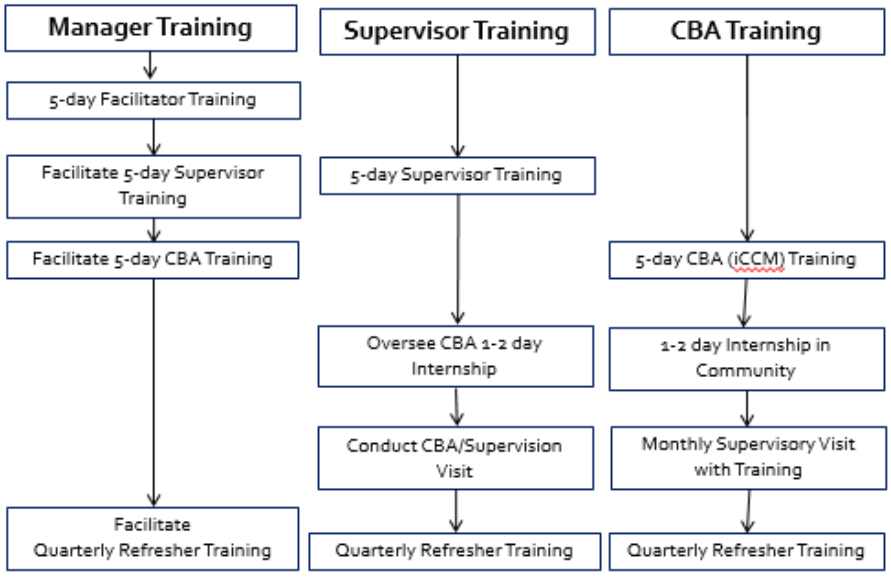


Figure 5: Health 2 Go Training Topics

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

Consistent Provision of Durable Equipment, Medicines and Supplies

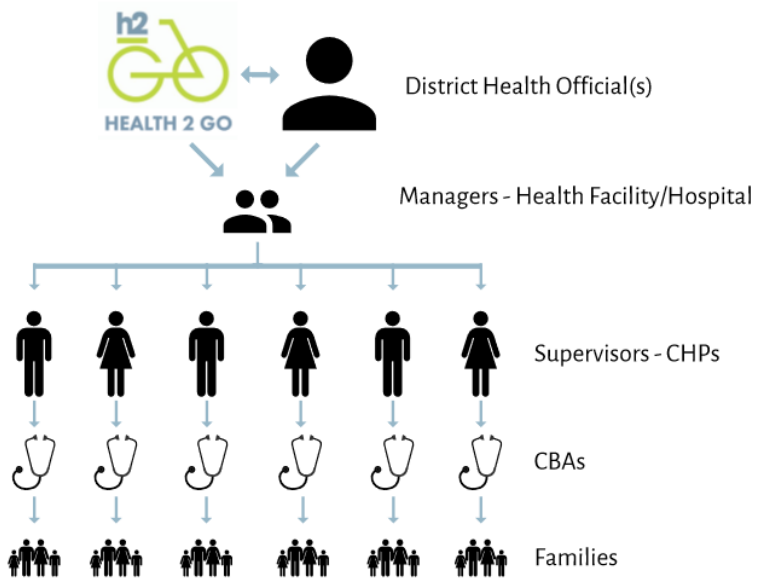
High quality, durable equipment along with an uninterrupted provision of medicines and supplies is essential to the success of the H2Go program. Rugged Bicycles are equipped with fully enclosed chains for safety and solid tires to ensure continual mobility and are branded with the H2Go logo for easy identification. Additionally, uniforms, rain gear, cell phones, and treatment equipment is provided to CBAs. A list of basic CBA equipment, medicines and supplies is listed below:

- **Mobility:** H2Go branded *Rugged* bicycles with rear basket, bicycle helmet, H2Go messenger bag, flashlight
- **Uniform/Identification:** H2Go polo and T-shirt; identification badge
- **Communication:** Cell phone
- **Treatment diagnostic/supplies**: Medicine box, timer, ORS mixing equipment, middle upper arm circumference (MUAC) tape, soap, Job Aid
- **Record keeping/documentation:** CBA Register, Referral book, home visit log, inkpad, pen, pencil, eraser
- **Vision/sight:** Corrective eyeglasses are provided if CBA vision is impaired
- **Medicines/tests:** Rapid Diagnostic Tests (RDT) for malaria, AA for malaria, ORS for diarrhea, amoxicillin suspension for pneumonia/Acute Respiratory Illness (ARI), and paracetamol.
    - H2Go sources all medicines/tests through GHS Regional Medical Supplies
    - Restocking occurs during monthly supervision visit

Regular Supportive Supervision

Community health officers are trained as supervisors, while CBAs provide healthcare services to communities. The H2Go supervision structure is established to be supportive, as CBAs receive support from their supervisors and are encouraged to develop relationships with their supervisors. In addition to supporting CBAs, supervisors are indirectly involved with communities, as they provide outreach services in the communities by conducting routine monthly visits. Overall, H2Go is structured in such a way that reinforces linkage to health facilities and integration into the national health system (Fig. 6).

Figure 6: Health 2 Go Supervision Structure



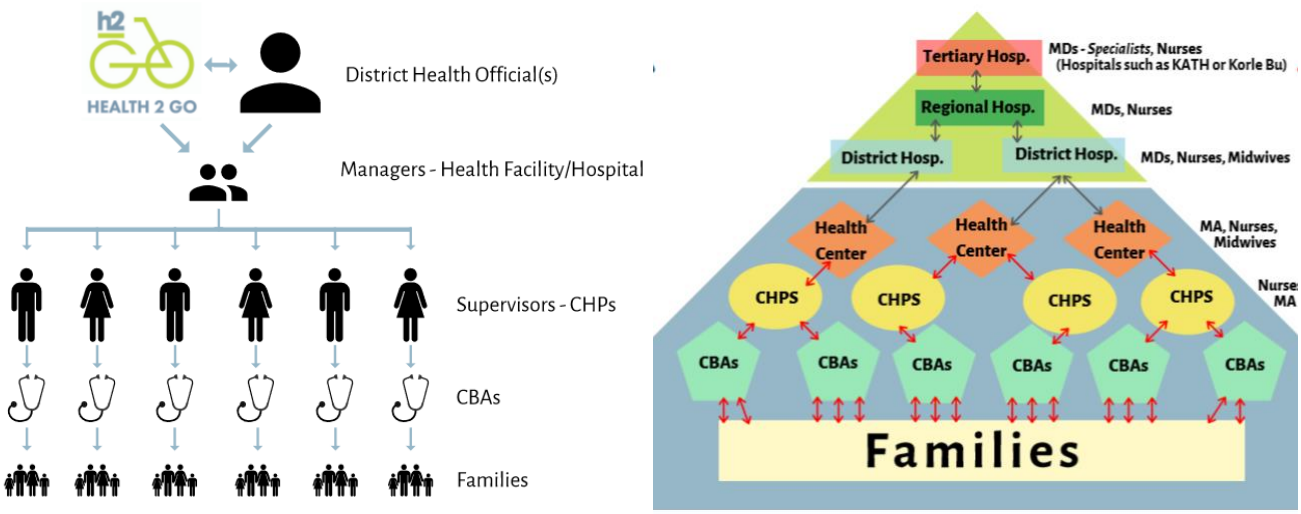
Continual Community Engagement

- 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

Clear Integration into Health System

- H2Go structure aligns with the Ghana Health Model (Figure 7)
- 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

Figure 7: Alignment of Health 2 Go Supervisor Structure and Ghana Health Systems Strategy



Focus on Prevention, Health Promotion, and Early Treatment

Educational home visits are another core component of the program. CBAs routinely educate mothers or caregivers during monthly household visits on illness prevention, health-promoting behaviors, nutrition, and seeking early treatment for illness. CBAs receive performance-based stipends per household visit. 10 home visits per week for a total of 40 per month are required for CBAs to receive the entire stipend. CBAs also encourage mothers during home visits to bring their children to outreach activities in which they can access life-saving interventions such as immunizations.

Effective Consumer Branding

Health 2 Go uses a common brand on all durable equipment and supplies. The brand is easily recognizable in communities and represents the high quality of the Health 2 Go system.

Health 2 Go: Wawase CHPS Zone Pilot

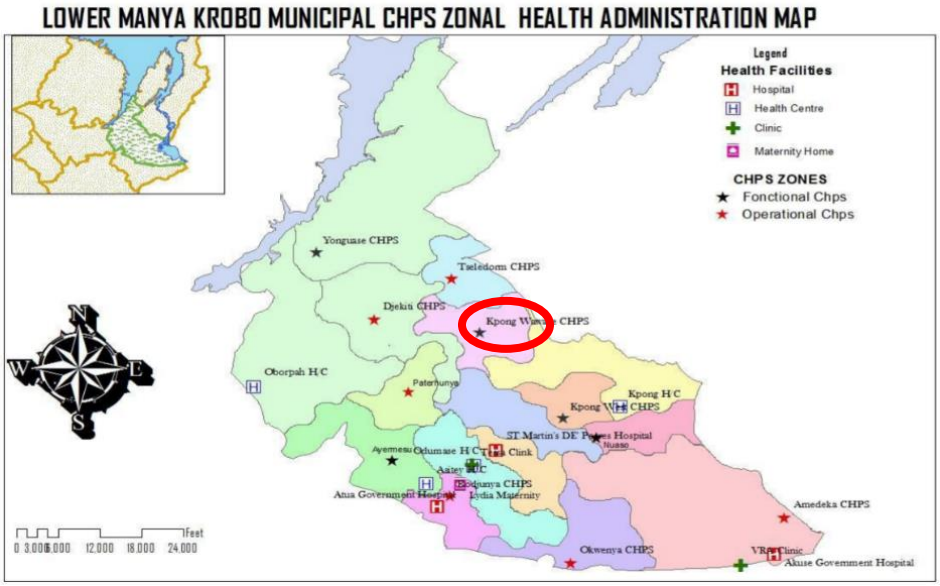
Implementation Overview

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 October 24, 2016.

Figure 8: Wawase/Kpong Health 2 Go Pilot Site in Lower Manya Krobo District (Eastern Region)

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 Global College with clinical sessions held at 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 August 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 November 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.

Impact of Health 2 Go

The Impact of the H2Go Wawase CHPS Zone 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.

Recent H2Go Wawase CHPS Zone Pilot Activities in Context of COVID-19

Overview

In response to the first cases of the novel coronavirus COVID-19 detected in Ghana on March 12, 2020, the President of Ghana issued a partial shutdown of certain areas of the country, in addition to country-wide suspensions of non-essential activities to enable social distancing. The H2Go Wawase CHPS Zone Pilot site was not affected by the shutdown orders and has been operational with H2Go supervisory visits, uninterrupted CBA service in communities providing essential health services to children under age five, and monthly health educational Home Visits to mothers and families. Additionally, CBAs received training on COVID-19 health education and risk communication, which has been incorporated into CBA's monthly educational Home Visits to mothers and families. However, H2Go activities where social gatherings take place such as H2Go Refresher Training have been adapted to support social distancing guidelines. H2Go procured face masks and hand sanitizers which were distributed to CBAs. CBA activities continue in the Wawase CHPS Zone Pilot with uninterrupted service in communities. As of August 25, 2022, Ghana's reported active COVID-19 case count is 41, with the Eastern Region reporting no active cases. Vaccination progress remains slow, with 24.7% of the country's population completing the initial vaccination protocol against Covid-19.

Eastern Region and Wawase CHPS Zone Status

The following are main points relevant to the Eastern Region and Wawase CHPS Zone COVID-19 status **(see figures 9 and 10):**

- Reported active cases in the Eastern Region are zero as of August 25, 2022
- The Eastern Region recorded 7,426 cases out of Ghana's total of 169,580 as of August 25, 2022[13]
- H2Go CBA service remains active and uninterrupted within the communities
- Only 24.7% of the country's population has completed the initial COVID-19 vaccination protocol as of August 21, 2022[14]

H2Go Response

Below is a summary of H2Go actions in the context of the COVID-19 pandemic:

- Adherence to national guidelines by initially postponing routine H2Go Refresher Trainings and Community Durbars until country restrictions lifted
- Training of CBAs on COVID-19 Health Education and Risk Communication by H2Go Supervisors
- Continued support of H2Go CBAs and provision of personal protective equipment
- Modification of monthly H2Go Supportive Supervision Visits and Refresher Trainings to follow strict COVID-19 prevention protocols
- Collaborative COVID-19 research study aimed at effecting community behaviors/practices to stop community spread (see Appendix 2)
- Continued support of CBA health education activities on prevention of COVID-19 to households and community

Figure 9: Ghana Regional Distribution of Active COVID-19 Outbreak Cases as of August 25, 2022.[13]

Table 4: Changes in reported cases of COVID-19 in Ghana from 24 Aug 2022– 25 Aug 2022

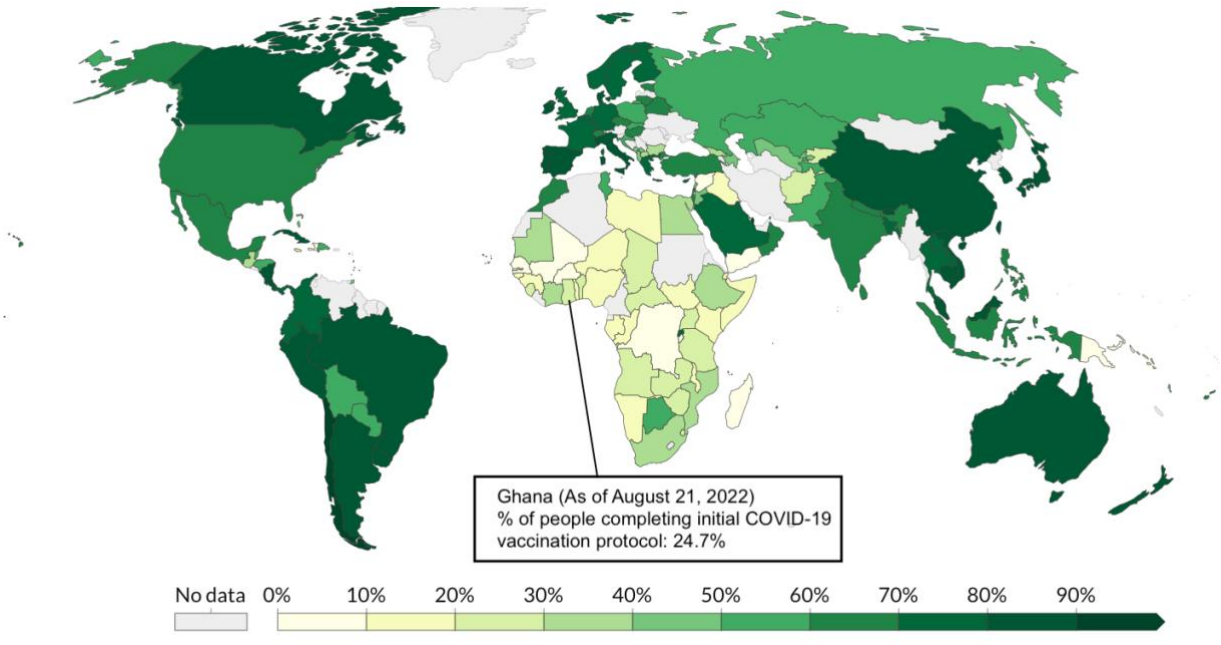
Region	24 Aug	25 Aug	Difference	Districts reporting
Greater Accra	95,748	95,750	2	Routine surveillance 0 and 2 from contact tracing
				Accra: 2
Eastern	7,426	7,426	0	
Central	5,914	5,914	0	
Western	8,663	8,663	0	
Upper West	948	948	0	
Volta	6,140	6,140	0	
Ashanti	22,535	22,535	0	
Upper East	1,801	1,801	0	
Northern	1,882	1,882	0	
North East	407	407	0	
Oti	1,021	1,021	0	
Western North	1,171	1,171	0	
Bono	2,523	2,523	0	
Savannah	325	330	5	Central Gonja (3), Sawla Tuna Kalba (2)
Bono East	3,200	3,200	0	
Ahafo	1,211	1,211	0	
IT(KIA)	7,657	7,658	1	
Total	168,572	169,580	8	

***International Travelers (IT)*

Source: https://www.ghs.gov.gh/covid19/

The Eastern Region has zero reported active COVID-19 cases as of August 25, 2022.[13]

Figure 10: Percent of population who completed the initial COVID-19 Vaccination Protocol, by country, updated August 21, 2022.[14]



Source: https://ourworldindata.org/coronavirus/country/ghana

H2Go Wawase CHPS Zone Recent Activities

During the quarter April – June 2022, routine CBA activities continued to occur in communities. Supervisory visits to conduct routine monitoring and evaluation with checklists occurred onsite in the community setting. During supervisor visits additional focus is placed on reinforcing training topics covered in the last Refresher Training and providing supportive supervision. Supervisors encourage CBAs to continue providing excellent service in communities. As part of the visit, supervisors use checklists to assess the CBA knowledge; assess the status of equipment, supplies, and medicines; review CBA service rendered during the previous month; and restock medicines and supplies. Additionally, supervisors may shadow CBAs as they are conducting routine monthly home visits to mothers and caregivers. CBAs provide health education on topics such as COVID-19, nutrition, preventing common illnesses in children, and health-promoting household practices. All H2Go Wawase CBAs remain active in their respective communities conducting routine home visits to families, treating common childhood illnesses, and referring patients who display danger signs of complicated illnesses to higher-level health care.

During the past quarter of April - June 2022, Wawase CBAs conducted 514 home visits and treated a total of 214 illnesses in the community setting in children under age 5 years. Malaria was again the most common condition with CBAs treating 138 cases. CBAs treated 34 cases of severe diarrhea and 42 cases of pneumonia/Acute Respiratory Illness (ARI). Additionally, CBAs made six referrals of seriously ill children to health facilities for higher level treatment.

The most recent 2-day refresher training occurred January 27-28, 2022, at the Ensign Global College in Kpong, Ghana. The training was attended by a total of 18 participants. In attendance were Ghana Health Service Personnel trained as H2Go facilitators/managers and supervisors, H2Go Wawase CBAs, and H2Go Ghana Project team members based out of Ensign Global College including Dr. Stephen Manortey, Ghana country H2Go Principal Investigator (PI), and H2Go Central PI Professor Stephen Alder dually based out of the Center for Business, Health, and Prosperity at the University of Utah (USA) and Ensign Global College (Ghana).

The following Refresher Training Report was prepared by Gideon, Kwarteng Acheampong, the Ghana H2Go Project Coordinator.

DAY 1 - THURSDAY, JANUARY 27, 2022

OPENING AND WELCOME ADDRESS

Dr Stephen Manortey opened the training at 8:30 am following an opening prayer. He emphasized on the importance of the works of the CBAs indicating global and national statistics of children under 5-years mortality rates. He also encouraged them to know so much about the project so that they can help households in their communities through treating basic childhood illnesses and reproductive health issues. He also told them the intention is to scale up from a pilot phase to a country-wide level. He also outlined some challenges experienced by past community health work programs which included inadequate working equipment, poor training modules, lack of supportive supervision and poor community engagement which Health 2 Go has addressed.

DOCUMENTATION/RECORD KEEPING

Joyce Adjei facilitated a presentation on record keeping. Under the supervision of facilitators and supervisors, CBAs were taken through record keeping for a pregnant woman, documentation of field

events for neonates, sick children between 2 months – 5 years after which they demonstrated in practical sessions. There was also a presentation on the filling of referral forms for neonates, babies and pregnant women. CBAs recapped how to document various symptoms of sick children including the documentation of symptoms of children with general danger signs; among which are convulsion and the inability to feed. Documentation of Infections such as diarrhea, cough, fever and malaria were all discussed. Documentation of treatment regimen for sick children was also discussed at length. Concurrently, exercises/quizzes occurred to determine the extent of understanding and assimilation by CBAs. Additionally, she took the CBAs through sick child danger signs. The general danger signs in sick children were recapped and discussed. CBAs were retrained on how to identify these danger signs in children. Following the presentation, CBAs were taken through exercises on how to identify danger signs (lethargic/ sleepy or unconsciousness) in children. The CBAs were admonished to always update their requisition sheet and submit their monthly reports in time.

NEONATE AND PREGNANT WOMAN DANGER SIGNS

Joyce Adjei gave a presentation on the danger signs in neonates. CBAs were asked to identify the danger signs in neonates and were reminded of how important it is to identify these signs. After the presentation, CBAs were presented with case studies in video form, and they were to identify the presence of danger signs discussed. The presenter then recapped documentation of neonate danger signs in community registers. They were reminded to keep a copy of the referral sheet for documentation purposes and also to make follow-up visits after referrals. Additionally, a presentation on pregnant woman danger signs was delivered. She outlined the need to carefully identify these danger signs as they may lead to severe conditions if not detected in time. CBAs were then given case studies on how to register and record pregnant woman danger signs. Questions were asked and clarifications were sought by CBAs after the practical exercises.

RDT RESULTS READING AND DRUG EXPIRATION TEST

The team took a 20 minutes' snack break, after which Mrs. Stella Katsriku began the next session with a test on RDT results and drug expiration date reading. RDT kit results were displayed for CBAs to identify whether an RDT result was positive, negative or invalid. Immediately after this was the reading of expiration dates on RDTs and a few selected drugs which were also displayed. CBAs were to identify the expiration dates on the RDT kits and drugs as well to indicate if they were safe for use. In a slide show, the answers to the RDT were projected while the facilitator leading discussions and asking the CBAs to determine the results of these RDTs.

FEVER & MALARIA REVIEW, RDT PRACTICALS & AL DRUG ADMINSITRATION

Mrs. Stella Katsriku delivered a presentation on fever and malaria. In her presentation, she outlined the causes, symptoms, and prevention of fever and malaria. She also enumerated the various danger signs of fever in children. The facilitator sought questions and inputs from Supervisors and CBAs. The steps to conducting an RDT on a child was reviewed which was followed by a demonstration of the process whereby CBAs took turns to conduct RDTs on each other with the guidance of the supervisors guided them on the process. The participants watched a video demonstration of the steps involved in conducting an RDT test after which they engaged in sample exercises. A comprehensive discussion on the administration of Artemether Lumefantrine (AL) for the treatment of malaria was also conducted. Later they asked questions and sought clarification on the recommended use of the drug for children between 2 months and 5 years.

TEPID SPONGING

CBAs were asked to demonstrate the handwashing and tepid sponging process. Mrs. Stella Katsriku made the necessary corrections to the process and demonstrated to the CBAs how tepid sponging and administration of suppositories are carried out. The CBAs then sought clarifications and asked questions on areas they were not clear about.

COUGH & PNEUMONIA

After a 45-minutes lunch break, Joyce Adjei facilitated a session on cough and pneumonia in children below the age of five. She began by outlining the causes and prevention of cough and pneumonia. She proceeded with a comprehensive presentation on pneumonia, stating the causes, symptoms, treatment and prevention. She projected videos of how to portray rapid breathing in children and followed it up with a video exercise on the subject. CBAs were required to identify whether a child had fast breathing or not as part of the exercises. Corresponding exercises were carried out on cough and pneumonia indicators like stridor and chest indrawing. Case study exercises of different children affected by cough or pneumonia were CBAs documented these cases in their registers and prescribed treatment for affected children. CBAs were encouraged to embark on follow-up visits.

NUTRITION QUICK REVIEW

Joyce Adjei took over for the final session of the day and delivered an extensive presentation on nutrition in children. In her presentation, she highlighted the definition of malnutrition, consequences of malnutrition, signs and symptoms of malnutrition in children, symptoms of Kwashiorkor, feeding of sick children after an illness and nutrition practices for caregivers. The facilitator also demonstrated how to determine pedal oedema in children and how the MUAC tape is used to assess child nutritional status. Counselling of caregivers and how to go about it were reiterated as well making referrals. Contributions and questions from CBAs were welcomed and addressed by the facilitator.

REVIEW OF DAY'S ACTIVTIES

Joyce Adjei and Stella Katsriku then led a discussion on a recap of the day's activities. In turns, the CBAs gave a rundown of what they had learnt throughout the session. Their various challenges were addressed. The facilitator reviewed all treatment regimen for malaria, fever, cough and pneumonia and nutritional deficiencies remedies. Announcements were communicated and the participants were informed in the change in itinerary for Day 2, that is the usual clinical session in the health facility would not come off. However, the session would take place in the training auditorium.

RECESSION

The program ended at 5:00pm after the announcements and closing prayer given by one of the participants.

DAY-2-FRIDAY JANUARY 28, 2022

PRACTICAL SESSION

The training for Day 2 began at 8:30 with a role play of how to assess children under 5 years facilitated by Mrs. Stella Katsriku. The areas under observation were malnutrition, pedal oedema, breathing rate, stiff neck, fever, and chest in drawing. The role play was done with two participants at a time. After each set of participants had finished their role play, the rest of the team including the supervisors evaluated their performance by making necessary corrections and contributions. Participants put forth some

challenges they experience on the field and the facilitators adequately responded to all concerns and particularly emphasized the need to refer cases/situations that they were not provided any training on.

DIARRHOEA IN CHILDREN

Dora Oppong took the participants through a presentation on Diarrhea, stating the causes, symptoms, treatment and prevention. Plenary discussions and interactions were used to achieve the goal of this section. CBAs had the opportunity to share some experiences they had in their respective communities on diarrhea and how they handled these situations. Contributions and questions from CBAs were well addressed. In a video exercise, Facilitators required CBAs to identify slow skin pinch and sunken eyes as indicators when checking for dehydration in children. Afterwards, there was a practical demonstration on hand washing, mixing of ORS and administration of zinc tablets.

HOME VISITS

CBAs were then taken through a detailed procedure on how to carry out home visits by Joyce Adjei. In the presentation the CBAs were educated on the following:

- Rationale for home visits
- Number of home visits to be carried out and how it must be done
- Things to avoid during home visits
- Helping the mother stay healthy before birth
- Helping the mother to stay healthy after birth
- Caring for the sick newborn and small baby
- Keeping the baby healthy after birth
- Supporting a mother successfully breastfeed
- Referral of sick child and neonates

CBA COMPETENCY EXAM

An integral part of the refresher training is to verify whether CBAs have well understood all that has been taught. CBAs were expected to take a competency exam to evaluate their extent of knowledge of the Health2Go program and their duties in the community. CBAs were examined on all the training sessions they were taken through including: RDT results reading, drug expiry date reading, breathing rate, chest in drawing determination, case studies and treatment regimen. This session lasted for an hour.

TRAINING EVALUATION

- Teaching on Nutrition in children, COVID-19 education, Artemether Lumefantrine dosage was well delivered.
- CBAs have improved due to regular trainings organized.
- Facilitation was perfect according to the CHPS coordinator
- Examination questions about the treatments CBA administer to children under 5 years should be reduced to about two.

RECESS

A closing prayer was said prior to which announcements were given; Medications and other logistics were restocked for the CBAs, and they were notified of the date for the next monthly supervisory visit. The training came to close at 5:00 pm.

Dr. Stephen Manortey, Ghana Country Principal Investigator for Health 2 Go delivering a presentation and opening remarks at the training

Mrs. Joyce Adjei a facilitator for the program, leading a session on general danger signs

Mrs. Stella Katsriku a facilitator for the program, leading a session on the procedure for referral

CBAs role-play to identify danger signs in children

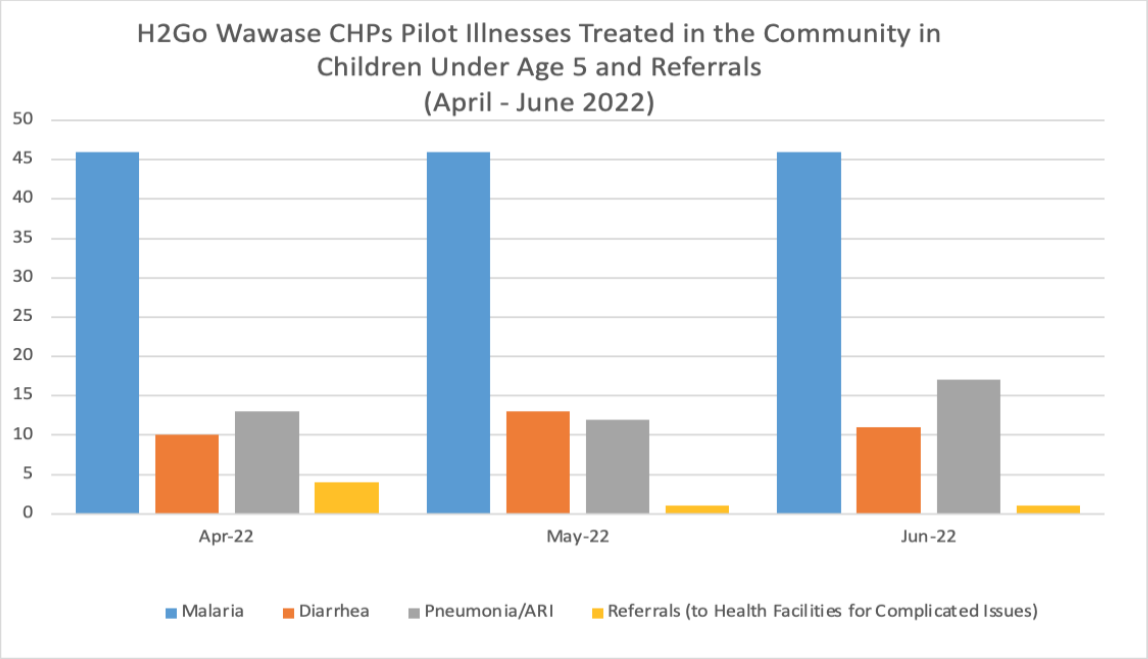
Facilitators observing CBAs as they carry out an exercise on determining Malaria RDT results and expiry dates of drugs

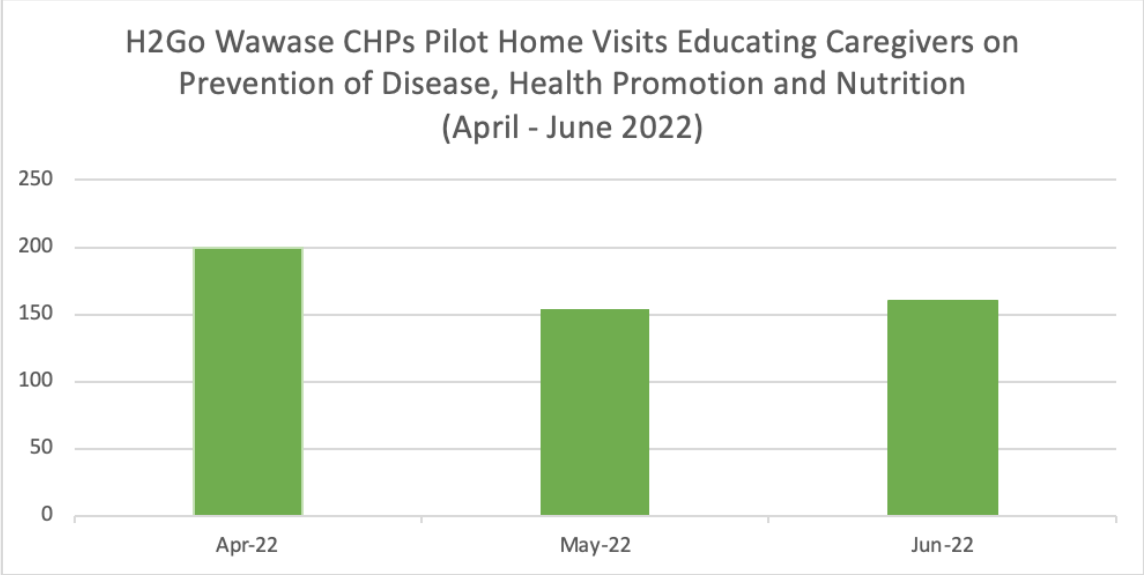
Wawase CHPS Zone Results

From Apr. to Jun. 2022, results are as follows:

Among approximately 200 children under age 5,

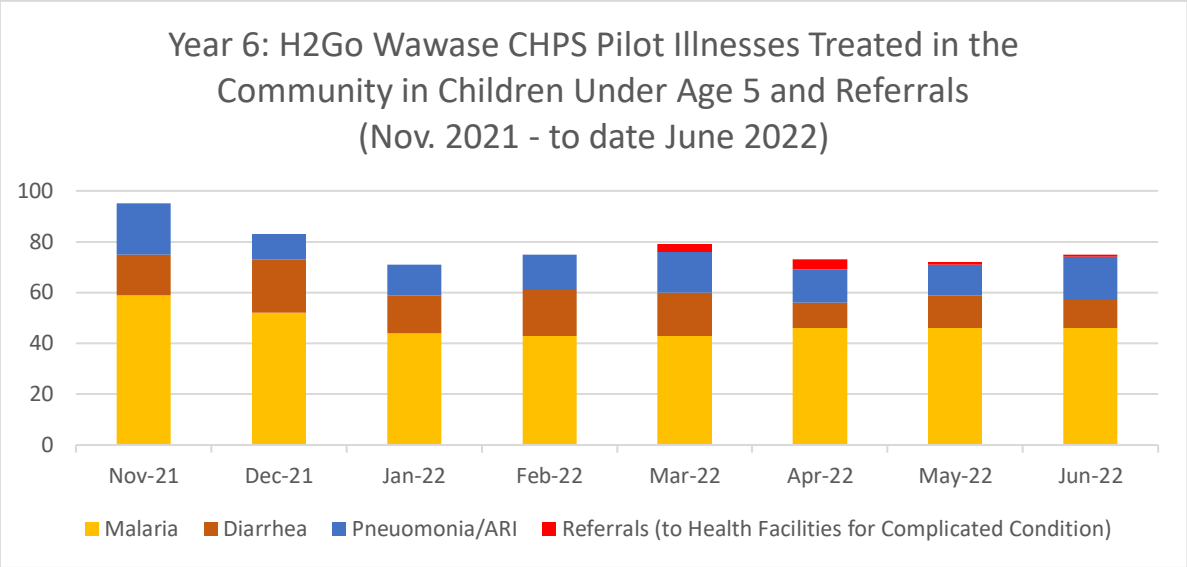
- 214 illnesses treated in the community by H2Go CBAs
  - 138 Malaria; 34 Diarrhea; 42 Pneumonia/Acute Respiratory Illness (ARI)
- 6 referrals were made to hospital for serious illness and life-threatening illness
- 514 Home Visits





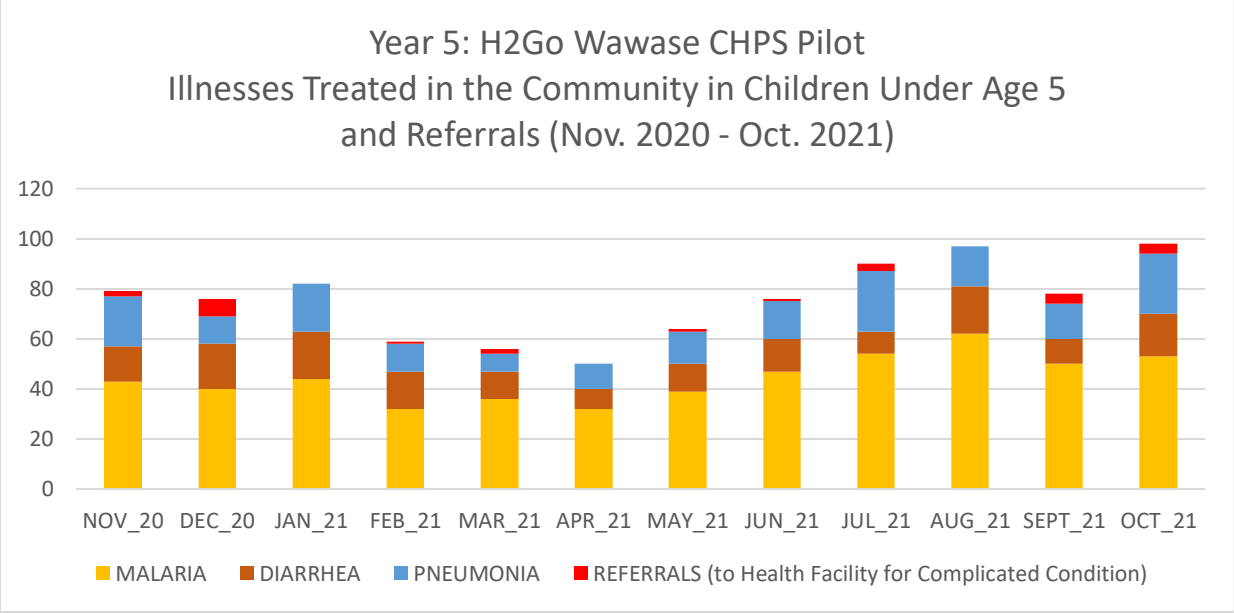
Year 6 (Nov. 2021 – to date Jun. 2022): Among approximately 200 children under age 5,

- 614 Illnesses treated in the community by H2Go Wawase CHPS Zone CBAs
  - 379 malaria; 121 diarrhea; 114 pneumonia/Acute Respiratory Illness (ARI)
- 9 Referrals to health facility for serious and life-threatening illnesses; 1,489 Home Visits



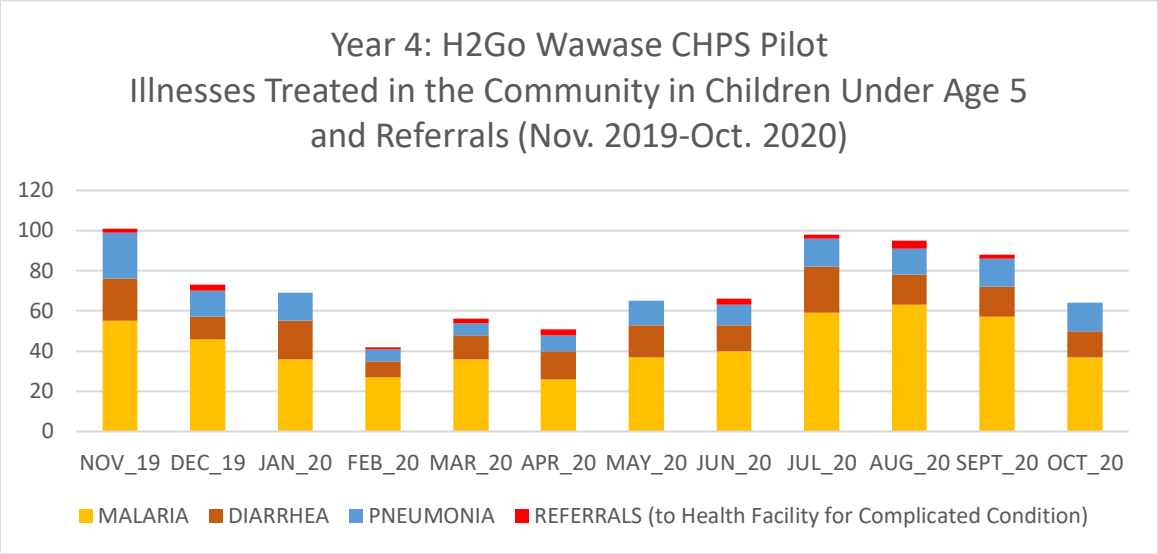
Year 5 (Nov. 2020 - Oct. 2021): Among approximately 200 children under age 5,

- 880 Illnesses treated in the community by H2Go Wawase CHPS Zone CBAs
  - 532 malaria; 164 diarrhea; 184 pneumonia/Acute Respiratory Illness (ARI)
- 25 Referrals to health facility for serious and life-threatening illnesses; 2,414 Home Visits



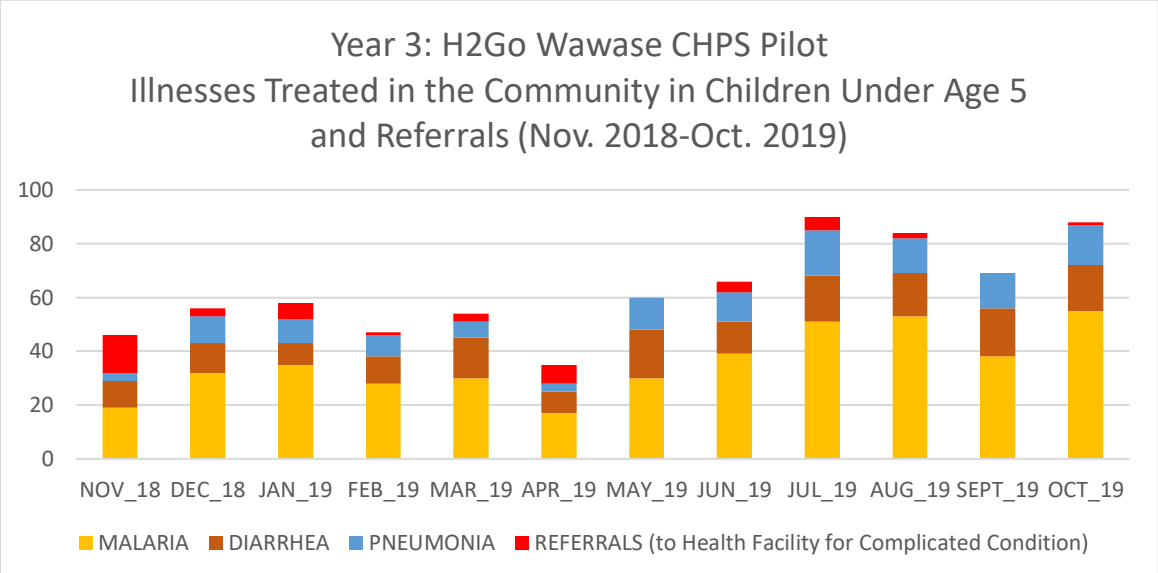
Year 4 (Nov. 2019-Oct. 2020): Among approximately 200 children under age 5,

- 846 Illnesses treated in the community by H2Go Wawase CHPS Zone CBAs
    - 519 malaria; 180 diarrhea; 147 pneumonia/Acute Respiratory Illness (ARI)
- 22 Referrals to health facility for serious and life-threatening illnesses; 2,756 Home Visits



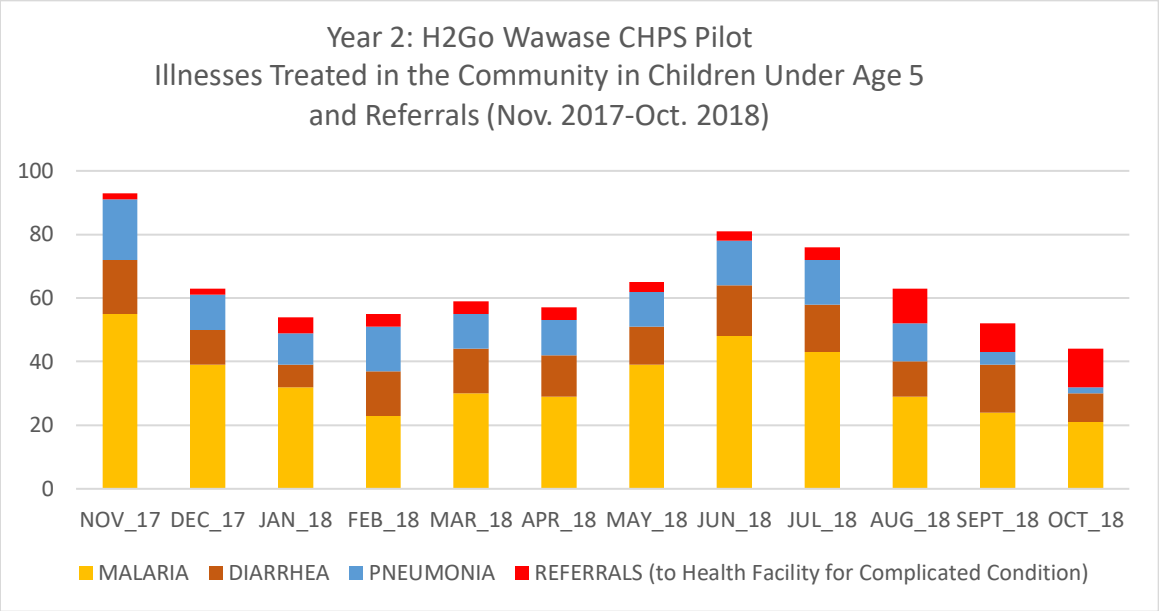
Year 3 (Nov. 2018-Oct. 2019): Among approximately 200 children under age 5:

- 707 Illnesses treated in the community by H2Go Wawase CHPS Zone CBAs
    - 427 malaria; 160 diarrhea; 120 pneumonia/Acute Respiratory Illness (ARI)
- 46 Referrals to health facility for serious and life-threatening illnesses; 2,571 Home Visits



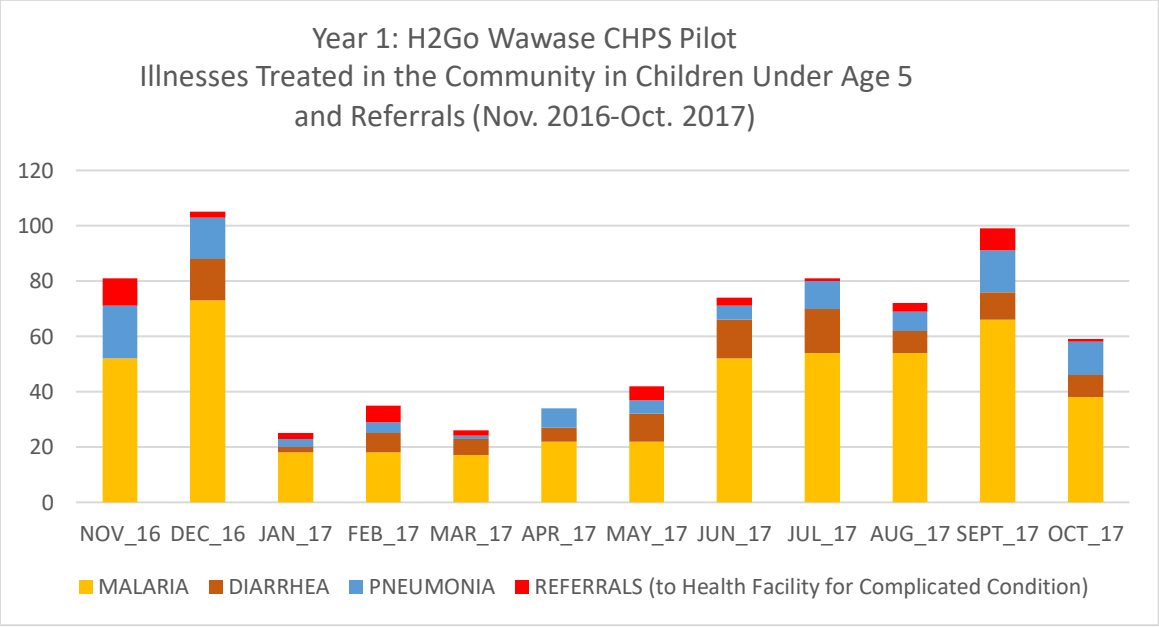
Year 2 (Nov. 2017-Oct. 2018): Among approximately 200 children under age 5,

- 699 Illnesses treated in the community by H2Go Wawase CHPS Zone CBAs
  - 412 malaria; 154 diarrhea; 133 pneumonia/Acute Respiratory Illness (ARI)
- 63 Referrals to health facility for serious and life-threatening illnesses; 3,197 Home Visits



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

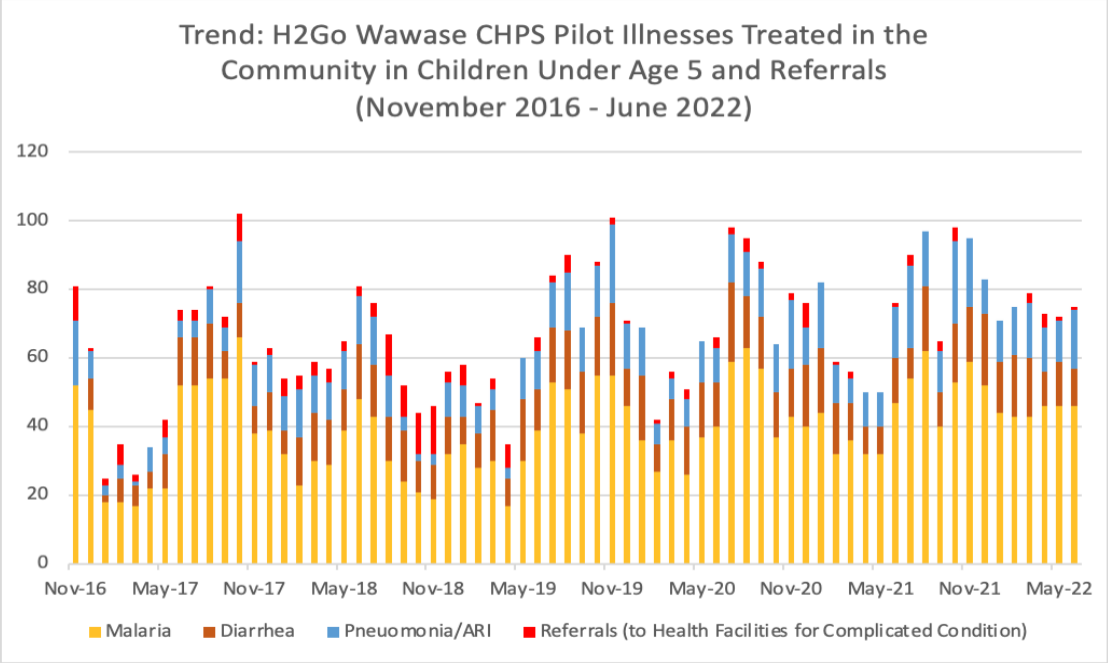
- 690 Conditions treated in the community by H2Go Wawase CHPS Zone CBAs
  - 486 malaria; 101 diarrhea; 103 pneumonia/Acute Respiratory Illness (ARI)
- 43 Referrals to health facility for serious and life-threatening illnesses; 3,524 Home Visits

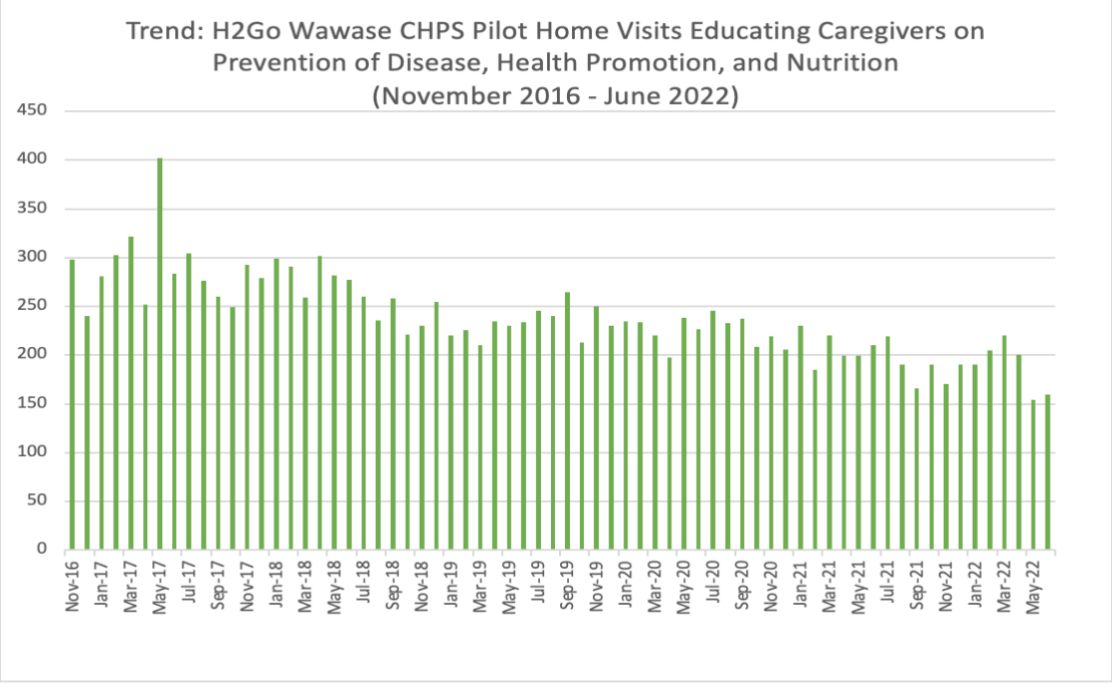


Trends to date (Nov. 2016-Jun. 2022):

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

- 4,356 Illnesses treated in the community by H2Go Wawase CHPS Zone CBAs
    - 2,708 malaria; 870 diarrhea; 778 pneumonia/Acute Respiratory Illness (ARI)
- 205 children referred to collaborating health facilities for serious and life-threatening illnesses
- 16,210 Home Visits





Health 2 Go BCCDP Demonstration Project

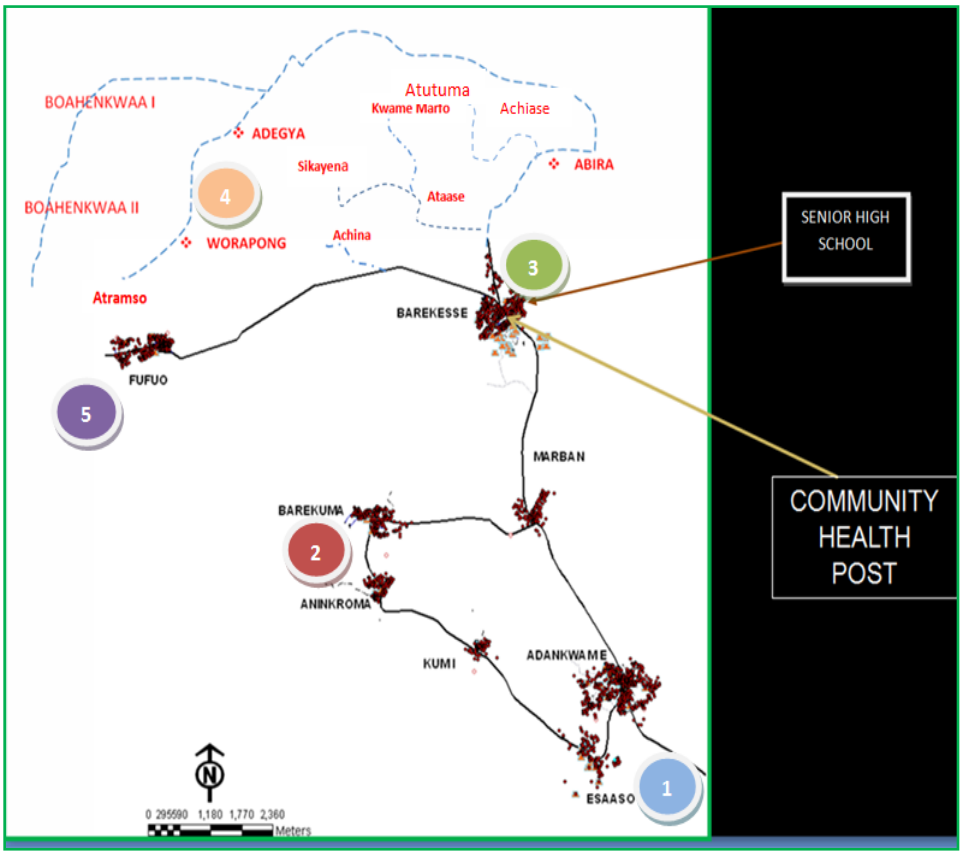
Implementation Overview

The expansion of Health 2 Go into a larger Demonstration project for the BCCDP follows the success of the Kpong Pilot, launched in May 2018. Approximately 20,000 people in 20 rural communities in the Atwima Nwabiagya North District near Kumasi in the Ashanti Region are being served by 30 H2Go CBAs.

Figure 10: BCCDP Communities

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. Fufuo
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 Global College with clinical sessions held at 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 of the internship 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. The three communities where the internship occurred 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 if necessary. Newly trained H2Go GHS personnel serving as 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 in Context of COVID-19

Overview

The first cases of the novel coronavirus COVID-19 were detected in Ghana on March 12, 2020. In response, the President of Ghana ordered a partial shutdown of certain areas of the country as cases increased, including Kumasi and its environs of the Ashanti Region, which includes the Atwima Nwabiagya North District where the H2Go BCCDP Demonstration project currently operates. A national directive included movement restrictions and called for suspension of non-essential activities. At the time H2Go was preparing for the fourth Refresher Training and the restocking of medicines and other supplies for the site. Despite restrictions in the area, H2Go CBAs received training on COVID-19 health education and risk communication from H2Go Managers and Supervisors via telephone. While the strict movement restrictions temporarily suspended routine H2Go CBAs activities from March through September 2020, H2Go CBAs played a crucial role in conveying COVID-19 preventive messages to their residents. As cases in the country and the Ashanti Region decreased, H2Go CBAs resumed routine health service activities in communities on October 1, 2020, which has continued with uninterrupted H2Go CBA service in communities. As of August 25, 2022, Ghana's reported active COVID-19 case count is 41, with the Ashanti Region reporting no active cases. Vaccination progress remains slow, with 24.7% of the country's population completing the initial vaccination protocol against Covid-19.

Ashanti Region and H2Go BCCDP Site Status

The following are main points related to the Ashanti Region and BCCDP (see figures 11 and 12).[13]

- Reported active cases in the Ashanti Region are zero cases as of August 25, 2022
- The Ashanti Region recorded 22,535 cases out of Ghana's total of 169,580 as of August 25, 2022.
- H2Go CBAs routine activities were restricted March – September 2020. However, CBAs played a vital role in COVID-19 health education and risk communication in their communities
- H2Go CBAs service resumed on October 1, 2020, with uninterrupted service
- Only 24.7% of the country's population has completed the initial COVID-19 vaccination protocol as of August 21, 2022[14]

H2Go Response

Below is a summary of H2Go actions in the context of the COVID-19 pandemic:

- Adherence to national guidelines on movement restrictions for the area by initially postponing Refresher Training, Community Durbar, onsite supervision visits and data collection activities from March – September 2020
- Training of CBAs on COVID-19 Health Education and Risk Communication via telephone by H2Go Supervisors
- Continued support of H2Go CBAs, including provision of personal protective equipment
- Collaborative COVID-19 research study aimed at effecting community behaviors/practices to stop community spread (see Appendix 2)
- Resumption of routine CBA activities and service in communities on October 1, 2020, which has remained uninterrupted
- Continued support of CBA health education activities on prevention of COVID-19 to households and community

Figure 11: Ghana Regional Distribution of Active COVID-19 Outbreak Cases as of August 25, 2022.[13]

Table 4: Changes in reported cases of COVID-19 in Ghana from 24 Aug 2022– 25 Aug 2022

Region	24 Aug	25 Aug	Difference	Districts reporting	
Greater Accra	95,748	95,750	2	Routine surveillance 0 and 2 from contact tracing	
				Accra	2
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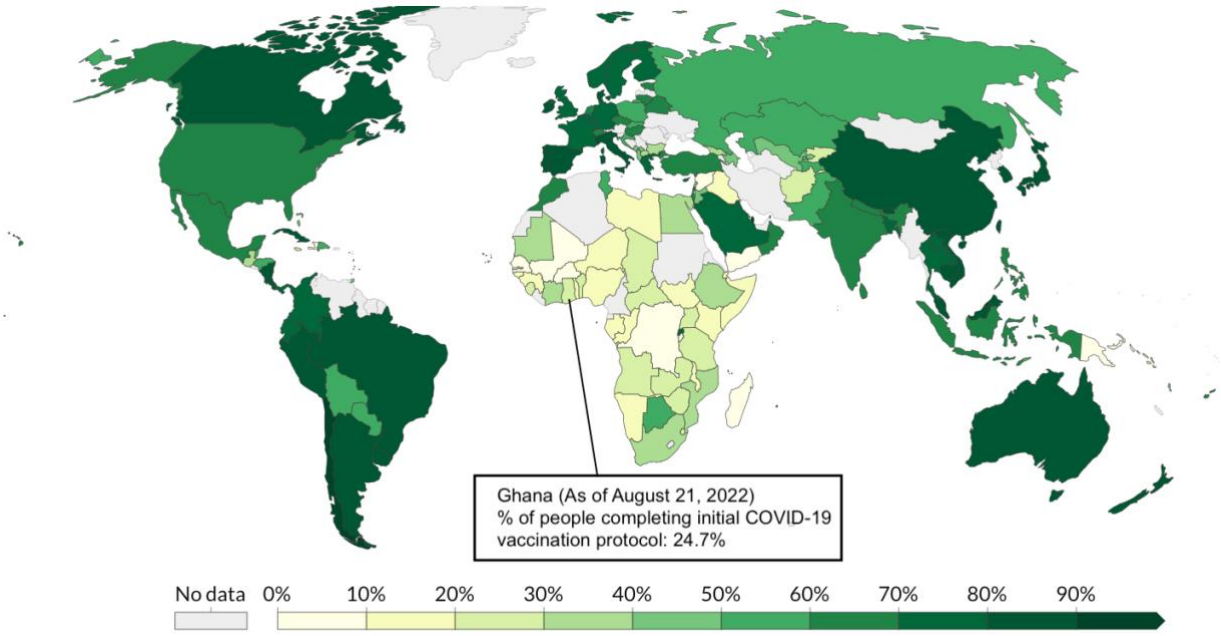
Central	5,914	5,914	0		
Western	8,663	8,663	0		
Upper West	948	948	0		
Volta	6,140	6,140	0		
Ashanti	22,535	22,535	0		
Upper East	1,801	1,801	0		
Northern	1,882	1,882	0		
North East	407	407	0		
Oti	1,021	1,021	0		
Western North	1,171	1,171	0		
Bono	2,523	2,523	0		
Savannah	325	330	5	Central Gonja (3), Sawla Tuna Kalba (2)	
Bono East	3,200	3,200	0		
Ahafo	1,211	1,211	0		
IT(KIA)	7,657	7,658	1		
Total	168,572	169,580	8		

***International Travelers (IT)*

Source: https://www.ghs.gov.gh/covid19/

The Ashanti Region has zero reported active COVID-19 cases as of August 25, 2022.[13]

Figure 12 (repeat of Fig.10): Percent of population who completed the initial COVID-19 Vaccination Protocol, by country, updated August 21, 2022.[14]



Source: https://ourworldindata.org/coronavirus/country/ghana

Recent H2Go Activities

Routine H2Go BCCDP CBA activities and onsite supervisory visits have remain fully operational. CBAs continue to conduct health education home visits to households, educating caregivers on health promotion, prevention of illness, including Covid-19, nutrition, nutrition, and early care seeking for illness.

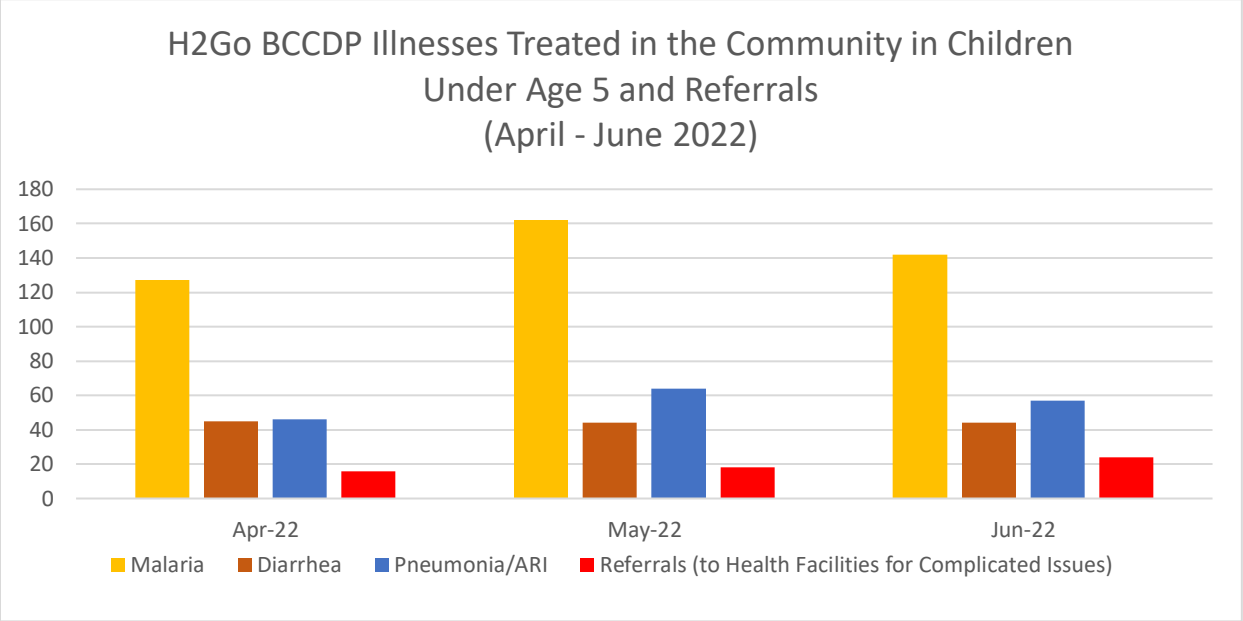
During the past quarter of April – June 2022, BCCDP CBAs conducted 1,653 home visits and treated a total of 731 illnesses in the community setting in children under age 5 years with readily available, inexpensive medicines. Malaria was the most common condition with CBAs treating 431 cases followed by 167 cases of pneumonia/Acute Respiratory Illness (ARI), and 133 cases of severe diarrhea. Additionally, CBAs made 58 referrals of seriously ill children to health facilities for higher level care.

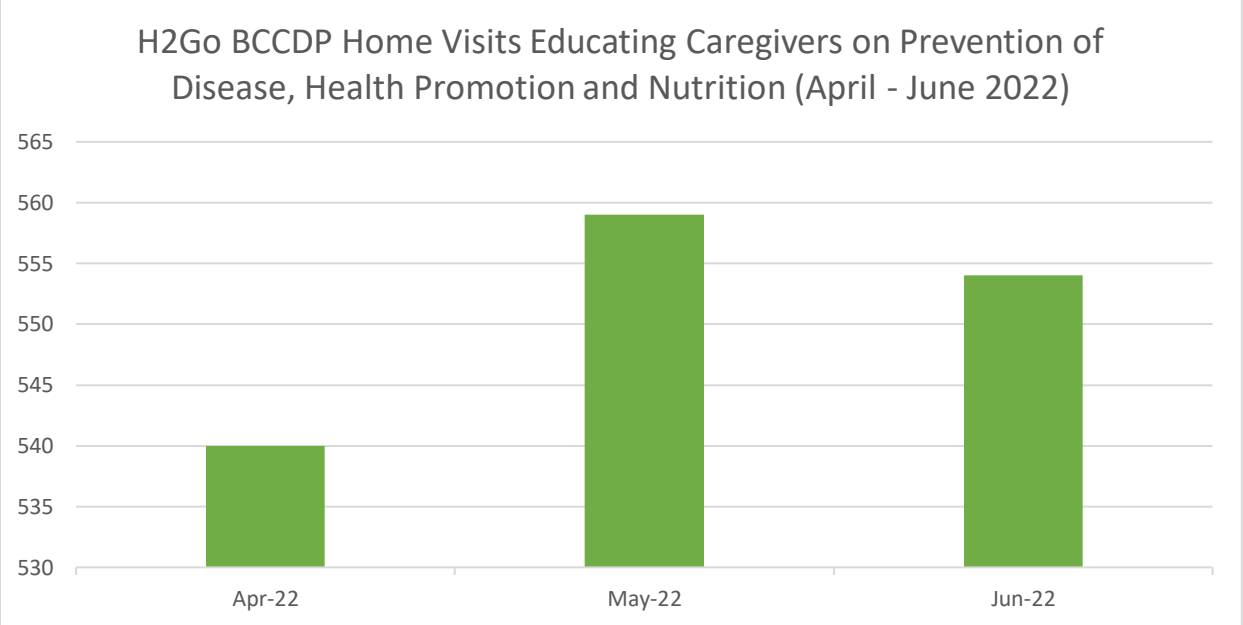
The most recent bi-annual 2-day refresher training occurred November 25-26, 2021, at the Atwima Nwabiagya North District Assemble office in Berekese, Kumasi, which was reported on in the previous quarterly report. The next refresher training is scheduled on August 25-26, 2022.

BCCDP Demonstration Project Results

Among approximately 2,200 children under age 5, (April 2022 – June 2022):

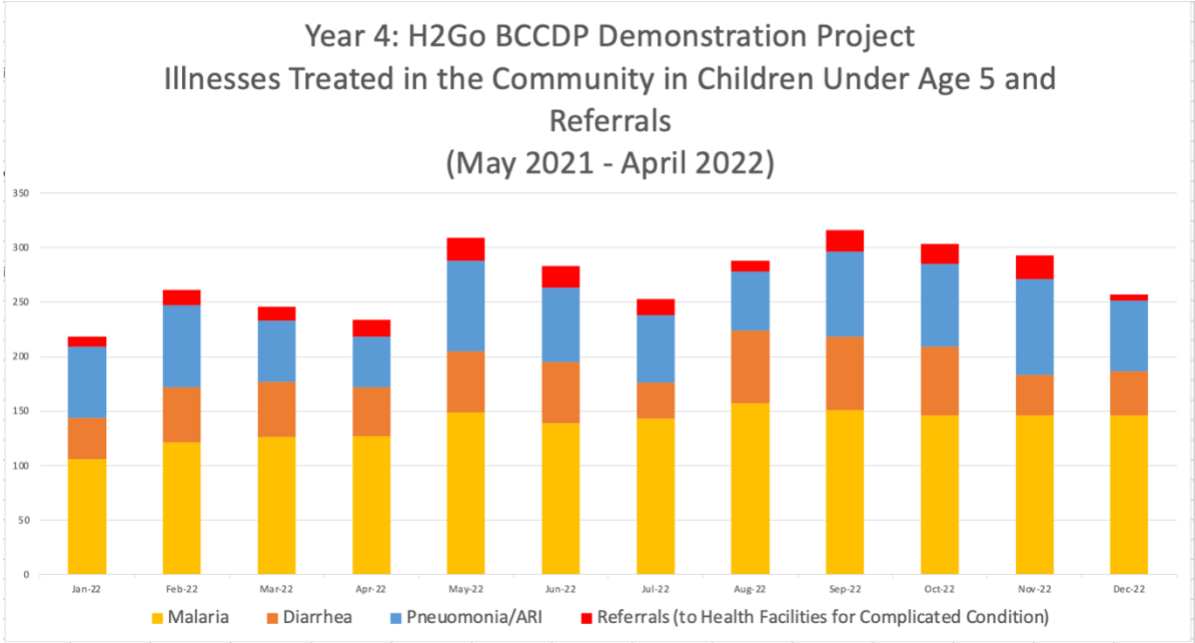
- 731 illnesses were treated in the community by H2Go BCCDP CBAs
    - 431 Malaria; 133 Diarrhea; 167 Pneumonia/Acute Respiratory Illness (ARI)
- 58 Referrals were made to health facilities for serious illness: 1,653 Home Visits





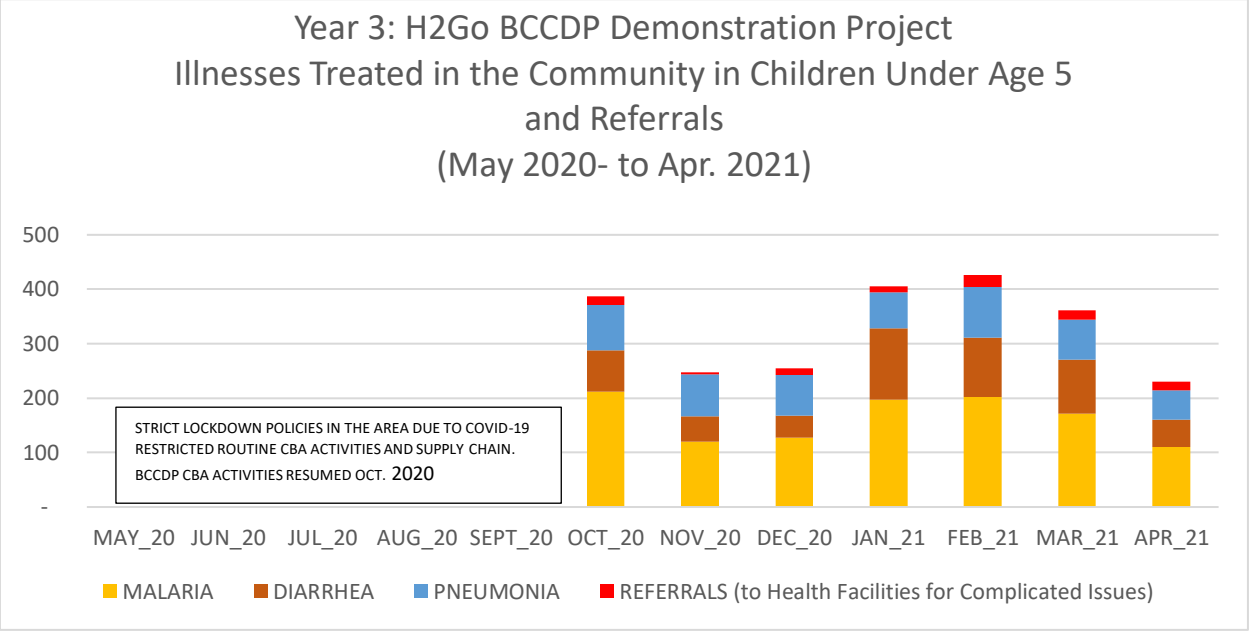
Year 4: Among approx. 2,200 children under age 5, (May 2021 – April 2022):

- 3,077 illnesses were treated in the community by H2Go BCCDP CBAs
    - 1,657 Malaria; 605 Diarrhea; 815 Pneumonia/Acute Respiratory Illness (ARI)
- 184 Referrals were made to health facilities for serious illness; 6,643 Home Visits



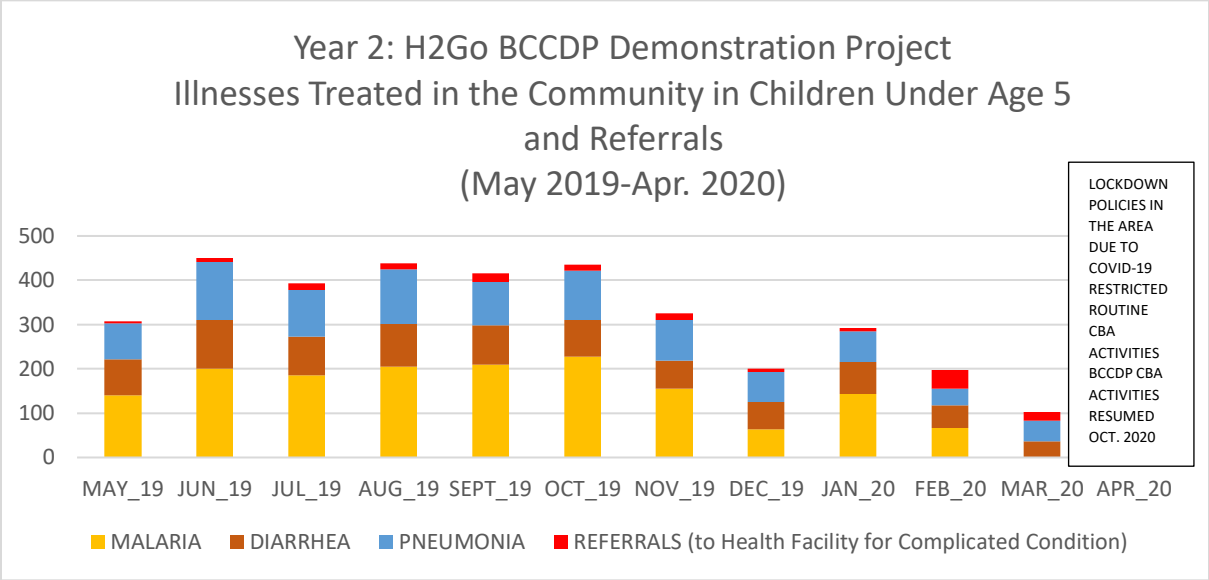
Year 3: Among approx. 2,200 children under age 5, (May 2020 – April 2021):

- 2,214 illnesses were treated in the community by H2Go BCCDP CBAs
    - 1,141 Malaria; 552 Diarrhea; 521 Pneumonia/Acute Respiratory Illness (ARI)
- 99 Referrals were made to health facilities for serious illness; 3887 Home Visits



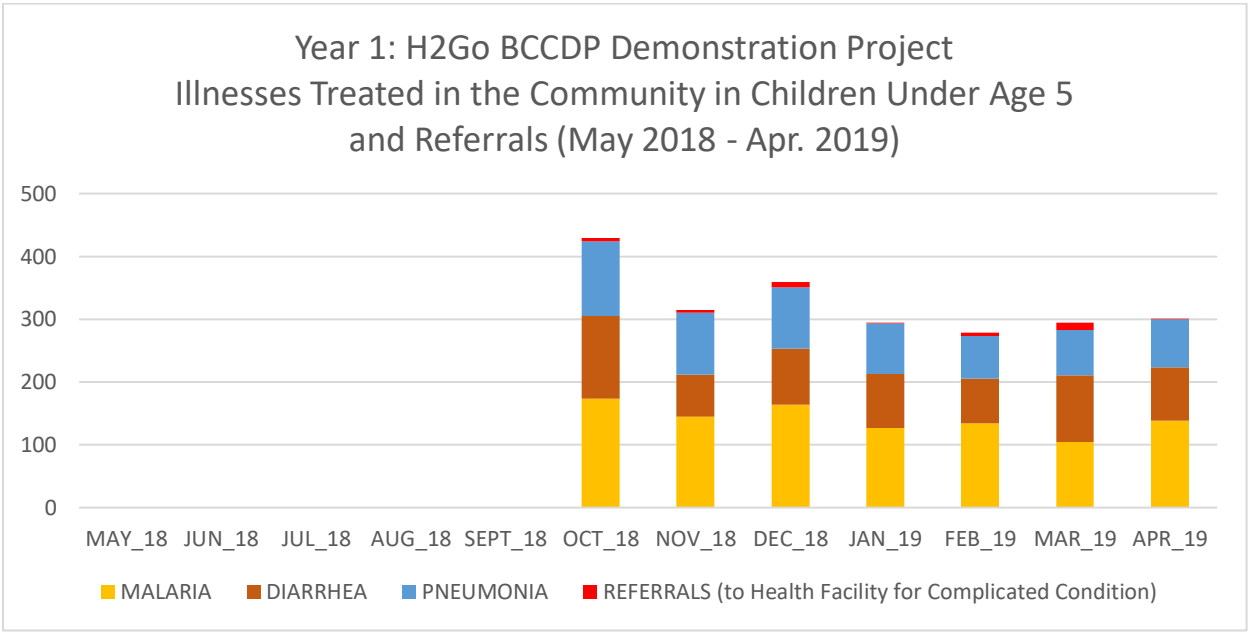
Year 2: Among approx. 2,200 children under age 5, (May 2019 – April 2020):

- 3,393 illnesses were treated in the community by H2Go BCCDP CBAs
    - 1,596 Malaria; 831 Diarrhea; 966 Pneumonia/Acute Respiratory Illness (ARI)
- 166 Referrals were made to health facilities for serious illness; 6,293 Home Visits



Year 1: Among approx. 2,200 children under age 5, (May 2018 – April 2019)*:

- 2,234 illnesses were treated in the community by H2Go BCCDP CBAs
    - 987 Malaria; 635 Diarrhea; 612 Pneumonia/Acute Respiratory Illness (ARI)
- 39 Referrals were made to health facilities for serious illness; 8,037 Home Visits

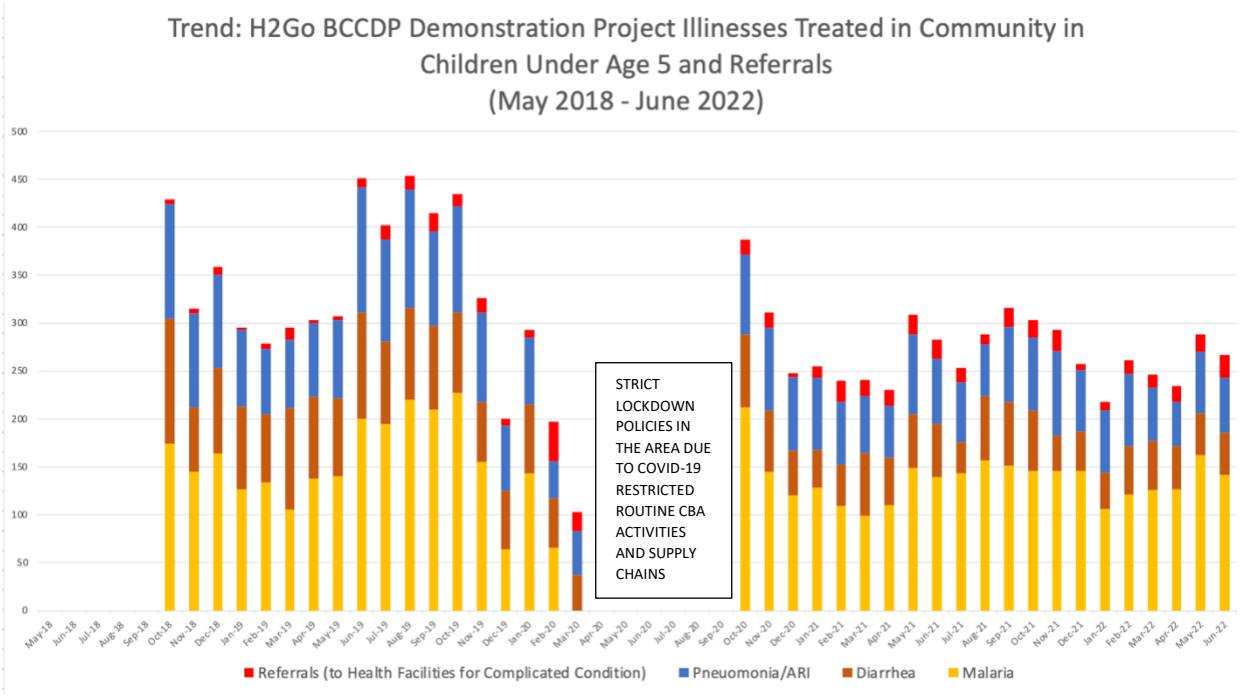


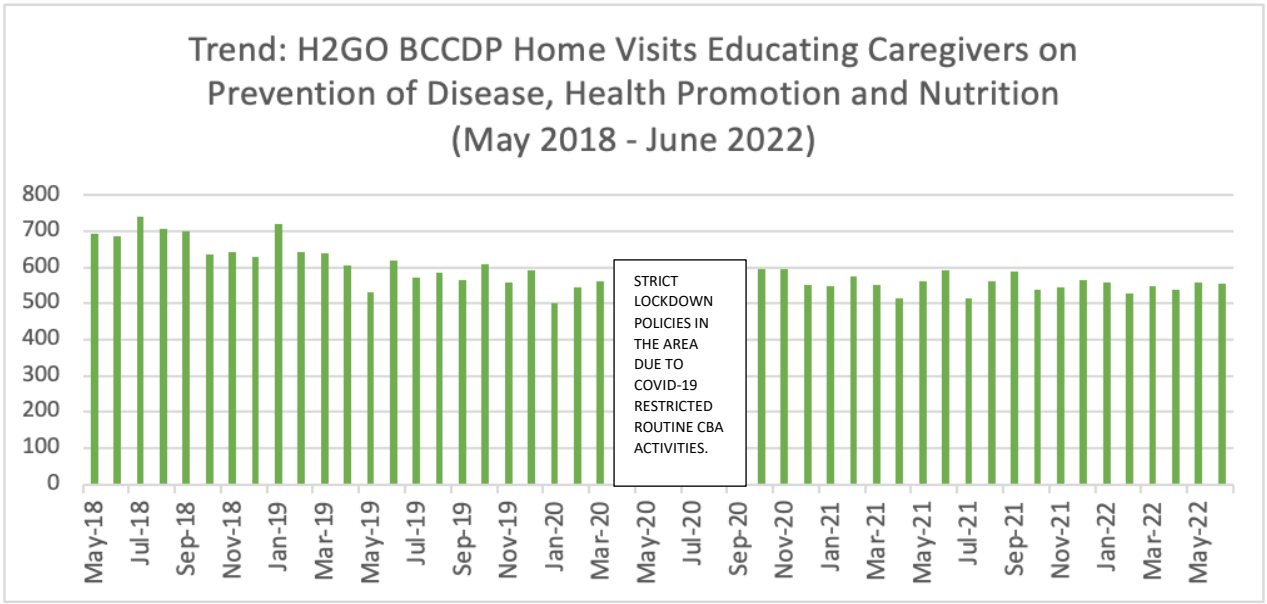
*CBAs did not have medicines until Oct. 2018, but began conducting home visits in May 2018

<u>Trends to date</u> (May 2018-Mar. 2022)*:

Trend-Project total: Among approximately 2,200 children under age 5:

- 11,050 illnesses treated in the community by H2Go BCCDP CBAs
- 5,491 malaria; 2,546 diarrhea; 3,013 pneumonia/Acute Respiratory Illness (ARI)
- 536 referrals for serious and life-threatening illnesses
- 25,977 Home Visits





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

Lessons Learned

Wawase CHPS Zone Pilot

Lessons learned from the Wawase CHPS Zone 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. In addition to improving overall healthcare and encouraging health prevention in households, the successful implementation of H2Go enabled health facilities to address urgent care more effectively.

Key learning includes:

- Determining the right amount of initial and refresher training
- Creation of additional tools and job aids to support CBA activities
- Development of a comprehensive CBA competency exam
- Linkage of supervision to training
- Community internship and supervision processes
- Appropriate equipment and replacement strategy
- Mobilizing CBAs quickly to support COVID-19 health education and risk communication in their respective communities
- Adaptation of trainings and supervision visits to be fully operational in context of pandemic

BCCDP Demonstration Project

Key lessons learned thus far include:

- Refinement of training model for adaptation in the community
- Reinforcing training skills with community internship
- Expansion to a larger site
- Mobilizing CBAs quickly to support COVID-19 health education and risk communication in their respective communities
- Adaptation of trainings and supervision visits to be fully operational in context of pandemic

Next Steps

With the implementation of the Wawase CHPS Zone Pilot and the expansion to the larger BCCDP Demonstration Project, H2Go aims to scale up and create a means for country-wide implementation as well as adaptation and expansion to other countries. As such, H2Go is taking action to achieve sustainability and expansion. Efforts include continued development of a sustainable financial model building on the work of the collaborative team from the University of Oxford, continued work with a consultant, former deputy of Ghana Health Service, to advance expansion efforts and connect with current health system leaders; seeking funding to expand into other countries; and evaluating the impact of the H2Go program in communities, both retrospectively and prospectively.

Progress has been made regarding building awareness of the H2Go program among regional and national Ghana Health Service (GHS) leaders. Dr. Stephen Manortey and the team gave two presentations to regional and national GHS leaders, receiving considerable positive feedback and interest to expand the program.

Currently, the program is being evaluated to assess the impact in communities where H2Go has been implemented compared to similar communities that do not have the program. Of note, H2Go was invited by the Thrasher Research Fund to submit a proposal for potential funding for a community-randomized trial in an expanded area of Ghana to assess the impact of the program on reducing severe illness and mortality in children. The proposal was submitted April 29, 2022, and we expect to hear whether we have advanced to the next round to be considered for funding before July 2022.

Moreover, H2Go is exploring ways the program can be adapted to 1) play a larger role in supporting country efforts within the community context for the current global pandemic and future emerging diseases; and 2) expand the scope of the program to extend health services coverage to a broader population. Next steps include:

- Prepare for expansion to a larger area of District level in Volta, Ashanti, and Eastern Regions
- Expand Countrywide in Ghana
- Seek additional support
- Prepare for implementation and expansion to additional countries
- Evaluate the impact of the H2Go program both retrospectively and prospectively
- Field test the H2Go app in communities
- Adaptation of H2Go program to support COVID-19 pandemic prevention efforts as well as other future infectious diseases that may emerge
- Assess the feasibility of broadening H2Go program to cover other conditions and age groups

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

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)
- Established and worked with a planning group
- Initiated Health 2 Go Program in Ghana with partnership of University of Utah, Ensign Global College, CastaPebble, 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 Wawase CHPS Zone Managers and Facilitators held at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (July 4-8)
- Press event at Ensign Global College 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 Global College, St. Martin's, and Atua Hospitals (July 25-27)

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

2017

January – June

- First Kpong Refresher Training (1-day) held at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (January)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss program (March)
- H2Go Wawase CHPS Zone Refresher Training (2-days) at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (April)
- Completed GIS Mapping, Census, and Health Behavior Survey in communities (June)

July – December

- H2Go Wawase CHPS Zone Refresher Training (2-days) at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (July)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go Wawase CHPS Zone program (September)

2018

January – June

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

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

July – December

- H2Go Wawase CHPS Zone Refresher Training (2-days) at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (August)
- 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 (September)
- 1-day H2Go BCCDP Refresher Training and distribution of 1-month medicine supply for Fufuo, Barekuma, and Maban Zones at Berekese (September 27)
- 1-day H2Go BCCDP Refresher Training and distribution of 1-month medicine supply for Abira and Warpong Zones (October 2)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go Kpong program at Abobeng and Wawase (October 9)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go Kpong program held at Abobeng and Wawase (December 11)
- Cast-a-Pebble agreed to fund H2Go BCCDP CBA medicines for one year (December)
- Cast-a-Pebble indicated they would fund H2Go Wawase CHPS Zone Pilot for an additional year

2019

January –June

- H2Go BCCDP Refresher Training held SDA Nursing Training School and St. Patrick's Hospital in Barekese, Kumasi (January 17-18)
- Wawase CHPS Zone Refresher Training (2-days) at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (March 7-8)
- Site visit to BCCDP conducted (May 21)
- Assessment of H2Go Wawase CHPS Zone Pilot CBA equipment (June 20)

- H2Go BCCDP Refresher Training held at SDA Nursing Training School and St. Patrick's Hospital in Barekese, Kumasi (June 27-28)

July – December

- Assessment of H2Go BCCDP Demonstration Project CBA equipment (July 17)
- Engagement of communities through multi-community durbars (Town Hall Meeting) to discuss H2Go BCCDP program at Achina (October 23)
- H2Go BCCDP Refresher Training held SDA Nursing Training School and St. Patrick's Hospital in Barekese, Kumasi (October 24-25)
- H2Go Wawase CHPS Zone Pilot Refresher Training (2-days) at Ensign Global College with clinical sessions at St. Martin's and Atua Hospitals (November 14-15)

2020

January – June

- Pre-scheduled H2Go Refresher Trainings for Wawase CHPS Zone Pilot and BCCDP Demonstration Project postponed due to COVID-19 pandemic and Ghana national quarantine restrictions
- Training of H2Go BCCDP Demonstration Project CBAs on COVID-19 health education and risk communication via telephone (March & April 2020)
- Training of H2Go Wawase CHPS Zone Pilot CBAs on COVID-19 health education and risk communication via onsite supervisory visit (March & April 2020)

July – December

- H2Go BCCDP Refresher Training held at SDA Nursing Training School and St. Patrick's Hospital in Barekese, Kumasi (September 24-25)
- Wawase CHPS Zone Pilot Refresher Training (1-day) at Wawase (August 17)
- H2Go BCCDP routine activities and service in communities resumed (October 1, 2020)
- Initiated a collaborative team with the University of Oxford and began working with Prof. Stephen Alder on a social franchise model and app ideation (December 2020)

2021

January – June

- Health 2 Go is based at University of Utah (UU) Center for Business, Health, and Prosperity in the David Eccles School of Business and the Institute for Health and Development at Ensign Global College, Ghana (January)
- Prof. Alder began collaboration with University of Oxford group to develop a social franchise model to ensure sustainability of Health 2 Go (January)
- Health 2 Go Uganda expansion monthly discussions began with Interethnic Health Alliance (IHA) using social franchise model (January)
- H2Go BCCDP Refresher Training held at Atwima Nwabiagya North District Assembly in Barekese, Kumasi and Barekese Hospital in Barekese, Kumasi (March 25-26)

- H2Go Wawase CHPS Zone Pilot Refresher Training (2-days) at Ensign Global College with clinical sessions at selected health facilities in the Lower Manya Krobo District (April 29-30)
- Health 2 Go summer intern projects initiated for the social franchise model, app development, and Helping Babies Breathe (May)
- Began H2Go app development collaboration with the UU Therapeutic Games and Apps Lab (GApLab) (June)

July – December

- Prof. Alder and collaborators presented the H2Go social franchise model at the University of Oxford Saïd Business School
- Helping Babies Breathe Training of Trainers launched at Ensign Global College (November 15-16)
- H2Go BCCDP Refresher Training held at Atwima Nwabiagya North District Assembly and Barekese Health Center in Barekese, Kumasi (November 25-26)
- Completed initial development of H2Go app (December)

2022

January – June

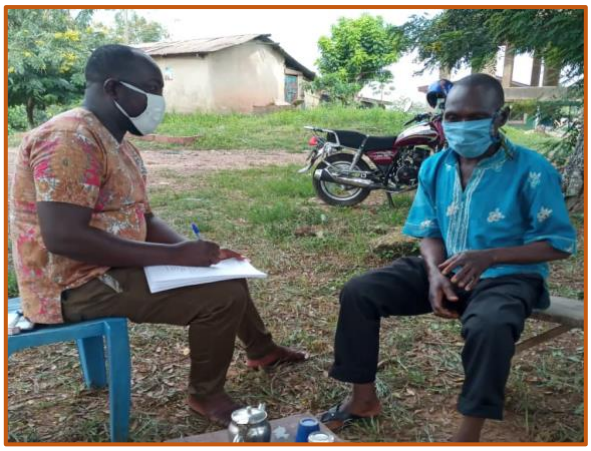
- Concept Paper for randomized community trial submitted (January 18)
- H2Go Wawase CHPS Zone Pilot Refresher Training (2-days) at Ensign Global College (January 27-28)
- Thrasher Research Foundation invitation to submit a full proposal (February 18)
- H2Go presentation to GHS Eastern Region leadership (March 17)
- H2Go presentation to GHs national leadership (March 30)
- H2Go presentation to Ensign Global College's Board of Governors meeting (June 13)

Appendix 2: Collaborative COVID-19 Study

The following overview of the collaborative COVID-19 study, and Progress Report was submitted by Dr. Stephen Manortey, Ghana Country H2Go Principal Investigator (PI):

The Ensign Global College (formerly Ensign College of Public Health) with its collaborative partners Engage Now Africa (ENA) and the Health2Go Project have launched out two-phased projects (Digital and Community Initiatives) in support to the national effort to mitigate the community spread of COVID-19 within Ghana. The primary aim of the Community Initiative is to adopt a research-driven approach to assess residents' current level of preparedness in practicing the laid-out protocols of preventing the disease using tested health behavioral change model. The findings from the baseline study will then guide the chosen health intervention strategy that will guide residents in the communities to appropriately follow the prescribe measure to curb the fast spread of the disease. The collaboration is relying strongly on the experience and expertise of the institutions on their past or ongoing community-based health intervention activities across the country.

The project has completed a baseline survey involving 770 adult residents in three administrative regions (Eastern, Volta and Ashanti Regions) in selected rural and peri-urban communities across the country. The study reported a very high response rate $(98.9\ \%)$, an indication of the willingness of all to understand the disease condition and what can be done to stop the spread.



It was further revealed from the baseline data that the majority of the respondents hinted they are taking some individual actions to prevent the community spread of the disease. However, when asked very specific questions regarding adherence to the prescribed protocols and identification of at least three (3) symptoms of the disease most of them (above the average age 37.4 yrs.) could not provide correct answers. Those who indicated not practicing protocols such as wearing of face masks and using of hand sanitizers attributed their inabilities to lack of funds to buy. It was also admitted that the directive not to shake hands and frequent washing of hands is new to their cultures and therefore very difficult to deviate from what is known to be normal.

These findings will, therefore, call for an intervention strategy that will not only support the vulnerable with PPEs but an opportunity to offer very informative education on the practices that will promote behavioral change on all prescribed protocols.

All activities have been covered on selected social media handles, including the use of the traditional media platforms. The Media Committee of the team is making all efforts to strategically project the teams 'work and also use the opportunity to reach out with the education to a much larger audience.

https://newsghana.com.gh/ecoph-engage-now-africa-and-h2go-push-for-covid-19-behavioural-change/

https://twitter.com/ensigncollege?lang=en

https://www.myjoyonline.com/news/regional/

Appendix 3: Budget

Wawase CHPS Zone Pilot

Health 2 Go Wawase Pilot Site

	Budget 7/1/15-6/30/22	Actual Expenditures 7/1/15 through 6/30/22	Amount remaining on 6/30/22
Costs			
Medications	$18,930.02	$6,641.81	$12,288.21
Program Equipment and Supplies	$48,572.56	$32,682.89	$15,889.67
Training (Initial Basic and Refresher)	$80,651.44	$43,638.08	$37,013.36
Supervision	$21,624.52	$10,786.74	$10,837.78
CBA Stipends	$20,238.00	$9,823.96	$10,414.04
Community Engagement	$5,593.28	$2,530.93	$3,062.35
Development of App	$31,955.00	$31,955.00	$ -
Franchise Model Development	$30,360.00	$59.99	$30,300.01
Site Visits by Central H2Go Team	$25,510.00	$21,940.02	$3,569.98
Ghana H2Go Team Support	$99,272.92	$94,069.97	$5,202.95
Central H20Go Team Support	$133,602.08	$172,417.96	($38,815.88)
Monitoring and Evaluation	$43,690.18	$2,030.89	$41,659.29
Total	$560,000.00	$428,578.25	$131,421.75

BCCDP Demonstration Project*

Health 2 Go BCCDP Demonstration Site

	Budget 7/1/15-12/31/22	Actual Expenditures 7/1/15 through 6/30/22	Amount remaining on 6/30/22
Costs			
Medications	$32,000.00	$32,000.00	$0
Program Equipment and Supplies	$37,923.80	$46,927.37	($9,003.57)
Initial Training	$42,984.00	$36,250.81	$6,733.19
Refresher Training	$98,980.00	$58,973.89	$40,006.11
Supervision	$5,076.92	$5,529.61	($452.69)
CBA Stipends	$18,461.54	$21,093.92	($2,632.38)
Community Engagement	$2,779.49	$3,111.39	($331.90)
Site Visits by Central H2Go Team	$26,844.25	$6,879.47	$19,964.78
Ghana H2Go Team Support	$16,250.00	$37,251.86	($21,001.86)
Central H2Go Team Support	$74,700.00	$107,981.68	($33,281.68)
Total	$362,000.00	$362,000.00	$0

*Cast a Pebble Foundation directly purchased and donated bicycles and accessories through Rugged Cycles to Health 2 Go amounting to approximate retail value of $40,000, $30,000 of which is reflected in the BCCDP Demonstration Project *Program Equipment and Supplies* Budget.

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