VILLAGE REACH®

Health Center by Phone:

Health Care in Every Home

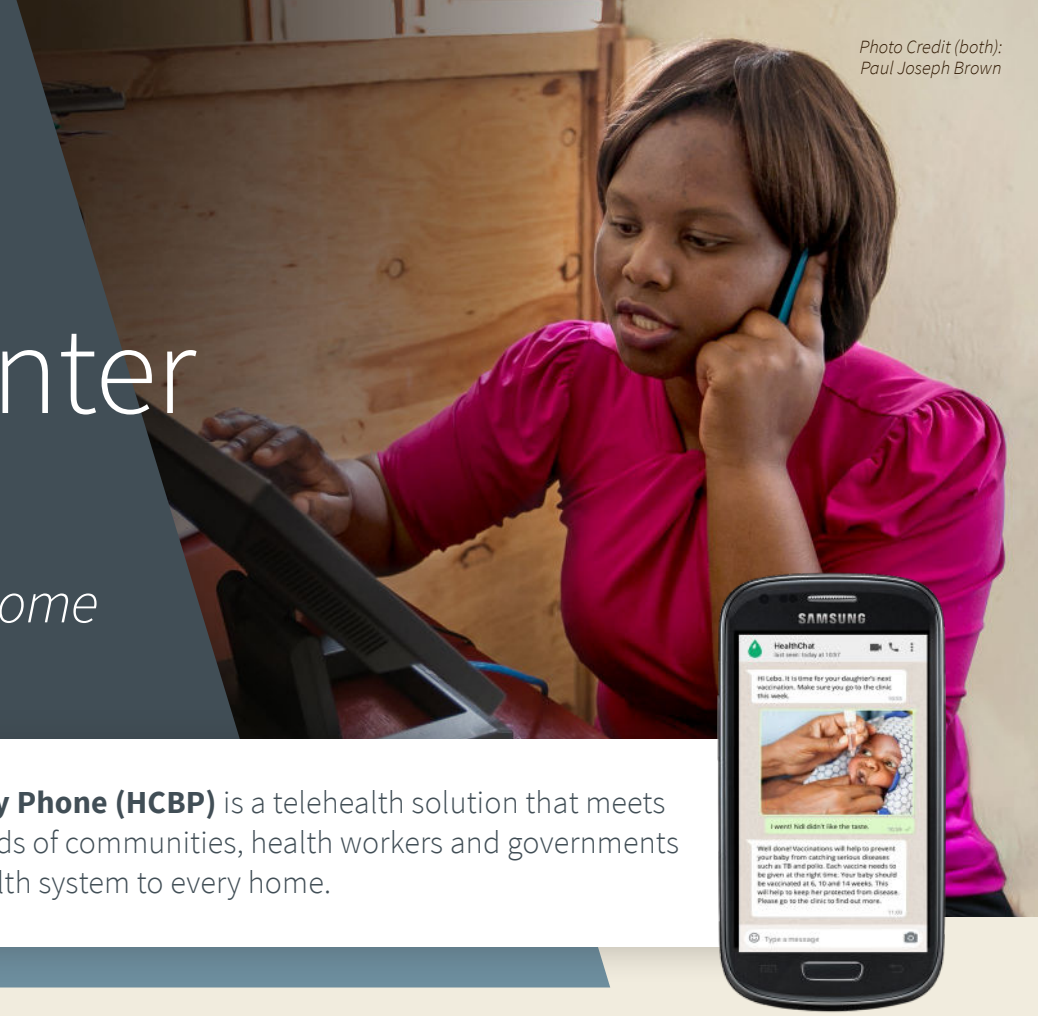


Photo Credit (both): Paul Joseph Brown

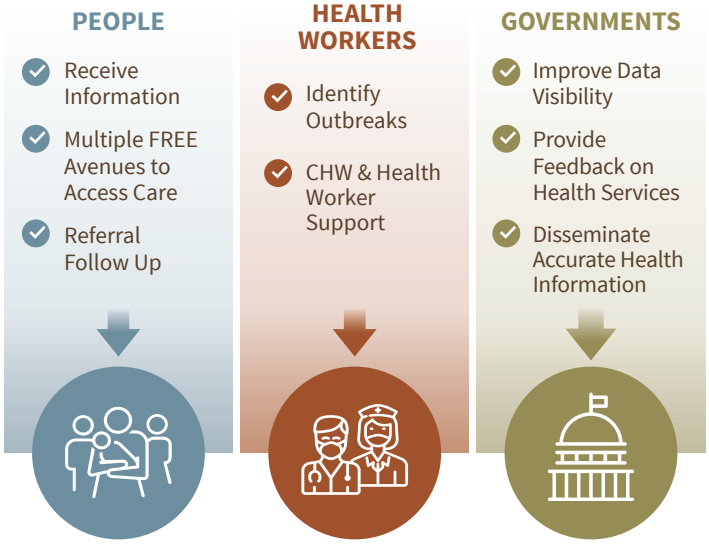
Health Center by Phone (HCBP) is a telehealth solution that meets the changing needs of communities, health workers and governments to extend the health system to every home.

VillageReach works in Africa to transform health care delivery to reach everyone. However, reaching everyone, particularly in remote, hard-to-reach communities remains a challenge. In sub-Saharan Africa, one-sixth of the population lives at least two hours from a public hospital, and one in eight people live at least one hour from a rural health facility.[1] Compounding this problem are health workforce shortages[2] that make it difficult for individuals to get care where and when they need it. Digital tools offer solutions that can connect millions of people to timely health information and services — especially in this region where cell phone and smartphone penetration are expected to be 50 percent and 28 percent respectively by 2025.[3]

Improving Health Outcomes

Health Center by Phone (HCBP) is a solution first co-developed with the Malawi Ministry of Health to help communities make informed health decisions with consistent access to health information. Since its first implementation in Malawi,[4] HCBP has evolved into a **scalable, sustainable** telehealth solution that that engages stakeholders through voice, mobile, Unstructured Supplementary Service Data (USSD) and AI technology to improve health outcomes for all. It provides an integrated approach that makes Universal Health Coverage possible for a wide range of audiences.

Health Center by Phone benefits can be realized by various stakeholders within the health system.



1 Planning universal accessibility to public health care in sub-Saharan Africa. Giacomo Falchetta, Ahmed T. Hammad, Soheil Shayegh. *Proceedings of the National Academy of Sciences.* Dec 2020, 117 (50) 31760-31769; DOI: 10.1073/pnas.2009172117

2 https://iris.paho.org/bitstream/handle/10665.2/52590/v44e1022020.pdf

3 https://www.gsma.com/mobileeconomy/sub-saharan-africa/

4 https://www.villagereach.org/wp-content/uploads/2020/02/VR_CCPFImpactEval_FINAL.-2_24_20-1.pdf

HCBP Features

- ✓ Voice & messaging services: Interactive Voice Recordings (IVR) and/or Short Message Service (SMS) or USSD
- ✓ Self-assessment symptom screener
- ✓ Remote training for health workers and Community Health Workers (CHW)
- ✓ Client-provider two-way messaging with AI Chatbot via WhatsApp
- ✓ Emergency medical services
- ✓ Data visuals & analytics to track health trends, disease prevalence and outbreaks
- ✓ Telemedicine services*

**feature under development*

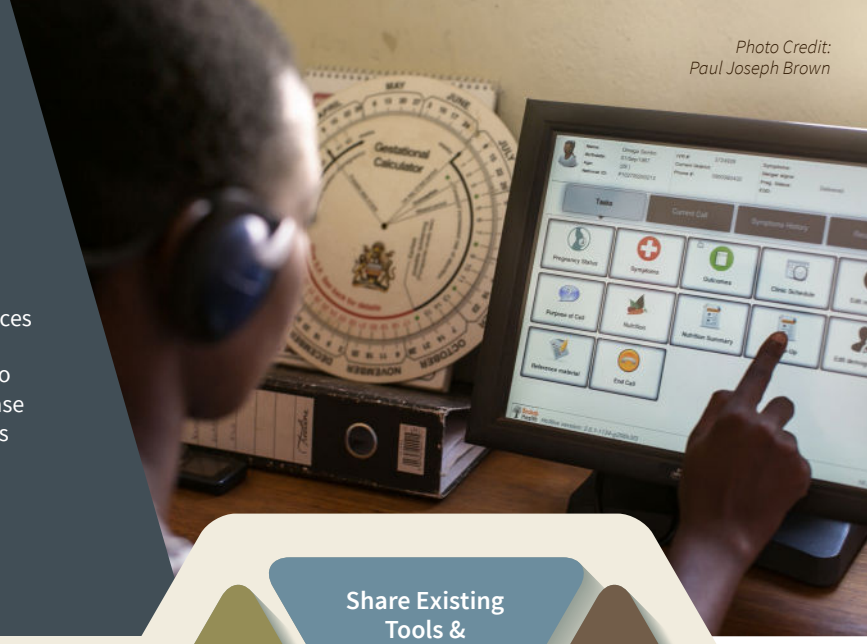
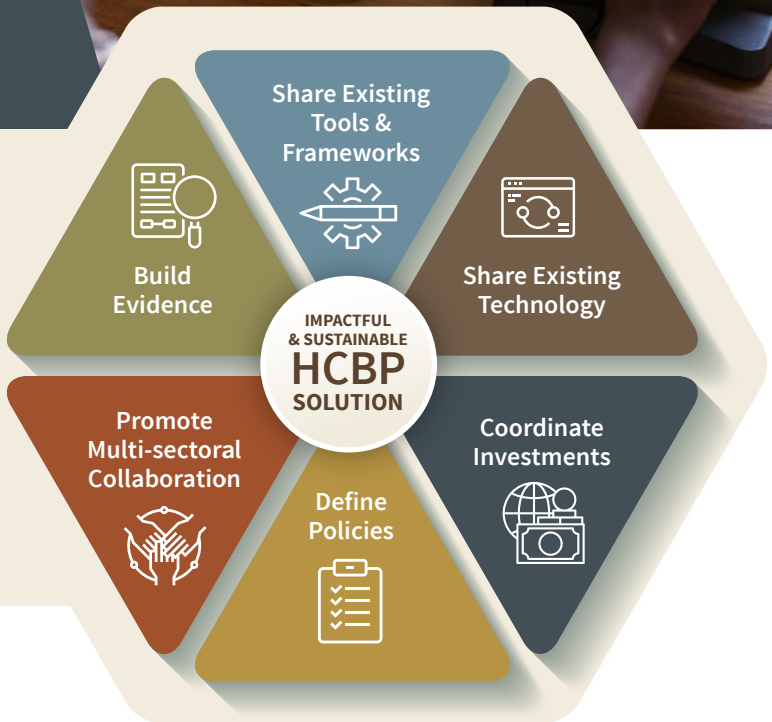


Photo Credit: Paul Joseph Brown

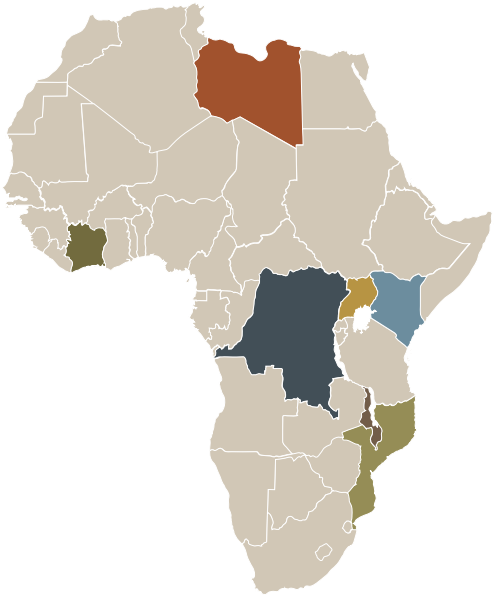
Implementation Approach

VillageReach sees the potential for HCBP to transform the way primary health care services are delivered in every country in Africa. Through our work we have identified **six elements that lead to an impactful and sustainable HCBP implementation.** Our approach is to work with government, the private sector and other partners to offer a range of technical services related to each element and tailored to country preferences.



VillageReach has worked with seven African governments on HCBP solutions

1. Côte d'Ivoire
2. The Democratic Republic of Congo
3. Kenya
4. Libya
5. Malawi
6. Mozambique
7. Uganda



Community of Practice

In addition to offering technical services, VillageReach is establishing a Community of Practice (CoP) for countries engaged in, or interested in, HCBP implementations. This CoP will help countries share lessons learned and best practices for sustainable impact at scale.

Interested in joining a HCBP CoP?
Contact Edwin Mulwa, Director, Digital Solutions:
edwin.mulwa@villagereach.org

Learn more about how the HCBP solution could be implemented in your country.
Contact Upile Kachila, Senior Manager, Digital Solutions: **upile.kachila@villagereach.org**

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VILLAGEREACH®

Impact Evaluation of Chipatala cha pa Foni (CCPF),
Malawi's Health and Nutrition Hotline

Introduction

The Malawi Ministry of Health and Population (MoHP) and VillageReach developed Chipatala cha pa Foni (CCPF) – "Health Center by Phone" – as a community-based hotline in the Balaka district of Malawi. The hotline initially focused on maternal and child health needs and has expanded to include all standard health and nutrition topics, including sexual and reproductive health (SRH). CCPF's overarching goal is to improve health outcomes by increasing access to free, timely and quality health information. CCPF also links patients to health facility services, thus extending the reach of the health system to under-served communities. CCPF is now available nationwide and operated by the Malawi MoHP.

Since its launch in one district in 2011, the scope and scale of CCPF steadily expanded. By early 2017, CCPF was advertised in nine districts (Balaka, Ntcheu, Mchinji, Nkhotakota, Mulanje, Machinga, Dedza, Salima, and Zomba) and it had become a general health hotline, answering questions on all health topics, including HIV, Tuberculosis (TB) and everyday concerns such as headaches, fever and asthma. In August 2017, the hotline added a module for adolescents and youth that aimed to answer in-depth questions around SRH, HIV and STI prevention, puberty/menstruation and other confidential topics. By August 2018, when this evaluation was initiated, the hotline was answering around 3,000 calls per month.

This evaluation demonstrates CCPF's impact on key health indicators in Malawi. It highlights several categories helping stakeholders assess overall program impact to date. The evaluation tested the following indicators:

1. KNOWLEDGE & BEHAVIOR CHANGE
To what extent did the CCPF hotline complement other sources of health information and advice? Is there evidence that the hotline led to more informed health consumers, in terms of their ability to make good decisions for *prevention and/or treatment of disease* through improved *home-based practices and health-seeking behavior*?

2. VALUE ADDED & USER SATISFACTION
Did the hotline meet the needs of CCPF clients?

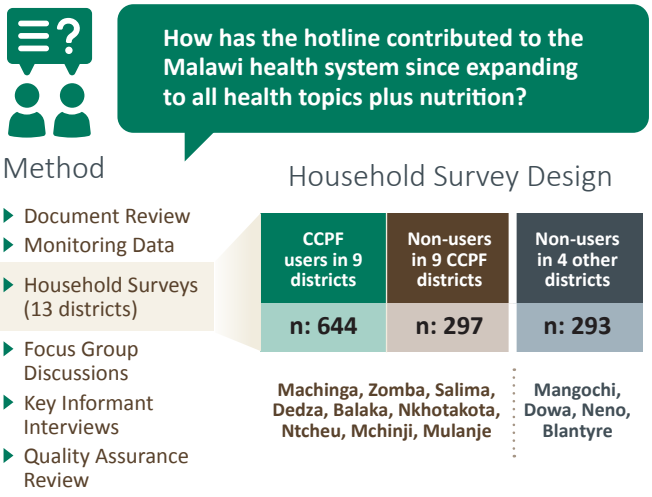
3. EQUITY & ACCESS
How effective was the hotline in reaching underserved populations?

4. QUALITY OF SERVICE
Did the hotline provide *quality* advice on a range of health and nutrition topics, according to Ministry of Health standards?

5. REFERRALS / LINKAGES TO CARE
How effective was the CCPF hotline in connecting the general population to needed health care services? Did the hotline provide *timely and appropriate referrals* to health facilities for clients presenting with specific health symptoms/danger signs or clients requiring certain preventive/family planning services? To what extent did the hotline support or enhance the patients' ability to seek and receive services from health facilities?

Impact Evaluation Approach

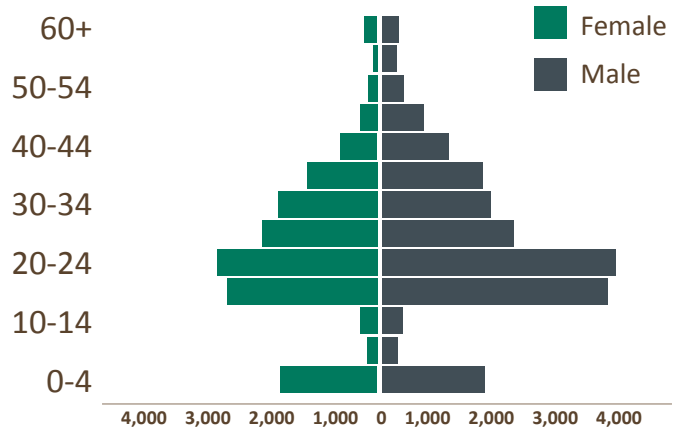
The 2018 CCPF evaluation field work was conducted by Jimat Development Consultants, with design and data analysis support from VillageReach, and input from the MoHP and CCPF stakeholders and partners in Malawi. The consultants used a mix-methods design using: household surveys from 1,234 respondents in 13 districts, focus group discussions (FGDs), key informant interviews (KIIs), and an external quality assurance (QA) review. Household survey respondents had called CCPF in the previous two years, and were located in 9 CCPF intervention districts and four comparison districts where CCPF had not been advertised.



CCPF Caller Demographics

CCPF hotline callers represented a diverse population of men and women between the ages of 25-49, and youth from ages 15-24. The evaluation results demonstrated that people called the hotline regarding a variety of health topics, and that a wide range of people accessed the hotline, such as people living far from health facilities, people with low levels of income and education, as well as people without personal phones.

Monitoring data for all CCPF calls
(April—June 2019)



90% of CCPF users live in households with a mobile phone. However, 22% of callers called CCPF from someone else's phone.

77% of CCPF users own an Airtel phone/SIM card and **another 20.5%** say it is 'easy to find someone with an Airtel phone' they can use. Similar access was reported by non-CCPF users living in the same communities.

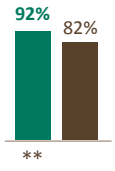
2% of callers had no formal education, an additional 12% had only completed up to four years of school, **42% had completed up to 8 years of school, and 43% up to 12 years of school.** Another 2% had higher education beyond secondary school.

8% of CCPF users could not read at all (literacy was tested by the data collectors), and another 10% could only read part of a sentence in Chichewa.

Key Results/Impact

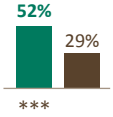
On SRH and HIV issues, the evaluation shows that CCPF use is correlated with increased knowledge and/or healthy behaviors for some key indicators. For instance, CCPF had a statistically significant impact on the following indicators:

TESTED FOR HIV IN THE LAST 2 YEARS



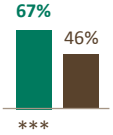
92% of CCPF users had tested for HIV versus 82% of non-users in the nine CCPF districts in the prior 24 months.

UNMARRIED AND USED CONDOM LAST TIME HAD SEX



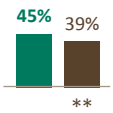
52% of unmarried CCPF users reported using a condom versus 29% of non-users in the nine CCPF districts.

USED MODERN CONTRACEPTIVE IN THE LAST 2 YEARS



67% of CCPF users had used a (modern) contraceptive relative to 46% of non-users in the nine CCPF districts.

KNOWLEDGE OF POST-EXPOSURE PROPHYLAXIS (PEP)

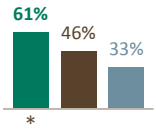


CCPF users were more informed than non-users in the same communities (nine districts) about the existence of PEP drugs, a relatively new option for HIV prevention in Malawi.

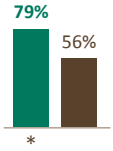
% CCPF Users in 9 districts % Non-users in 9 districts

Statistically significant difference is designated by * p<0.05, ** p<0.01, *** p<0.001

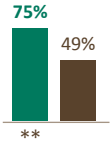
Maternal Health was one of the initial focal areas for CCPF and shows promise in ensuring access to health information at critical points before, during and after pregnancy. For instance, pregnant CCPF callers were more likely to have had a planned pregnancy, had better knowledge of their due date, timing for antenatal care (ANC) visits and were more likely to start antenatal care in the first trimester of pregnancy compared to non-CCPF users. These women also seemed to have better nutrition practices, and sought more care upon danger signs. For instance when compared to non-users in the same districts:



61% of CCPF users had knowledge concerning their delivery date compared to 46% of non-users in the nine CCPF districts, and 33% of non-users in the other four districts.



79% of CCPF users had planned pregnancy compared to 56% of non-users.

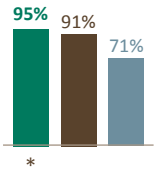


75% of pregnant CCPF users started antenatal care during the first trimester.

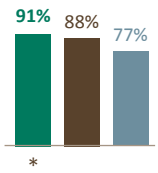
% CCPF Users in 9 districts | % Non-users in 9 CCPF districts | % Non-users in other 4 districts

Statistically significant difference is designated by * p<0.05, ** p<0.01

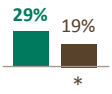
On Child Health, the evaluation shows statistically significant results in the intervention areas of young child immunizations, malaria prevention and nutrition in under-five children amongst CCPF users and non-users. For instance:



95% of CCPF users had their under two children vaccinated or received vitamin A at least once compared to 91% of non-users in the nine intervention districts, and 71% of non-users in the four districts.



91% of all CCPF users' under-five children had slept under an insecticide-treated bed net to prevent malaria the night preceding the survey, compared to 88% of non-users in their districts, and 77% of non-users in four other districts.

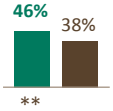


29% of CCPF users knew the recommended frequency for daily feedings for children under five.

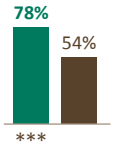
% CCPF Users in 9 districts | % Non-users in 9 CCPF districts | % Non-users in other 4 districts

Statistically significant difference is designated by * p<0.05, ** p<0.01

On Nutrition, the evaluation showed statistically significant differences between CCPF adult users and non-users regarding improved nutritional knowledge. For instance:



46% of of CCPF users knew about the six food groups vs. 38% of non-users in their districts.



78% of CCPF users understood the importance of eating from all six food groups daily versus 54% of non-users in their districts.

While CCPF users did not have more diversified meals than non-users in the prior 24 hours, we did find CCPF users to be significantly more likely to consume fats/oils and fruits than non-users.

% CCPF Users in 9 districts | % Non-users in 9 districts

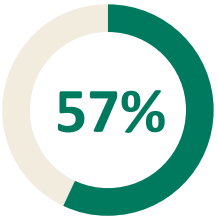
Statistically significant difference is designated by * p<0.05, ** p<0.01, *** p<0.001

- In addition to the four priority health areas presented above, hotline workers answer calls on hundreds of preventive and curative topics.
- Of CCPF callers interviewed, 87% reported following the advice given by the CCPF hotline nurses, regardless of the health topic. Another 6% said they followed 'some' of the advice".
- CCPF was successful in linking patients to care. 87% of all callers who had been referred by CCPF to a health facility for further tests, care or preventive products reported going. Furthermore 95% were satisfied with the referral and 33% said they probably would not have gone otherwise.

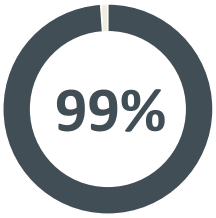
The satisfaction levels among CCPF users were high, confirming prior user satisfaction surveys done over the phone. In this case, the surveys were conducted at the household level, which means that even people without a personal phone could be reached and were able to express their opinion. The vast majority of callers find value in CCPF because of the personalized health advice they got from a live hotline nurse. The study found that:

of CCPF users said customer care was very good or good

of CCPF users who called with a sensitive/intimate question were satisfied with the privacy/confidentiality at the hotline



of CCPF users said they would still call even if they had to pay for the service



of CCPF users are very likely or likely to call again

of CCPF users recommended the hotline to others

An external quality assurance (QA) review of randomly-selected CCPF calls, conducted by a MoHP physician and nurse, validated the internal hotline QA processes. It showed that CCPF hotline workers give good clinical advice to the population in a majority of cases, according to MoHP protocols. This was the case for both clients who were sick (presenting with symptoms) and clients who needed preventive services or products.

The external clinicians commended the hotline nurses for the quality of professional advice given, and made recommendations for how to handle more complex clinical cases that are rising based on caller demand.

Conclusion

The evaluation results show that a diverse group of people are calling the hotline and that it improves a number of important health indicators. CCPF extends the reach of the health care system by providing access to certified health and nutrition information and services. These evaluation results will guide future improvements to the hotline in collaboration with MoHP. The complete evaluation report and data are available upon request.

The 2018 CCPF impact evaluation field work was conducted by **Jimat Development Consultants**, with design and data analysis support from **VillageReach**, and broad input from across various **Ministry of Health and Population (MoHP)** departments and **CCPF partners** in country, including Airtel, ONSE/USAID, GIZ and JSI/DREAMS.

This evaluation was funded through the generous support of CCPF program donors, primarily **Vitol Foundation** and **Johnson & Johnson**.

The evaluation protocol and questionnaires were approved by the **National Health Sciences Research Committee (NHSRC)** of the Malawi MoHP.

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- **MOH Central Monitoring & Evaluation Division:** Mr. Isaac Dambula
- **VillageReach Malawi:** Ms. Luciana Maxim, Mr. Benson John