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Chipatala cha pa Foni (CCPF)

Case study by UNESCO-Pearson Initiative for Literacy



Name

Chipatala cha pa Foni (CCPF)
(Health Centre by Phone)



Location

Malawi



Implementing organization

VillageReach



Year launched

2011



Focus of intervention

Connect communities to important
health information and services via
mobile telephony



Reach

Almost 50,000 calls logged from
more than 35,000 unique callers

Summary

Approximately 84 per cent of Malawi's population live in rural areas, with more than half of the residents living over 5 kilometres from the nearest health facility (UIS, 2017). According to 2009 estimates, Malawi's health workforce density was one physician for every 55,500 people and one public health worker for every 33,300 people (WHO, 2016).

CCPF was designed on the premise that access to relevant health information is integral for maximizing efficient utilization of health services. The project operates under Ministry of Health (MoH) approved protocols to provide health care support to decrease the burden on under-resourced community clinics. Individuals requiring professional attention are referred to their local health centre, and the hotline worker conducts a follow-up call to verify the outcome of the visit. The free hotline is operated by trained health workers and was designed to be an inclusive solution geared towards people with low literacy. To further support this group, the CCPF model also includes an ongoing mobile messaging service, which is both voice- and text-based.

CCPF was launched in Balaka District, Malawi in 2011 by VillageReach in collaboration with the MoH and Concern Worldwide. Since its launch, CCPF has logged almost 50,000 calls by more than 35,000 unique callers, of which 75 per cent are resolved without having to refer the caller to a health facility. An independent evaluation of the pilot programme found that CCPF led to improvements in maternal, newborn and child health (MNCH) knowledge and practices (IKI, 2013). Increased MNCH knowledge included factors related to maternal nutrition and appropriate physical care during pregnancy. Improvements in practices included increased antenatal and post-natal care visits, use of bed nets during pregnancy, and breastfeeding within one hour of childbirth (IKI, 2013).

75%

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ABOUT THIS CASE STUDY

Through the UNESCO-Pearson Initiative for Literacy: Improved Livelihoods in a Digital World, this case study is part of a series highlighting how inclusive digital solutions can help people with low skills or low literacy levels use technology in ways that support skills development and, ultimately, improve livelihoods – in contribution to achieving the Sustainable Development Goal on education. For more information go to en.unesco.org/themes/literacy-all/pearson-initiative.

Why selected

Not only does CCPF provide affordable and ongoing mobile-based access to health information for low-literacy populations in rural Malawi, the partnership model itself is noteworthy. The journey from a non-profit-led proof of concept in close partnership with the mobile network operator (MNO) Airtel, to a planned handover to the MoH for continued operations and scaling up, provides insight into sustainability.

Key takeaways

- 1 / VillageReach recognizes the importance of ministry-level buy-in and government champions for a successful scalability and sustainability strategy.
- 2 / Developing a formal quality assurance protocol helps support staff development while improving service delivery and potential for impact.
- 3 / Mobilization at the community level is imperative for increasing the reach of health services.

Context and project origins

Long travel distances and rushed consultations prevent community members in Malawi from seeking and retrieving health information that is timely, relevant and reliable. For many individuals in Malawi, knowing what to do, where to go, and when to seek health care can mean the difference between life and death.

In 2014, mobile phone subscriptions across Malawi were estimated at 30 per 100 inhabitants (UNDS, 2017). Airtel, one of two cellular network providers in the country, reaches all districts of Malawi and continues to expand its coverage.

The idea for CCPF was developed from a national campaign funded by the Bill and Melinda Gates Foundation soliciting strategies to address health challenges for improving maternal, newborn and child health indicators, entitled 'Share an idea, save a life'. The concept originated by combining two winning submissions. The strategy was further developed by interviews with community health workers, traditional leaders and district health staff. The content for the hotline was provided by government protocols for health-care support and reviewed by a team of MoH coordinators.



The digital solution

Distance and lack of information are major barriers to health care among remote communities.

CCPF operates along two primary components: a health hotline and mobile-based messaging service.

The hotline is currently staffed seven days a week from 7.00 to 19.00. Hotline operators provide health advice and information in accordance with the MoH approved protocol. Prior to serving on the hotline, all operators complete a thorough onboarding training that covers customer care protocols, health content and the CC PF software system. In-service refresher training on specialized topics takes place monthly to maintain a high-quality user experience and serve to update hotline workers on changing guidelines from the MoH.

The service platform includes decision-tree software, developed in collaboration with Baobab Health Trust, a Malawi-based technology agency that specializes in health information systems. This software guides the hotline operator through information protocols based on client input on their symptoms, and flags danger signs for referral to the facility. At the same time, the software records demographic and health information, creating a history of the calls

for the registered callers.

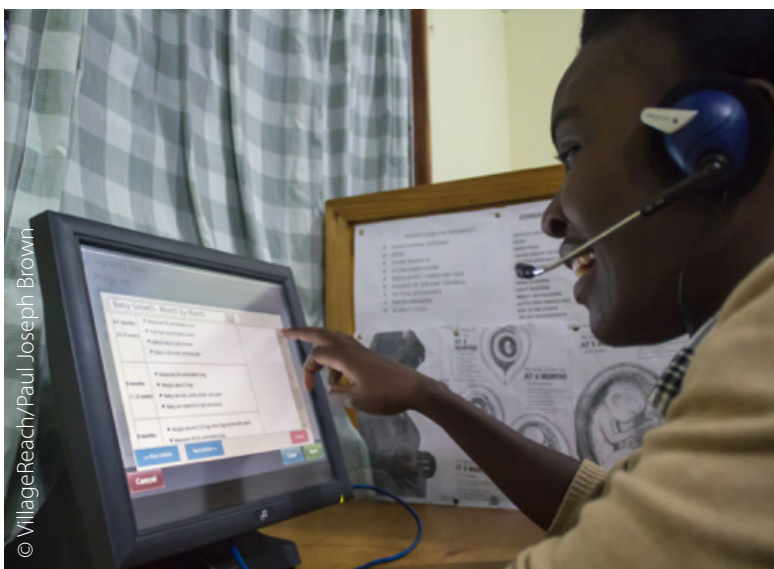
Once registered with CC PF, users receive weekly text messages with important health information targeted according to their estimated date of delivery, reproductive age or child's date of birth. The text messages are short (160 characters in total) and use basic language to improve the successful transmission of information.

Given the low literacy rates in the area, the team designed the service to incorporate voice messaging through interactive voice recognition (IVR) to ensure a broader user base. This technology allows community members to use the phone's keypad to receive important health information regardless of their ability to read or mobile phone ownership status.

The hotline service incorporates several layers of support mechanisms involving various sectors of the professional health workforce. CC PF clerks register new callers while trained nurses answer medical questions and oversee daily hotline operations. On-call doctors provide an additional level of support on the rare occasions when the hotline operators are confronted with lesser-known symptoms (particularly for emerging conditions, for example, as seen with Zika).

Roughly 75 per cent of hotline inquiries are resolved over the phone without the need for further support. Where referrals are made, CC PF operators follow up with the caller after 24–72 hours to verify whether the caller went to a health facility to seek care.

Figure 1. CC PF Hotline worker with touchscreen device



Designing with the user

A major strength of CCPF is the attention to multi-stakeholder collaboration in developing the design solution. The overall adaptation process involved input from a broad range of local partners and technical experts. VillageReach deployed several focus groups to validate the messaging procedure and to ensure that content was representative of the prominent health issues facing families in the rural Malawi context.

As the programme evolves, the design continues to follow a user-centred approach. For example, based on inputs from the government and other stakeholders, the service has expanded to all health topics. In 2016 the hotline expanded to include a nutrition module which is based on government protocols and received extensive field-testing to ensure a user friendly and intuitive platform. A draft of the nutrition module was initially developed as a paper-based protocol. Health-care operators provided several recommendations for improving the overall user experience.



1 / Content. One set of recommendations involved improving the content delivery and input procedures. For example, not all food items have direct translations to the English language. Therefore, hotline operators suggested incorporating some content in the local language of Chichewa. Also, dietary habits vary greatly across Malawi, and not all callers reported their food consumption during the field-testing exercise. Operators suggested that the protocol allow blank fields for callers with no reported food consumption and personalizing the module according to the caller's demographic data.

2 / Platform. During the field-testing activities, hotline operators noted that there were occasionally issues with the touch screen device as well as insufficient information gathering in the system for referral callbacks. In the past, referrals required the completion of a paper-based form. The touchscreen devices are being evaluated and a more robust form of reference tracking is being built into the software for easy information access and triaging.

3 / Delivery. In addition to content and platform feedback, operators offered several suggestions for improving the user experience for the callers.

a One general suggestion was that the module be adapted according to four distinct groups: pregnant and lactating women, caregivers of children under 6 months (receiving breast milk only), caregivers of children between 6 and 24 months (complementary feeding) and everyone else.

b While the nutritional assessment is important, not everyone will want to respond to the protocol. Another suggestion from the field-testing was to recognize the importance of the nutritional module as part of the overall software and make it easy to access, but not a mandatory part of the assessment procedure.

c As noted earlier, dietary habits vary by person, region and because of other factors. The system was not created to prescribe a specific diet for callers, but to help the hotline operators have a conversation about the foods and resources callers can access to provide advice on an appropriate nutrition plan to follow.

INSIGHT

Customized care

The CCPF nutrition module protocol varies based on a person's demographic data. Once the caller's page is created, the nutrition module is tailored for them. For example, a caregiver of a child under 6 months will only get information on using breast milk or formula.

Similar processes are being followed for the new adolescent health module and for the revalidation of the mobile messages.

Understanding the local ecosystem is also important for the success of CCPF. To this end, the MoH is carefully monitoring the changing market in phone ownership and Airtel cellular coverage. Understanding the limits of the system is also key to successful scaling up.

IMPACT

Hawa's story

Pictured here, Hawa, 20, had been living with fistula for nearly three years after giving birth to her first child, when complications from obstructed labour led to her being given a caesarian section. Hawa was in labour for three days at her local health centre, unable to deliver. Lack of transport from the health centre to the district hospital (about 100 kilometres away) had severe consequences. Sadly, her baby was stillborn. The fistula was the result of sepsis brought on by lack of timely treatment.

One day she received a text message alert from CCPF, which encouraged people to call CCPF with health questions and concerns. She decided to call the charge-free number.

On the other end of the line was Wellington, a CCPF hotline worker trained to triage callers over the phone and make referrals to additional services and support. After the call, Wellington and his team did some quick research and discovered that an annual fistula repair clinic was being held in the area within weeks.

Given that there is just one urologist in the country that performs this service once a year in the community, Wellington and the CCPF team worked quickly to contact the sponsoring organization and request that Hawa be added to the upcoming clinic.

Hawa had her fistula surgery on 14 October 2016 at the Fistula Care Center in Lilongwe. She is now healthy again, and knows that she can call CCPF with any health questions or concerns.



Monitoring and evaluation strategy



Originally, the monitoring and evaluation strategy was based on improving the knowledge and behaviours of women and children with the aim of reducing maternal, infant and child mortality rates. The strategy is designed to track usage data, health conditions and registration statistics for the hotline service. General information on the purposes of the calls, number of callers, and district breakdown of call volumes is shared with the CCPF partners and Ministry officials to help inform the marketing strategy.

As community members call into the hotline, data collected from user registration and the subsequent phone conversation is used to generate reports on call volume, demographic trends, key areas of concern, the ratio of calls resolved and referrals to a facility. All calls are recorded for quality assurance, and project supervisors conduct reviews on a quarterly basis. During the quality assurance review, the supervisor

listens to at least ten calls per hotline operator. The operator is evaluated based on customer service, adherence to approved protocol, and quality of information provided to the caller. Results from the reviews are incorporated into the in-service training. Quality assurance is evaluated through a standardized scoring process, and the hotline supervisor is responsible for working with the operator on individualized improvement plans where necessary.

CCPF is a confidential service. All hotline operators and staff who work with personal identifying information are required to sign a confidentiality agreement prior to working for the hotline. This agreement is renewed on a yearly basis along with staff contracts. The data itself is saved on a server and can only be accessed by those responsible for the data.

Results to date

CCPF was developed to address barriers to access to quality health information and appropriate utilization of health services. An independent evaluation assessed the impact of a pilot version of the project over a two-year period (2011–13) in a sample of over 6,000 individuals across the intervention district of Balaka and a neighbouring comparison district (IKI, 2013). The evaluation reported the following significant outcomes as associated with the CCPF service:

- Increased access to timely and reliable health information for appropriate health-seeking behaviours.
- Reduction in unnecessary visits to health centres (there were fewer than 25 per cent of referrals of callers for further medical management).
- Reduction in putting off seeking health care.
- Users cited ease of getting information and savings on transport and money as the greatest benefits of the programme.
- Higher antenatal care adherence during the pilot.

While mobile phone penetration is historically low in Malawi, a major strength of this programme is that it has been able to produce results (and government buy-in) despite low phone ownership. To date, Airtel CCPF has logged almost 50,000 calls from more than 35,000 unique users, while over 19,000 subscribers have registered for the messaging service.

A central goal of the MoH in Malawi is to reduce the burden on its professional health-care workforce by increasing the number of trained staff throughout the country (MoH, 2011). Only one in four calls registered with CCPF require further referral to a health clinic, on average. This outcome directly responds to the government's health sector objective by reducing the patient caseload at clinics while building up a new group of trained healthcare professionals.



Sustainability and future plans

CCPF has grown in both geography and programmatic content since its launch in 2011. Currently the service is available in nine districts, and there are plans to expand nationally to all twenty-eight districts by the end of 2017. The programmatic content has grown in scope from maternal, newborn and child health topics to include all health topics, including specially customized nutrition and adolescent health modules. The programme is also exploring the opportunity to provide emergency referral capabilities and support health professionals in serving as a resource for access to additional information.

The Malawi MoH has been a close partner at each stage of the planning and implementation process. To ensure the sustainability of the programme, VillageReach is working to transition the model into the MoH formal health strategy. This intentional collaboration has positioned CCPF to be viewed as a Ministry initiative, and enhanced the ownership by the Malawi government. As part of the transition to the national government, the hotline relocated from the Balaka District Hospital to Lilongwe, Malawi's capital city, in 2017. The purpose of the relocation was to increase the programme's access to critical technological infrastructure needed to support a nationwide hotline, as well as allowing for the hotline to be closer to the government. The hotline is now located at the MoH Health Education Unit. There will be full nationwide coverage by December 2017, and the full transition is planned over the course of 2018. VillageReach will maintain its partnership in an advisory role by providing technical guidance and capacity development throughout the transition.

A 2015 memorandum of understanding with Airtel resulted in Airtel zero-rating the calls – in other words, ensuring callers are not charged. Airtel, VillageReach, and the MOH are discussing Airtel's ability to continue the zero-rating once the full transition to the MOH has been made. The private-public partnership is integral to the sustainability plans of the initiative.

Currently, the messaging service is available in the most prominent national language of Chichewa as well as Yao, a common language in the Southern region of Malawi, where the programme was originally located. The messages have also been translated to Tumbuka, predominantly spoken in the Northern region of the country, and will be incorporated in the messages once the technology upgrade is complete.

As part of the mobilization process, an outside company, supported by Johnson & Johnson was commissioned to work with the MoH and a consortium of key stakeholders to develop a brand for the hotline that would clearly convey the purpose and benefits of the service to communities nationwide. The consortium used these inputs to develop a final brand design that was validated and endorsed by the MoH.



Lessons learned and recommendations

CCPF implementation has offered many opportunities to learn important lessons about designing a digital health solution that can provide access to a wide range of public health information for all age groups, both genders and communities countrywide. Since its early beginnings in 2011, CCPF has expanded beyond maternal and child health to all health topics. Some key lessons are referenced below.

Importance of government champions.

Policy integration does not happen in isolation and it does not happen overnight. Like other national systems, the Malawian government consists of many divisions, and many decision-makers who need to approve of a strategy before official commitments can be made. This is a complex process that involves engagement from all parties to move any initiative forward. Including government representatives from the beginning planning stages facilitates this process.

Designing with simplicity.

The technologies selected for expansion and government ownership must be easy to operate and maintain. This is critical to ensure reporting can continue as intended and the service can be easily adapted or upgraded as necessary.

Develop mechanisms for quality assurance.

Before formal quality assurance mechanisms were in place, hotline workers were responsible for completing their own audit forms. Once full-time nurse supervisors were incorporated into the staffing scheme, more cases were identified for referral. The quality assurance protocol also served to identify where hotline workers needed additional training. The quality assurance continues to change as the Quality Management department of the MoH is in the process of reviewing and revising the protocols to fit into the national system.

Community mobilization.

As CCPF evolves through the expansion and transition phase, it is important that partnering organizations continue to promote the service through community advertising campaigns. An overarching recommendation for similar interventions seeking government buy-in and partner collaboration is to make sure all parties are promoting the service to increase the reach of the service and its potential impact.

Contact information

VillageReach was a key partner in developing the CC PF innovation, and has been implementing the service since its pilot. Together with the MoH and its partners, VillageReach is leading the effort to scale CC PF nationally and support the transition to full government ownership by the end of 2017.

VillageReach is an NGO that develops solutions to health system challenges in low-resource environments, with an emphasis on strengthening the 'last mile' of health care delivery.



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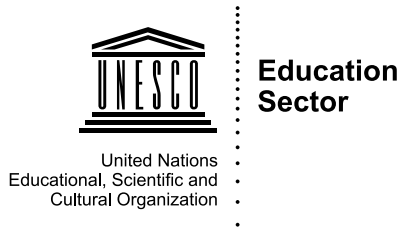
This case study was commissioned by UNESCO and Pearson as part of the UNESCO-Pearson Initiative for Literacy: Improved Livelihoods in a Digital World. The views and opinions expressed in this case study are those of the authors; they are not necessarily those of UNESCO and do not commit the Organization.

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UNESCO is grateful to VillageReach for their support in developing this case study.

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