

# mNurturingCare

A systems-based approach to integrating early childhood development into community health platforms in Kenya



NAIROBI CITY  
COUNTY



**PATH**  
P A T H



Brief assessment report

## Background

Over 250 million children aged 0–5 years fail to reach their age-appropriate developmental milestones, which has lifelong consequences on their health, development, and well-being. Routine health services such as home visits delivered by community health volunteers (CHVs) do not always include counseling on early learning and responsive caregiving and monitoring for developmental milestones (henceforth referred to as “early childhood development (ECD) content”).

In addition, there are systemic weaknesses with overall CHV service delivery—e.g., weak and inconsistent supervision, lack of robust feedback loops, and poor capacity to provide in-service training to refresh skills and knowledge levels of CHVs and their supervisors.

## Introduction

The Children’s Investment Fund Foundation (CIFF) funded Medic Mobile, the Africa Early Childhood Network (AfECN), and PATH to integrate ECD content onto a Medic Mobile platform being used to provide CHVs with decision-making support and facilitate reporting, referrals, and follow-up in Siaya County in western Kenya. This application (“mNurturingCare”) was developed using a human-centered design approach featuring shadowing of home visits, user testing of mock-up versions of the application, and consultations with government staff overseeing CHV service delivery.

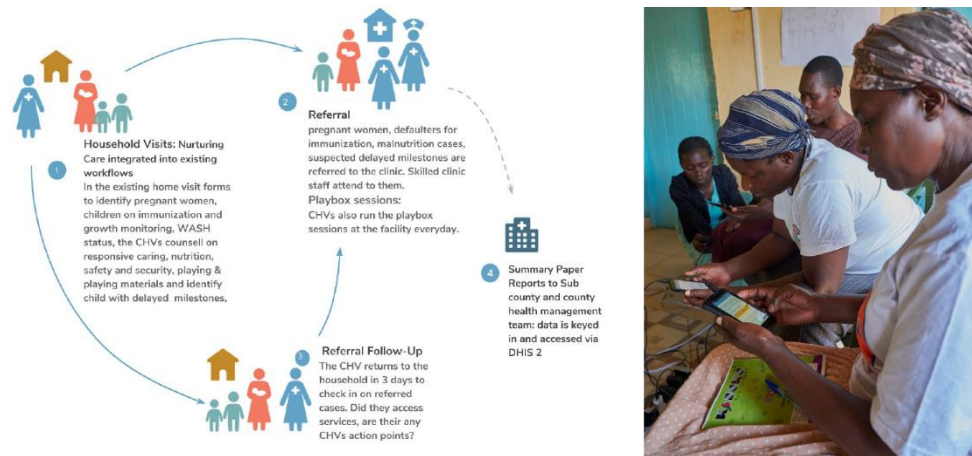


Figure 1: Depiction of CHV workflows

The application was tested with a convenience sample of 60 CHVs (30 in Siaya County and 30 in Nairobi County), who were invited to use the application as part of routine home visits during a one-month “product placement” period. The application was loaded onto existing cell phones—either personal phones or phones donated by other projects. CHVs were provided an initial two-day training, followed by intensive mentoring to integrate mNurturingCare into home visits.

## Assessment methodology

A qualitative assessment was carried out to probe for acceptability and feasibility of the mNurturingCare application. The assessment included six focus group discussions (FGDs) with the 60 CHVs using the application, ten interviews with government staff overseeing CHV service delivery, observations of five home visits using the application, and two follow-up visits to households having children with suspected developmental delays. The key themes listed in the following section were identified through preliminary data analysis, followed by coding of data around the identified themes.

## Assessment findings

### CHV perceptions of service delivery

In general, CHVs enjoy their work and are aware of the critical role that they play in strengthening linkages between the community and health facility. They enjoy the opportunity to promote key

behaviors and practices and raise awareness on a variety of issues. CHVs also appreciate the trust built with individual families and family members over time.

*“What I enjoy most is the interaction... If anyone has an issue, he/she comes to me.” (CHV, Siaya)*

### **Alignment of mNurturingCare with perceived needs**

While CHVs play a critical role in strengthening two-way referral networks, building awareness, and facilitating uptake of desired behaviors and practices, community health services face some systemic challenges. For examples, a substantial amount of time during home visits is taken up by recording data on paper registers and there are no decision-making tools that assist CHVs with referrals and follow-up actions. In addition, there are no tools for systematic tracking of referrals and as such, CHVs physically accompany referred clients or visit the health facility to ensure that a referral has been completed. Clients may also change houses, which further complicates registration and follow-up.

### **Perceptions of the mNurturing Care application**

CHVs appreciated that using the application reduces the need to carry multiple registers and tools, since the application supports client registration, decision-making, reporting, and referrals. The application was also praised for including content on child development, responsive caregiving, and maternal and child nutrition. Some of the topics were novel, especially for CHVs from Nairobi, who learned key concepts about child development and that expectant parents can stimulate babies in the womb by talking and telling stories to them. Despite some initial concerns around privacy and data use, there was a perception that caregivers take CHVs more seriously when the latter use the application for home visits. Caregivers also appreciated the information received from CHVs in a systematic manner and expressed their desire to practice the promoted practices and behaviors.

*“I learnt so much about pregnancy and infant care. Mothers should avoid stress as that can have effects on their unborn babies.” (CHV, Nairobi)*

### **Understanding of mNurturingCare workflows**

CHVs perceive that the application is easy to use and navigate and that the tasks created remind them to follow up on individual clients. Initially, some CHVs took back-up notes on paper, but increasingly migrated the entire content of home visits to the application. While some of the workflows were considered to be lengthy, in general, CHVs and CHAs had a decent understanding of the workflows toward the end of the one-month pilot period.

### **Technology**

Most CHVs already had smartphones and did not require further training on their use. CHVs felt that using a phone allowed them to be more discreet during home visits, which in turn made caregivers more comfortable with asking questions. In addition, there was a widespread perception that the application reduced loss of information as compared to when using paper tools.

*“The application ensures security of client details as you cannot lose them.” (CHV, Nairobi)*

### **Training and mentoring**

While the initial two-day training was perceived to be too short, the post-training mentoring provided by CHAs was highlighted as being critical to successfully integrate mNurturingCare into routine home visits. CHAs conducted hands-on demonstrations of the use of the application and the behaviors and practices being promoted through the application. CHVs in Nairobi also formed peer groups that enabled them to support each other whenever they had questions or faced challenges

*“My supervisors did not go there as my supervisors. They came down to CHV level.” (CHV, Siaya)*

### **Quality of developmental counseling and monitoring**

The application was felt to empower CHVs with the information they need to assess developmental milestones and refer children with suspected delays. CHVs were observed to take 12–24 minutes to

complete an mNurturingCare workflow, which is longer than the duration of home visits using paper tools. Factoring in the reduced time for recording data/reporting using the application, this suggests that the application facilitates a conversation with the client. In fact, observed CHVs were found to use effective interpersonal skills—e.g., making eye contact, asking questions to caregivers, and pausing to receive responses. In addition, CHVs from Siaya participating in the pilot monitored 11 children for suspected developmental delays in the 168 households that they visited. While some of the delays were not confirmed, this figure suggests a higher rate of detection of suspected developmental delays than has been typically achieved with using paper-based monitoring tools in health facility settings.

### **Challenges with using mNurturingCare**

The application tends to freeze on older phones during home visits and the phones themselves require frequent charging, which is a challenge for CHVs without access to a regular source of electricity. Some of these issues arose from the lack of a common operating system, given that some phones used in the pilot had been procured by a previous donor, while others were the CHVs' personal phones. CHVs also expressed concern that the application does not have an option to close a task midway during a home visits and complete it later. Moreover, CHVs expressed concern that if a phone is stolen, they will face difficulties in replacing it. In addition, there are some foundational challenges that may affect the ability of CHVs to seamlessly integrate mNurturingCare into their routine services—e.g., absence of strong coordination mechanism for the Community Health Strategy.

### **Sustainability and scale-up**

There was general consensus that the mNurturingCare application was well integrated into the Community Health Strategy and that the pilot was conducted in a “real-world” setting. Training and mentoring were provided by CHAs, who are the CHVs' usual supervisors under the Community Health Strategy. Moreover, there was strong interest expressed by both Kisumu and Nairobi county health management to scale up mNurturingCare to cover both counties. There are still questions around procurement and maintenance of phones and a concern that should phones break down or be lost, individual CHVs would be responsible for replacing them. Nonetheless, CHVs expressed their willingness to partially pay the cost of cell phones, which has positive implications on the long-term sustainability of the use of the application at scale. Pilot participants also had suggestions on further improving mNurturingCare content—e.g., incorporation of short audio snippets and videos to demonstrate/reinforce certain practices and having task reminders be configured as text messages.

*“The app has helped a lot, the flow and content has helped CHVs a lot and I feel it should be rolled out in other CUs, other counties or even the whole of Africa.” (CHA, Siaya)*

### **Recommendations for continued use and scale-up**

The assessment results suggest that mNurturingCare holds excellent promise for scale-up and that incorporating video and audio files would greatly enhance its utility as a counseling tool. The use of the dashboards as a tool for summarizing data and decision-making should be reinforced for CHAs and other government staff overseeing CHVs. Future iterations of the application should also include a real-time supervision/mentoring function making use of analytics data, as well as the ability to push down key messages to CHVs to reinforce their technical knowhow in identified areas of weakness. For the application to have the greatest impact, it should be used where basic coordination and management structures exist to support the Community Health Strategy. As such, future investments should focus on simultaneously strengthening the Community Health Strategy—and not just on rolling out the application. In addition, data being collected by the application needs to feed into government health information systems (HIS). Since no ECD data is currently reported through the HIS in Kenya, future investments in mNurturingCare should also focus on strengthening the enabling environment for ECD data collection and reporting. Lastly, there needs to be a common understanding of phone/hardware requirements for using the application, as well as a mechanism for replacing/repairing phones, while also ensuring that CHVs share responsibility for upkeep of their phones.