

mDharura

Equipping Community Health Volunteers (CHVs) in Siaya County with Mobile Technology to Rapidly Respond to COVID-19

Introduction

Community Health Volunteers (CHVs) are at the forefront of Siaya County's response to COVID-19. Traditionally tasked with delivering a range of services that include growth monitoring of children, immunization, and breastfeeding support, their roles have expanded to include a range of tasks related to the rapid reporting and treatment of suspected COVID-19 cases in their communities (Putcha, 2019; Hussein et al., 2021). To facilitate this process, [Medic Mobile](#), under the leadership of the [Kenyan Ministry of Health](#) (MOH), the [Center for Disease Control](#) (CDC), and the [KEMRI-Wellcome Trust Research Programme](#), recently adapted mDharura, a Community Event-based Surveillance (C-EBS) system, to assist CHVs in Siaya County in responding to COVID-19 (Digital Square, 2020).

Overview of mDharura

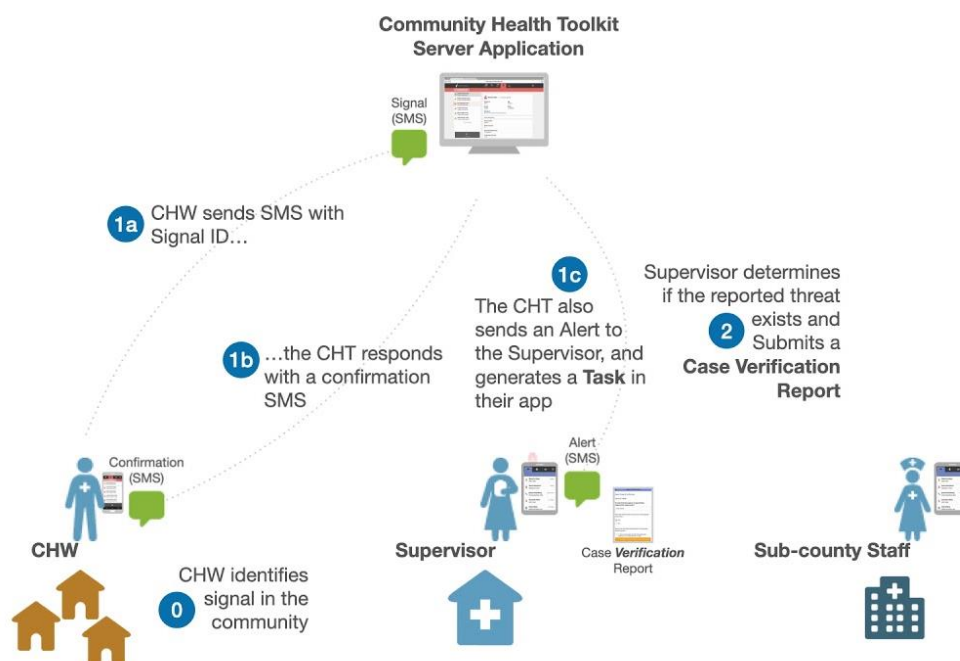
Originally developed in 2019, mDharura is an application that is used to facilitate the early detection and real-time reporting of public health threats at the community level. Its goal is to leverage existing mobile health (mHealth) tools to increase the speed with which community events are reported, reduce the time between the identification and investigation of credible community events, and improve access to real-time data to inform rapid response and data-driven decision-making (Medic Mobile, 2019). In 2020, the tool was adapted to support the reporting, verification, and escalation of potential COVID-19 cases in Kenya. In September 2020, it was deployed to 6,169 users in the Siaya, Nakuru, and Marsabit counties (Digital Square, 2020).

With mDharura, CHVs use SMS to rapidly report suspected COVID-19 cases to their supervisors, who then review and verify the reported cases and, if warranted, escalate them to the appropriate sub-county team for investigation and follow-up. Sub-county officials then call CHVs to request additional information on the suspected cases and use a case identification and verification form to verify that the reported cases meet the COVID-19 criteria set forth by Kenya's Division of Disease Surveillance. If the suspected cases meet the



criteria, disease surveillance officers will manage them according to case management protocols in Kenya.

The following illustration depicts the event-based surveillance workflow:



Event-based surveillance training (EBS)



CHVs participate in Event-Based Surveillance (EBS) training in Siaya County, Kenya

In 2020, CHVs in Siaya County began receiving event-based surveillance (EBS) training to ensure that they were well equipped to use mDharura while carrying out home visits. The training consists of an eight-hour session during which Sub-County Health Management teams introduce CHVs to mDharura, train them to detect and use the application to report suspected COVID-19 cases in their communities, and walk them through the EBS workflow (Digital Square, 2020). Once the initial training is complete, sub-county staff conduct periodic in-person and virtual follow-up sessions with CHVs on a case by case basis to address any challenges they are facing.

Enablers and Barriers to Implementation

Overall, CHVs' response to mDharura and the EBS training has been positive, with CHVs reporting that the application has provided them with an easy and straightforward way of reporting suspected COVID-19 cases to their supervisors. CHVs also noted that the training has helped strengthen their capacity to use digital technology to bolster COVID-19 response efforts in Siaya County. Additionally, the availability of local troubleshooters on the ground has made it easy for CHVs to receive support on any issues that may arise while using the application. Lastly, the implementation of an integrated response mechanism by the National and Siaya County Governments has allowed CHVs to continue visiting households and using mDharura to report suspected cases even after curfew.

Despite these successes, CHVs noted that it sometimes takes supervisors a long time to respond to the suspected COVID-19 cases that they have reported, which can consequently reduce CHV morale over time. To address this challenge, sub-county staff instituted performance appraisals for supervisors to ensure that they were responding to CHV concerns in a timely manner.

mDharura's Impact

Siaya County's experience with mDharura and the EBS training highlights the important role that CHVs play in managing COVID-19 cases in their communities. By investing in mobile technology and providing CHVs with the training to facilitate the real-time reporting of potential COVID-19 cases, the Government of Siaya County is ensuring that these frontline workers are not only building their capacity to respond to the pandemic, but also providing valuable information that can be used to bolster data-driven decision-making at the county and national levels. As Siaya County slowly begins to roll-out the COVID-19 vaccine, there will be an increased need to invest in mobile technology to ensure that CHVs can continue gathering data that can eventually be used to inform the easing of COVID-19 restrictions in their communities.

References

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