

mHealth for Community Health Workers: Global use informs local need

Much of what we at Dimagi have learned firsthand has come from our experience working with community health workers (CHW) and other frontline worker teams in over 60 countries. However, with a recent uptick in the number of groups looking to place mobile tools in the hands of teams here in the US, we're discovering that considerations for the CHW and other non-clinical healthcare workforce are generalizable across global and domestic settings.

CHWs have incredible rapport with their clients and deep knowledge about the communities they serve. This is the common thread that exists no matter where you meet a CHW. Because of this, the design and implementation of technology is critical. mHealth tools should be introduced to *enhance* and not disrupt the relationships these teams build with their clients. Any mHealth component must be both easy to use and seen as valuable to the CHW, or it runs the risk of being a burden and distraction as the CHWs work to build trust in some of the hardest to reach populations of the world.

[CommCare](#) (developed by [Dimagi](#)) is a longitudinal case management tool that can be customized to fit the data collection, client management, and health promotion needs of just about any use case. We are a social impact company, and our primary focus has been to continuously enhance our core product (CommCare) to enable CHWs and Frontline Workers to collect better data, make more complex decisions at point of care, and improve client management during and between health visits. Continuous enhancements to the mobile platform also require us to build out CommCare's web-based application builder interface. Program staff who have no software engineering background can use the app builder to design and customize apps they may need. For smaller organizations that have little to no technology budget, easy-to-build, do it yourself solutions are an affordable option for adopting mobile technology.

Dimagi's CommCare is an example of a business-to-business (a software/tech company to your clinic) mHealth platform as opposed to a business-to-consumer (your patient downloads an app that a company has developed or uses a wearable like a pedometer) option. There are technologies out there that exist for various purposes within this space. Some are disease-specific, some offered through an electronic medical record (EMR), and some are custom-developed for a single and specific use.



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Dimagi and US-based partners developed CommCare to:

- Manage adolescent HIV cases (Social Workers, Case Managers)
- Engage with HIV positive adolescents using SMS and case management tools (CHWs)
- Track home visits and enroll new patients in community-based programs (CHWs)
- Conduct Neonatal Abstinence Syndrome assessments via tablet in NICUs (Clinicians, hospital staff)
- Replace paper-based systems for various community health center research studies (data collection officers, CHWs, graduate students)

- Collect and share relevant information during community home visits (CHWs, health promoters)
- Inform primary care practitioners of risk assessment results before appointments (waiting room staff, nurse assistants, care teams)

Today, surprisingly, we continue to encounter organizations using paper-based programs across the US despite the prevalence of digital technology—smartphones, tablets, etc. While many organizations express a strong desire to digitize (at least) some of their activities, barriers to the adoption of mHealth remain. Some of the following key questions may help organizations think about how mHealth solutions can improve their work.

- How much data do we currently collect and manage on paper?
- How much time does it take our staff to enter that data into a spreadsheet or other database?
- Can a mobile-based tool help my CHWs manage clients/patients more efficiently?
- What paper-based job aides exist that need to be updated regularly or changed according to the client’s native language, culture, etc?
- What challenges does my organization face when rolling out process changes or additional tasks to CHW and other non-clinical health teams?
- What are the EMR and HIPAA compliance factors we need to consider when assessing various mobile tools?
- Does my organization leverage CHWs or other teams for monitoring and evaluation and research initiatives such as community needs assessments or study participant qualification and enrollment?

mHealth tools like CommCare (and many others) can fit in to existing paper- or even laptop-based programs. They can operate independent of, in parallel with, or as part of an EMR. Many are also able to pass security audits for HIPAA compliant needs, making them solid options when considering the use of an mHealth tool for risk assessments, patient enrollment forms, or more complex projects.

Assessing various options (one independent resource for assessing data collection platforms can be found [HERE](#)) to achieve your ‘going paperless’ needs is a good first step. CommCare is one of many options that gives you the flexibility to start simple and then build in other features. These features can include case management, SMS communication, and decision support to make CHW visits more effective and efficient. CHWs can collect registration/baseline data for new patients and save it to an mHealth tool. This data can then be accessed for future visits to monitor patient health. mHealth programs have also harnessed SMS technology to send automatic reminders to patients for medications or upcoming clinic visits. During visits, CHWs can ask patients questions using the questionnaire feature of an mHealth tool, and depending on the patient’s answer, a relevant follow-up question appears. mHealth programs like CommCare also provide guidance and structure for community health education through their needs assessment component. CHWs, together with their patients, complete the assessment, which helps build a customized health education plan that includes validated pre-loaded materials to share over subsequent visits. mHealth performance monitoring tools can show CHW progress and results through simple graphs, charts, and summaries on-screen, which can inform future CHW strategies to improve patient care.

mHealth programs of all shapes and sizes play an important part in the job experience of CHW teams worldwide. There is significant opportunity to leverage mobile technology to illustrate and inform this work within local and national level health systems here in the US.



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