CommCare for Home-Based Care

Brief Overview

Home-based care providers (HCBPs) are community health workers that play a vital role in serving poor and hard-to-reach populations suffering from chronic diseases. They promote preventive care and convey important health information during regular visits to a patient's home. Being embedded in the community and experiencing the reality of a patient's daily life, the CHWs are in a unique position to understand the challenges facing patients. CHWs also have the potential to collect information that is needed at the national level about disease burden and barriers to adopting preventative health practices.

CommCare, a software application that runs on mobile phones, was developed and scaled up by D-tree International in order to improve the effectiveness of Pathfinder International's home-based care (HBC) programs in Tanzania. The tool assists HBCPs to screen for common problems, manage household visits and referrals for services, collect data, and report on program activities and outcomes. Additionally, supervisory, as well as monitoring and evaluation (M&E) components of the program, help supervisors better manage their providers and programs in the field.

The project start date was October 2008. There are currently over 300 HBPCs using CommCare who are trained and monitored by Pathfinder International, D-tree International and district municipal staff in Tanzania. HBPCs using CommCare are located in two districts in Dar es Salaam.

■ **Geographic Coverage:**
Two districts of Dar es Salaam, Tanzania

■ **Implementation Partners:**
Pathfinder International is leading a team of partners which includes:
D-tree International | National AIDS Control Program (Tanzania) | Temeke and Kinondoni District Councils

■ **Funder:**
The Centers for Disease Control and Prevention (CDC)

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About CommCare

The phone-based tool simplifies the collection and transfer of data to a general database and offers decision-making support to HBCPs. The application applies the guidelines for care and data collection that HBCPs are trained to follow and is used to support the delivery and management of community health services including:

- HBC for people living with HIV/AIDS;
- Home-based counseling and testing (HBCT);
- TB screening at the community level; and
- Family Planning counseling using the Balanced Counseling Strategy Plus approach (BCS+).

The application provides a checklist of activities which are expected to be performed during each home visit, as well as reminders of appointments. It gives HBCPs access to electronic registration forms for new clients, follow–up forms for existing clients, referral options for existing clients, and reminder options for pending referrals and visits to clients. It also provides HBCPs with a list of appropriate steps for counseling clients and basic information on the benefits, potential side effects, and efficacy of family planning methods. The tool runs off-line as a stand-alone application on the HBCPs java-enabled phone.

The HBCPs send their data to the server on a daily basis using general packet radio service (GPRS), a packet oriented mobile data service, and from there, supervisors can view activities by HBCP and monthly government and supervisory reports. An additional feature of the system is an SMS reminder that is sent to each HBCP and their supervisors notifying them of upcoming or missed follow-up visits.

Evaluation and Results

Five HBCPs in the Kibada area of Dar es Salaam were trained to use the application in November 2008. Qualitative interviews were conducted with seven clients whom had been visited by HBCPs during this initial period, and overall, the clients spoke positively of the phone-based system. The phones were seen by clients as better for privacy than paper records, given that they are more discreet than paper notebooks and cannot be read as easily by third parties. They also saw the phone-based system as advantageous because records are not as vulnerable to destruction.

Project staff have noted additional improvements to both the management and delivery of services.

- Improved reporting time from old paper system collection and data entry (weeks/months) to instant (100 percent availability on web-based dashboard for supervisor).
- Use of SMS reminders to the HBCPs and their supervisors resulted in an 86 percent reduction in the days overdue for client visits (9.7 to 1.4 days).
- Anytime visibility into the activity levels of 300 users now possible, which enables remote monitoring and follow up.

Lessons Learned

- Simplicity of the mobile application is critical for quick and easy use.
- It is important to limit the number of SMS messages a single user receives as they can easily become overwhelmed.
- SMS reminders for the HBCPs alone are not nearly as effective as when supplemented by calls from supervisors.
- It is important to plan as early as possible with the government and partners when transitioning from paper reporting to electronic reporting in order to reduce any double reporting.
- Use of local champions or "superusers" can greatly improve field support capabilities.

Conclusion

This project has demonstrated how successfully mHealth tools can be used to improve the delivery of HBC and has shown the utility of mobile applications in improving data collection, monitoring, and reporting. Although there is no concrete health outcome data at this point, one can assume that the clients of these HBCPs are healthier than they would have been otherwise in a system where HBCPs would not complete all of the required visits, referrals, counseling, or checks for health issues.