GRAND CHALLENGE EXPLORATION PHASE 1 PROJECT

Community health workers using mobile phones to improve maternal, newborn and child health outcomes in Mozambique

SERVICE DELIVERY

Implementation date: November 2010 to October 2012

As part of its growing mHealth program, World Vision implemented a Bill & Melinda Gates Foundation funded Grand Challenge Exploration (GCE) Phase 1 Project to complement the activities of Strengthening Communities through Integrated Programming (SCIP) Ogumaniha: an ongoing, community-based, multi-sectoral project to improve the health and livelihoods of children, women, and families funded by USAID Mozambique. SCIP empowers community health volunteers (CHVs) in mobilizing communities to increase access to maternal, newborn and child health (MNCH) services using the 2003 Home Based Life Saving Skills (HBLSS) methodology. HBLSS training takes place through community meetings using materials designed for low-literacy settings to recognize life-threatening problems in pregnant women and newborns.

About The Grand Challenge Exploration Phase 1 Project

The Grand Challenge Exploration Phase 1 Project in Mozambique utilized the Gates-funded MOTECH Suite (MTS), a sustainable, scalable, open source mobile solution which includes CommCareTM, a job-aid for mobile health workers. The GCE project took place in the Licuar and Namacata communities within the Nicoadala district where male and female CHVs were selected from within the SCIP project intervention areas to receive training. The CHVs had a minimum seven years of experience and an estimated 40 percent were functionally literate[1], many having limited formal education. They were not paid and did not receive direct incentives for participation.

Training sessions on the use of the Pregnancy and Postpartum Modules installed on mobile phones through CommCareTM were conducted. Training focused on basic

operating skills and implementation of the CommCareTM program, as most selected CHVs had limited experience using phones.

The CHVs visited homes of pregnant women and newborns, each responsible for assisting at least 15 families in his/her community. The CHVs registered the information of any pregnant woman in their care using the CommCareTM program on the phone as early in the pregnancy as possible.

CHVs followed the prenatal and postpartum care algorithms with their clients, following text and/or audio prompts through non-urgent questions, reminders, and advice on ensuring safe pregnancy. In case of danger signs, the CHVs applied first aid procedures, contacted health facility personnel for clinical management support, and referred the

client to a health facility. The CHVs continued these follow-up visits to the pregnant woman until parturition, and then once within one week after delivery for postpartum care.

All data were transmitted from phones to the Project's database for collation and analysis. The Project Coordinator monitored data quality, assessed CHVs' work and made follow-up supervision visits. The data were used to inform any necessary adjustments in the implementation of the project.

Refresher trainings were conducted periodically to improve the skills of CHVs using CommCareTM and to gather input regarding advantages, challenges, and impacts of mobile phone use.

Evaluation and Results

The project was evaluated based on the analysis of CommCareTM data and interviews (written and verbal) with CHVs and project participants. Data from the CommCareTM application and health facility records were analyzed, primarily using Epi-Info version 3.5.3. Frequencies for all parameters measured were calculated, including clients who experienced one or more danger signs. Additionally, two CHV focus group discussions, with a total of 19 CHVs (79 percent), were conducted to gain understanding of the project, its interventions, successes, challenges, and lessons learned. The CHVs had the opportunity to provide feedback about the program and areas for improvement.

Initial results conclude that the use of the mobile phone modules improves the quality of services delivered by CHVs as demonstrated by danger sign identification and referral rates.

Key qualitative findings reported by CHVs included the following:

- Enhanced communication with health facility personnel through the use of the mobile phones
- Expedited referral process benefited women with both minor and significant complications
- Increased confidence of clients in CHVs provision of services because of the mobile technology
- Increased client trust in the CHVs because they are asking the same questions that are asked by hospital staff

Lessons Learned

- Allow time for users to become familiar with using phones; Consider providing reading glasses to users who may have trouble reading the phone screens
- Consider a solar charger as a power source for the phones; It is a cheaper, long-term solution
- Illiteracy needs to be accounted for—in this project an audio application was added to the module
- Make expectations of phone use clear upfront, and address misuse of phones
- Provide standardized materials in appropriate local languages so translators are not needed

Conclusion

The use of mobile phones by CHVs to follow-up with pregnant and postpartum women assists with identification, referral and expedited management of minor and major complications to health facilities in these communities, where literacy levels were not high. Mobile technology increased credibility of CHVs in the community and strengthened linkages with the formal health system.

Geographic Coverage: Nicoadala district in Zambezia Province, Mozambique

Implementation Partners: World Vision, Inc.

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[1]High illiteracy rates are ubiquitous among community resources living in rural areas of the developing world. This might constitute one of the most important barriers to address in improving their skills and resolution capacity.