

CASE STUDY

HEALTH

Mobile SAKHI Project: CommCare for Improving Maternal & Child Health

Monitoring antenatal, natal and postnatal care and infant nutrition in rural India with LMRF and the Department of Public Health

PROJECT OVERVIEW

Lata Medical Research Foundation (LMRF) partnered with Dimagi to assess CommCare's feasibility for monitoring antenatal, natal and post-natal care and infant nutrition in rural India. After an initial successful study, LMRF adopted CommCare in 2013 to help frontline workers track pregnant women, and familiarize them, as well as their families, with public health programs to improve their health seeking behavior, and consequently, maternal and child health outcomes. These FLWS are hired by the Government of India to impart primary health education in the community. In this pilot, they utilize the mHealth tool to care for expectant mothers from their third trimester, up to six months after delivery.

At a Glance

Implemented: India, 2013

Sectors: Maternal health, child health, & nutrition

Features: Data collection; case management; multimedia & counseling; auto calculation of EDD, gestational age, age of the infant, date of next scheduled visit; skip logic; data editing feature

Impact: Substantially improved the monitoring and supervision of frontline workers, improving both work performance and compliance to visits.

This case study was written by LMRF in collaboration with Dimagi.

BACKGROUND

LMRF is a nonprofit organization dedicated to public health research and community development. They work collaboratively with the public health systems of Maharashtra State to address complex public health interventions, and have been working with rural health providers since 2008 to augment their maternal and child health services.

With rising affordability, acceptability and expanded coverage of cellphones in India, LMRF's project, Mobile SAKHI (Solutions Aiding Knowledge for Health Improvement), strives to digitize often ignored, or poorly understood education material; such as, notices, posters and handbills that have failed to achieve desired change in health-seeking behavior. Because the mobile phones' popularity encompasses the majority of the population, including adolescents and elderly, the rich and poor, the educated and the uneducated, LMRF believes mobile phones can be a creative medium to modify health-seeking behavior in low-resource settings.

PILOTING MOBILE HEALTH WITH AUXILIARY NURSE MIDWIVES

LMRF recently conducted a pilot cluster trial in urban hospitals, which compared usual care to the use of mobile health (text messages and scheduled weekly calls) by

frontline health providers (ANM) to communicate with expectant mothers. The intervention began in the third trimester and continued until 6 months postnatal with aims to improve infant feeding practices through lactation counseling using cell phones. The study reported a significantly improved rate of women timely reporting to the hospital for delivery, reduced rates of resuscitation of newborns, improved rates of feeding practices, such as breastfeeding and appropriate introduction of semi-solid foods at 6 months. The clients expressed satisfaction with the communication platform as it served their interests of improved health outcomes and relationship with the provider over time.

THE LMRF FLW APPLICATION

After this pilot, LMRF introduced CommCare as a longer-term mHealth solution. The LMRF app is an easy-to-use application for FLWs, locally referred to as ASHAS (Accredited Social Health Activists) for registration of expectant mothers to record antenatal and postnatal events, infant morbidity and mortality, and the effect of counseling messages on a range of health outcomes. It was designed for FLWs in the local language, Marathi, and is comprised of four modules, each created to enhance the ease of FLW data collection and enable the registration and tracking of both mothers and children. These modules help structure FLW delivery visits as well the six monthly postnatal care visits. These visits aim to identify



maternal and infant illnesses and care received from health facilities, and to improve infant feeding practices and family planning.

The application has been designed to:

- Assist FLWs in remote data collection & patient visits
- Provide visit reminders for improving FLW compliance
- Play audio files in regional languages so that both the provider and clients understand the questions & health messages
- Encourage health behaviour changes, such as pregnancy spacing, maternal diet, early iron and folic acid supplementation, immunization and appropriate infant and young child feeding (IYCF) practices
- Improve understanding of key danger signs and thus aid in timely reporting to the health facility

"Introduction to CommCare has improved our work efficiency and self confidence"

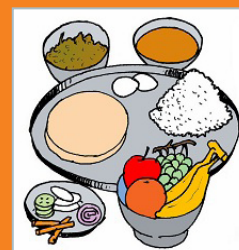
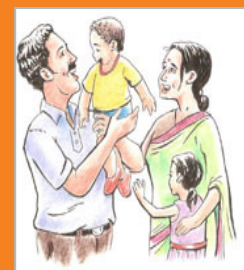
-Jaymala Urkude, ASHA

Feature Spotlight

Multimedia for Behavioural Change

The LMRF application leverages extensive multimedia to ensure that both health care providers and clients understand the questions and health messages delivered. It also serves to guide FLWs through their visits with mother and child, by delivering questions or audio messages in the regional language. In this way, multimedia can help FLWs and patients properly identify early danger signs, such as prenatal headaches and fevers or prolonged labor, and thus seeking timely health care at facility.

These audio messages and pictures (shown on the right) also illustrate key concepts for improving maternal and child health, ranging from counseling on proper pregnancy spacing, maternal diet, early iron and folic acid supplementation, to immunization and appropriate IYCF practices. This use of multimedia complements existing error detection in the software, and reduces the chance of data collection errors, as well as misinterpretation of the information delivered.



M&E FOR PROJECT STAFF

The FLWs are monitored by the project staff on a daily basis through CommCareHQ via the various reports saved and maintained on the server. It also generates custom reports, aiding in monitoring of data collectors in the field. The project staff use worker activity, daily form activity, submissions by form, submit history and case list reports to monitor FLWs performance and their individual cases. The raw data is then exported to excel sheets and analyzed using STATA software.

IMPLEMENTING MOBILE SAKHI

LMRF's Mobile Sakhi trial began in Takalghat, Nagpur district and registered 80 pairs of mothers and infants in both a CommCare cluster and a control cluster, respectively. Implementation started with earlier iterations of the app developed with extensive worksheets comprising of the questions to be asked, images, audio descriptions and their translation in the regional language. Ten FLWs were then recruited as data collectors, and were provided with Nokia C2-01 JAVA phones, with the task of collecting data on a total 80 women starting from her third trimester till 6 months of infant age.

Dimagi field staff visited the LMRF site to impart training and field test the app, including a short training of trainers for LMRF staff. The FLWs were extensively trained in three day training sessions by the LMRF team, with the help of role-plays, flip charts, health videos and interactive sessions. During the field visit for pre- testing the app, the FLWs tested the app with actual participants and provided their feedback to improve the app design. Additionally, FLWs have been provided with a user manual and other tools that can aide them with troubleshooting issues.

EVALUATION AND IMPACT

Early evaluations of the Mobile SAKHI Project have positioned CommCare as a best practice for improving efficiency and timeliness of field reporting, and most importantly in aiding improvements in quality of care delivery through close monitoring and evaluation. LMRF staff report that the mobile phone can be used as an efficient tool for both data

"Though the ASHA fills up the form in the distant village, I am able to check the form, as well as monitor her activity, sitting here in my office and thus support them whenever needed by them"

- Amrita Puranik, Project Staff, LMRF

collection and health counseling, in addition to leveraging the roles and responsibilities of FLWs in the health system. For instance, LMRF reported that rigorous training and monitoring helped to improve the performance of the FLWs, thus resulting in higher quality and productivity of work.

Preliminary findings from the first two visits from both clusters showed that 20% of women in intervention clusters admitted to danger signs, as compared to none in the control clusters, and that a significantly higher proportion of women was hospitalized in the intervention cluster (8.75%) than in the control cluster (1.25%). Additionally, subsequent visits reported no neonatal or infant deaths in the intervention cluster, as compared to three in the control group. This could have been due to timely reporting to health facilities, given better interpretation of counseling messages on danger signs displayed by ASHAs on the app. Finally, women receiving care through CommCare-enabled FLWs, showed a higher average number of check-ups from their care providers.

SCALING IN TAKALGHAT

LMRF has ambitions to scale up the Mobile SAKHI Project to all primary health centers in Takalghat, equipping each of the FLWs with a mobile tool. The organization is also looking forward to slowly and systematically rolling out this program for their ongoing Maternal and Newborn Health (MNH) Registry. Within this project, LMRF would transition the training toward auxiliary nurse midwives (ANM), and medical officers who are involved in data collection. Amidst these plans to scale, LMRF also hopes to continually leverage the CommCare platform by adding health videos for improving delivery of IMNCI services in the villages. With better outputs, they hope to share this experience with the state government and expand the Mobile SAKHI Project to strengthen the state health system registry.

CommCare 2014
commcarehq.org

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