

The transformative effects of mobile phone messaging on women's roles in decision-making for maternal and child health

Allison Stone, *Columbia University*
James F. Phillips, *Columbia University*
John Koku Awoonor-Williams, *Ghana Health Service*

Description of topic to be studied

The Mobile Technology for Community Health (MoTeCH) Initiative was launched in July, 2010 with the aim of sending individualized care reminders and health information to pregnant women and mothers of young children. MoTeCH has developed a comprehensive mobile phone-based health information system for primary health care and is testing the proposition that m-health technology can improve health. The initiative builds on an earlier project of the Government of Ghana, the Community-based Health Planning and Services (CHPS) Initiative, which relocates nurses from static clinics to community posts and mobilizes volunteerism and social support for their work. Located in the Upper East Region of Ghana, the country's poorest and remote region where health information is severely limited, MoTeCH captures nurse's health service data via inexpensive mobile phones. Using this data, MoTeCH feeds back alerts and reminders to health workers and mothers supporting individual care needs throughout pregnancy and early infancy. MoTeCH is a collaborative program of the Ghana Health Service that is conducted with Columbia University's Mailman School of Public Health and the Grameen Foundation. The project has currently been piloted in 11 communities in the Upper East Region.

MoTeCH information services for pregnant women and mothers of young children include weekly health education messages covering such topics as what to expect during pregnancy and delivery, appropriate nutrition during pregnancy and childhood, and the necessary health services women and children should receive during these stages of life. MoTeCH educational messages also target traditional beliefs and customs that are detrimental to health, for example that women should withstand labor pains for as long as possible before reporting to a health facility. In addition to educational messages, MoTeCH sends individualized reminders to clients regarding upcoming (or overdue) antenatal, postnatal, and child health visits. MoTeCH has the ability to send messages to clients in either voice or text format, and clients select whether they want to receive their messages in English or one of two local languages. Clients are encouraged to listen to MoTeCH messages with their partners, and some MoTeCH messages specifically target a male audience. Women with a personal mobile phone or access to a mobile phone in their household member can choose the day and time to receive their messages. Clients can also access their personal messages at anytime by calling MoTeCH free of charge and entering their individual MoTeCH ID number. This provides a way for women with sporadic access to a mobile phone to receive their messages: if they are able to borrow the phone of a friend or community health volunteer, for example, they can access their messages without incurring any cost.

Theoretical focus

Qualitative appraisal is underway to evaluate the impact of MoTeCH messaging on clients' access to key maternal and child health services. Key areas of investigation include: MoTeCH's effect on clients' knowledge regarding maternal and child health; perceptions of the importance of utilizing available health services before and after exposure to MoTeCH; and any barriers encountered by clients in accessing essential health services. While MoTeCH has not specifically aimed to transform gender and intergenerational dynamics of health decision-making within households, as this theme has emerged in preliminary discussions with clients it has become an area of close examination during qualitative data collection.

Research methods and data

Following several months of exposure to MoTeCH messages, MoTeCH clients, their partners, and other key decision-makers in their households are selected to participate in focus-group discussions. Participants are purposefully sampled to solicit the experiences of MoTeCH clients with varying levels of access to a mobile phone (personal ownership, household ownership, or no ownership/public access), varying parity, educational attainment and household income. Focus group discussions are conducted separately for 1) MoTeCH clients that are pregnant women and women who have recently delivered; 2) Male partners of MoTeCH clients; 3) Other female household decision-makers of MoTeCH clients; and 4) Other male household decision-makers of MoTeCH clients. Each focus group discussion includes six to ten participants, is facilitated by an experienced moderator in the local language, and is tape-recorded, translated, and transcribed for analysis. Following focus group discussions, key informants from each group are selected for in-depth interviews. In-depth interviews aim to solicit more detailed information on the impact of MoTeCH messaging the knowledge, perceptions, and health care utilization of MoTeCH clients and their household members.

Expected findings

Preliminary results have revealed that MoTeCH messaging has had unexpected transformative effects on traditional roles for decision-making regarding maternal and child health within households. MoTeCH clients report that receiving health information through mobile phones lends credibility to their wishes to access key health services, and empowers younger women to insist on healthy behaviors that were previously discouraged by their partners and/or elder members of their households. Many clients report that they listen to MoTeCH messages with their partners and share the messages with other members of their households. Several clients have reported using MoTeCH messages as support in justifying facility-based delivery to their elder household members that encourage giving birth at home according to traditional practices. MoTeCH clients also have commented that the MoTeCH messages regarding proper nutrition for pregnant women and children have increased their ability to access healthy foods in their households. Furthermore, several clients have reported that after listening to messages that discourage heavy lifting and exercise during pregnancy, their partners are more willing to help with strenuous household work.

Several women have commented that MoTeCH messages have empowered them to go against the traditional beliefs, usually promoted by elder female household members, that encourage women to bear pain and discomfort during pregnancy and childbirth without reporting to a health facility for care. One MoTeCH client stated that during an earlier delivery, her mother-in-law encouraged her to remain at home for as long as she could stand before moving to a health facility. This client said it was traditionally considered a mark of strength to bear labor pains at home without the supervision of a midwife. After listening to MoTeCH messages throughout her latest pregnancy that encouraged her to go to the nearest health facility as soon as she started to feel labor pains, the client insisted in doing so during her last delivery against the suggestions of household members. She reported telling household members that, “the people on the phone, the people calling from Accra [the capital of Ghana], they say that I need to go to the health facility as soon as I start feeling pains, so, I won’t delay, I am going now.”

Discussions with MoTeCH clients reveal that the extra-familial information transmitted through MoTeCH messaging has credibility and status itself that enhances the role of young women in health decision-making within their households. MoTeCH messaging has shown to be an influential device for clients in overcoming the traditional beliefs held by household gatekeepers that are detrimental for maternal and child health. Household members may be more likely to comply with healthy instructions that they can access themselves directly through MoTeCH messages, rather than learning this information second-hand from pregnant clients or young mothers after they visit health care providers. Furthermore, the ability for family members to listen to educational health messages directly may reduce familial tensions arising when young women insist on healthy behaviors that do not coincide with the traditional beliefs of elder household members. Health information transmitted via mobile phones lends credibility and support to women’s desires to practice healthy behaviors, enhancing women’s roles in household decision-making.