Promoting youth reproductive health through text messaging

By Eunice Namirembe and Bas Hoefman

A couple shows off their mobile phones. (Photo courtesy of Text to Change).

According to the Guttmacher Institute/IPPF in Facts on the Sexual and Reproductive Health of Adolescent Women in the Developing World, some 67 per cent of married adolescent women in sub-Saharan Africa, aged 12 to 19 years, who want to avoid pregnancy are not using any method of birth control. About 12 per cent are using traditional family planning methods including breast feeding, the rhythm (calendar) method, among others. They further state that 42 per cent of unmarried, sexually-active women do not use any family planning method.

This could be due to the fact that access for young people in Africa to knowledge about contraceptive methods is still very limited, and that there are persistent myths and misconceptions about contraception among the population. Young people's concerns with location and hours of operation of health centres, the issue of privacy and confidentiality, cost of services, and provider beliefs and attitudes, are major barriers in young people's decision to seek information about contraception.

Mobile phone technology can help overcome some of these limitations. It is estimated that 27 per cent of the 5.9 billion mobile phone subscribers, worldwide, are people under the age of 30. According to the International Telecommunications Union, (ITU), (June 2010), there are over six billion mobile subscribers and at least 79 per cent of them in the developing world.

According to the Communications Commission of Kenya (CCK) second quarter, sector ICT report for 2011/2012, mobile phone subscribers in Kenya increased to over 28 million from about 26 million. Tanzania Communications Regulatory Authority (TCRA) also released their second quarter ICT sector report indicating over 25 million subscribers in Tanzania. Mobile phone technology and its relative accessibility and portability therefore become a new, fresh and innovative method to foster access to public health information for women and men in diverse settings. Short text messaging system (SMS) has already been used successfully in a wide range of public health services, including disease

management, sexual and reproductive health (SRH) promotion, and health education.

Mobile phones present a tremendous opportunity for promoting family planning awareness, uptake and continuation, by helping women and men choose and maintain the contraceptive method most suitable for their needs. Moreover, mobile phones are private and confidential. Young people may stay away from clinics or conversations with healthcare providers or other adults for fear of being stigmatised for seeking out information about reproductive health.

And yet, providing family planning information via mobile phones has received limited attention from health service providers. Acknowledging the opportunity that the mobile phone technology provides, the Mobile for Reproductive Health (m4RH) was established in 2010 as a pilot project in Ghana, Kenya and Tanzania. To obtain feedback on the feasibility, design, and content of the m4RH project, some 40 clients in family planning clinics in Dar es Salaam, Tanzania, and in Nairobi, Kenya, were interviewed in May and June 2009 regarding their familiarity with and frequency of text messaging and willingness to receive contraceptive messages via mobile phones.

The m4RH project was launched in May 2010 by Family Health International Kenya funded by the United States Agency for International Development (USAID) with Text to Change (TTC) being responsible for the technical design and platform. The partnership brings together five agencies including Family Health International (PROGRESS project), USAID, Family Health Options Kenya (FHOK), Marie Stopes Kenya (MSK), and Kenya's Ministry of Public Health and Sanitation. It took 18 months to develop and launch the m4RH system. With the goal to increase knowledge of contraceptive methods among young people, the m4RH was set up as an information service.

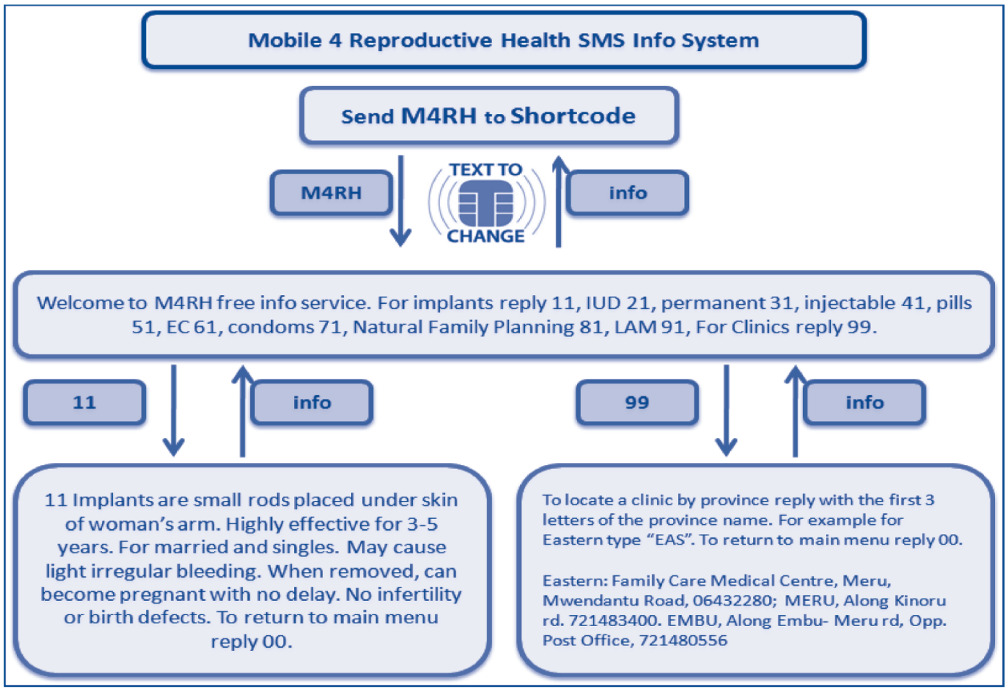

Figure 1: m4RH mobile data as accessed by a participant. Source: Text to Change

Thorough formative research and testing was essential. Concept and message testing with clinic clients, usability testing of system interaction and navigation were also essential steps in the programme development. This is because message content development is always a challenge, hence the need for prior activities. The content is based on World Health Organization (WHO) and country-specific Family Planning (FP) guidelines and was reviewed by global and in-country FP experts, clinic partners, and the MOH before translating and testing in English (Kenya) and Kiswahili (Tanzania).

To maximise reach and access to health information via a mobile phone, the TTC platform was built to generate an automated, keyword, text-based system compatible with a basic mobile device. The platform connects over all telecom service providers in the country. Using the key word 'm4RH'', clients are able to reach the platform over a short code (a telephone number which is shorter than full numbers, that is used to send short messages over mobile networks) from which they will access information on eight contraception methods, location of the nearest clinic and phone numbers of nearby SRH centres. Those who voluntarily opt to receive the m4RH service share information and facts about family planning via SMS. In Tanzania, the service is also available in Kiswahili to curb language barriers.

To maximise clients' participation, FHI distributed promotional material including write-ups, flyers, palm card (smaller cards carrying information) and posters, among others, in health centres in Kenya and Tanzania. Community events, radio spots via partners like PSI were used. Health workers were also involved in recruiting beneficiaries. Over the past four years, TTC has proven that text messaging (SMS) and Voice-based applications can be used successfully in various interactive mobile health education programmes reaching thousands of people across the continent. The system uses text messaging to encourage behavioural change, promotes testing and drug compliance, and provides information on available contraceptive choices. TTC is currently expanding from not only providing a platform for SMS and voice but also data collection.

The table below shows who m4RH is reaching in terms of gender, age, and promotion point

		N	Percent
Gender (n=995)	Female	553	56 %
	Male	442	44%
Age (n=927)	19 and younger	142	15%
	20-29	411	44%
	30-39	243	26%
	40 and older	131	14%
Promotion Point	Poster	326	40%
(n=824)	Clinic	157	19%
	Partner, relative, friend	152	18%
	Community health/peer educator	147	18%
	Community event	42	5%

Results

Within the first four months of the implementation (May-August, 2010), the m4RH service had recorded over 2,000 hits. This has multiplied to over 19,000 and a total of 40,000 queries in Kenya and Tanzania respectively in 2012. It could be argued that Tanzania has a greater uptake for the programme than Kenya due to the fact that the service is offered in the local language, Kiswahili.

After only two years of implementation, however, the system may also have other positive effects. When asked to report on any particular changes in their family planning choices, clients who accessed m4RH reported changes in condom use and that they accessed other contraceptive methods via this platform, suggesting that there is room for the adoption of a variety of coitally-dependent, short, and long acting contraceptive methods. Although accessing m4RH alone will not bring about change, the method in conjunction with exposure to family planning information and health programming can have a positive effect on family planning behaviour.

Young people reported many changes in condom use, meaning, mobile phones may be an effective platform for reaching youth with condom information. m4RH provides an innovative method of reaching out to young people to complement traditional ways of reaching youth with family planning and HIV prevention messages. Young m4RH users also reported changes in the use of other contraceptive methods, also suggesting that there is room for the adoption of a variety of coitally-dependent, short, and long acting contraceptive methods.

Beneficiaries tell their story

Most respondents said they would share the service and/or the messages with their partner or other family members, and especially with their friends. Particularly in Kenya, respondents reported increased discussions around family planning with their partners. Some respondents reported: "I will save [the IUD messages] to show to my husband and friends" (female, 37, Tanzania). "I will tell my fellow women and my husband. I will show them the message so that they can understand" (female, 31, Tanzania).

"My friends and my wife should use the service", (male, 37, Tanzania). "Yes! Friends, neighbours and relatives. I will advise them to use their phones to get reproductive health information", (female, 38, Tanzania). "This is important information and I will share it with friends so that they do not get wrong information" (female, 22, Kenya). "I will tell about the (service) to my sisters — the young ones — and I will talk to them about family planning methods" (female, 28, Tanzania).

Conclusion and recommendations

The time has come to embrace new technologies such as mobile phones to reach young people with SRH information, support and services. A number of organisations are already creatively reaching out to young people via the internet, smart phones and SMS-based applications.

TTC has explored more mobile growth opportunities to create mobile for health brands with m4RH being a strong one that has inbuilt innovative reproductive health packages. This package has now become a strong household name that has attracted opportunities for scale-up to other countries like Ethiopia, Ghana, Rwanda and Uganda.

The opportunities of using a mobile phone as a tool for health are currently numerous and endless. TTC has seen the rise of many mHealth competitors but these have only made them more innovative and explore new ideas — like data collection over a mobile phone and mobile marketing.

The m4RH programme has proved to be an inexpensive system to set up and maintain, and this, we believe, has attracted more partners for scale-up. Discussions to incorporate it into government campaigns in other countries are still ongoing. In order to improve evaluation assessment, plans are under way to ensure continuous electronic data capture and monitoring, fielding of three questions to m4RH users to assess age, gender, and where they learned about m4RH, clinical-level data collection to assess if clients visit clinics as a result of m4RH, and telephone interviews to obtain feedback on the system and possibly evidence for clinic referrals.

Lessons Learnt

- **Text messaging (SMS) and Voice-based applications can be used successfully in various interactive mobile health education programmes reaching thousands of people across the continent.**
- **There is room for the adoption of a variety of coitally-dependent, short, and long acting contraceptive methods.**
- **It is thought that Tanzania has a greater uptake for the programme than Kenya because the service is offered in the local language, Kiswahili.**

A pregnant woman with her mobile phone. (Photo courtesy of Text to Change).

TTC has a fully functional call centre that will be available for necessary follow-up of clients/users to assess user experiences and the quality of health services. Today, with young people constituting the largest demographic in the world, mobile phone technology offers a tremendous opportunity to equip millions of them with essential information about their bodies, relationships and health. The M4RH mobile system has proved to be a major success in reaching even the unreached women and men on health issues. ■

Eunice Gnay Namirembe
Programme Manager

Correspondence:

Text to Change
P.O. Box 40187, Kampala, Uganda
Tel: +256 712 833 955
E-mail: enamirembe@texttochange.com
E-mail: h.ormel@kit.nl