

Case Studies

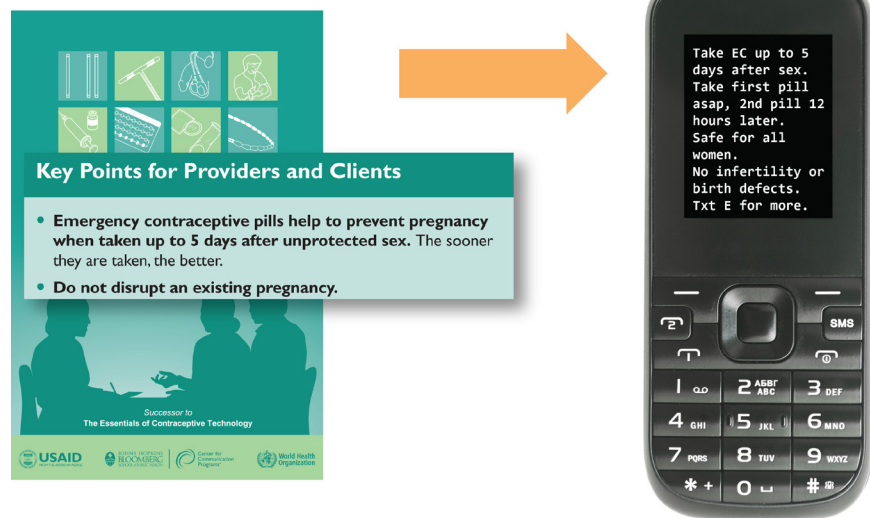
Adapting Global Family Planning Training Curricula and Research Into Easy-To-Read SMS in Kenya and Tanzania | FHI 360

In 2008, with funding from the U.S. Agency for International Development (USAID), FHI 360's Program Research for Strengthening Services (PROGRESS) project began developing Mobile for Reproductive Health (m4RH), an opt-in SMS-based health communication program that provides information about nine family planning methods and a clinic database for accessing the methods. It was piloted and evaluated in Kenya and Tanzania from 2010 to 2011 in collaboration with several partners including the ministries of health (MOH) in both countries and Text to Change, the technological partner.

FHI 360 conceptualized, developed, and deployed m4RH as part of a research study aimed at determining the feasibility of providing family planning information via text message, the reach of this communication channel, and impact on family planning use. FHI 360 took a systematic approach to adapting evidence-based global and locally relevant guidelines to the 160 character limit of SMS, with all content undergoing extensive user input and testing.

For the initial message development in Kenya and Tanzania, FHI 360 reviewed global resources that were already well synthesized. In an interview conducted for this case study, they mentioned specifically the *Family Planning: A Global Handbook for Providers*¹¹ as a "key resource because of it has well-synthesized key messages at the beginning of every chapter." They also reviewed relevant global and local training curricula, research reports, and programmatic documentation (for example, from family planning-focused strategic behavior change communication projects).

Figure 2.
Synthesizing "key points"
from *Family Planning: A Global Handbook for Providers* into a SMS message



They conducted two levels of expert review of the proposed messages: global expert consultation and in-country stakeholder consultation of family planning experts, clinic partners, and the MOH. Once the messages were refined based on the consultations, they were translated and reviewed again in English (Kenya) and Swahili (Tanzania). They were then tested with the audience in family planning clinics with female and male clients, who viewed the messages and provided feedback on language, comprehension, relevance, and trustworthiness.

Results from the pilot indicated that women, men, young people, and couples used m4RH to learn about the range of family planning methods. Users found m4RH easy to use and understand and reported increased family planning knowledge as well as some behavior change.

Since the pilot was completed, FHI 360 has expanded m4RH, developing and testing new messages using the same approach applied in the pilot. In Tanzania, FHI 360 has developed additional family planning content to further address side effects and common rumors and misconceptions associated with different family planning methods. FHI 360 has also adapted the program for young people in Rwanda, Tanzania, and Uganda. The youth adaptation process involved developing new messages about HIV, sexually transmitted infections (including human papillomavirus), sex and pregnancy, and puberty, as well as ensuring that the basic contraceptive messages are appropriate for young people.

The process for adapting the m4RH content to other country settings and audience groups includes the following:

Conduct stakeholder group technical meetings to determine and prioritize content areas. Stakeholder input is vital to understanding method availability, contextual issues, as well as what the sexual and reproductive health laws and policies (especially as they relate to abortion, age of consent, and homosexuality) are in a given country. This is important to consider in developing messages that are factual but won't be perceived by lawmakers as encouraging something that is illegal. Review endorsed local materials as well as any updated global best practices. Share messages with stakeholders for their review and inputs. Conduct focus group discussions with the audience, and in the case of youth in Rwanda, for example, with their caregivers as well.

In some countries, the stakeholders and audience requested more emphasis placed on content areas indirectly related to family planning and reproductive health, such as the impact of alcohol or gender-based violence. FHI 360 used a similar approach as outlined above in developing messages related to those topics as well.

Key lessons learned:

- Engage global and local content experts throughout the message development and testing process.
- Don't reinvent the wheel entirely—use existing content to help craft messages.
- Consider the country context, audience (their age and where they might be in terms of their development and family planning and reproductive health needs), and knowledge needs.
- Always test messages with the audience.
- Develop a promotion and delivery plan. Because m4RH is an opt-in system, its use is highly dependent on how much it is promoted.

Repackaging eLearning Health Content as a Mobile App for Community Health Workers in Ghana | Concern Worldwide/ Grameen Foundation

Community health nurses (CHNs) are often the primary providers of maternal, newborn, and child health care (MNCH) in rural Ghanaian communities. However, CHNs face substantial challenges to address the health care needs of their communities, which are geographically diffused and often under-resourced. While CHNs serve a crucial role, they are the least credentialed nurses within the Ghana Health Service (GHS) and have limited opportunities for career advancement. Their experience reflects global trends: although there are more in-service training programs developed for health workers than ever before, a continuum of learning from preservice to in-service training is sorely lacking.

From February 2014 to December 2015, K4Health collaborated with GHS and Grameen Foundation to give CHNs in five rural districts of Ghana access to professional development courses via an Android app. The Android app, developed by Grameen under Concern Worldwide's Care Community Hub Project, was designed in response to challenges that CHNs reported had impacted their motivation and job satisfaction. These challenges included not feeling valued by clients, not being recognized by supervisors, lack of access to information and tools, and lack of peer support. CHN on the Go had five modules to address the various challenges of the CHNs, including a planner, point-of-care tool, and a learning center. K4Health provided educational content for the app's learning center through the USAID Global Health eLearning Center website (www.globalhealthlearning.org), which K4Health manages. The technology for the learning center was developed by Grameen based on OppiaMobile, an open-source mobile learning platform developed by Digital Campus.

The Global Health eLearning Center can be accessed via phone; however, it still requires an Internet connection. On the other hand, the CHN on the Go app allows for courses, once downloaded, to be viewed without an Internet connection. In addition, it is a free global resource, with content developed for a broad audience of public health program managers, health service providers, and policy makers, not specific to any one country or health cadre. To meet the needs of CHNs working in rural settings in Ghana, K4Health, Grameen, and GHS undertook a systematic approach to adapt content from the Global Health eLearning Center to make it more relevant and accessible to the local context.

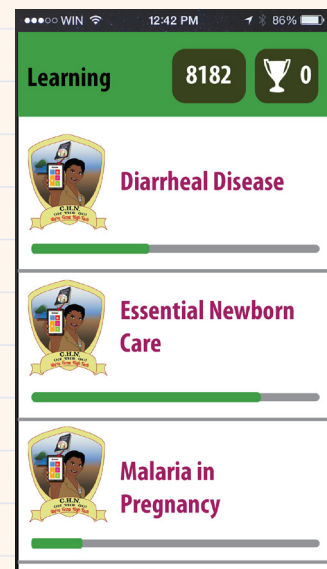
K4Health reviewed the Global Health eLearning Center family planning and MNCH course content for suitability for CHNs and the local needs in Ghana based on family planning methods availability and CHN's roles and responsibilities in Ghana. The content was then reviewed by Grameen and GHS in detail for language and clarity, content relevance, appropriateness for CHNs, conformity with GHS health protocols and policies, and appropriate photos or other imagery that reflected the Ghanaian context. During this stage of the adaptation process, GHS created additional content for key topics not included in the original courses. The review process highlighted the collaborative nature of the effort, with multiple departments of the Family Health Division of GHS working together to revise the content for local context.

The app with the adapted content was launched in two phases to ensure two rounds of training with CHNs and their supervisors, testing, and iterative improvements to both the technology and the content based on user feedback.

- Phase I introduced the adapted family planning courses on the app (July 2014)
- Phase II introduced the adapted MNCH courses on the app (November 2014)

In the end, 14 adapted Global Health eLearning Center family planning and MNCH courses were made available via the Android app. About 80% of the content is relevant and ready to use; however, the remaining 20% needed to be adapted for the job function of CHNs and the local context in Ghana. Of the 234 course certificates earned (earned by passing a course final exam with an 85% or higher), the five most popular courses account for 85% of the successful course completion and also represent the main areas in which CHNs provide counseling and services: diarrheal disease, family planning counseling, essential newborn care, malaria in pregnancy, and emergency obstetric and newborn care.

Figure 3. Global Health eLearning Center courses hosted on the Learning Center of the CHN on the Go app



Key lessons learned:

- Engage local stakeholders at multiple levels of the health system.
- Align content with country protocols.
- Make sure the content is relevant to the audience's job responsibilities.
- Adapt and/or replace visuals to make them more locally relevant.
- Seek user feedback.
- Consider user incentives! Ultimately, the mLearning courses were accredited by Ghana's Nursing and Midwifery Council.

Adapting eLearning Health Content to an Interactive Voice Response Training Course for Medical Training Students in Kenya | K4Health

In response to a growing demand for customized training content in the field, K4Health began to explore new ways to deliver the free global health technical content available on the Global Health eLearning Center to reach a wider audience of health program managers and health providers working in low- and middle-income countries. While the proportion of households with Internet access has increased, accessibility and connectivity continue to be an issue for the vast majority of people living in low- and middle-income settings. On the other hand, there are almost as many mobile-cellular subscriptions as people on Earth and more than three-quarters of them live in low- and middle-income countries.



A midwife uses her feature phone.
© 2015 Radha Rajan, Courtesy of Photoshare

Leveraging this reality, K4Health sought to test how easily and effectively Global Health eLearning Center quiz content could be adapted to an interactive voice response (IVR) platform. IVR is a technology—possible with any type of mobile phone—that delivers information via audio recordings and enables users to provide feedback by pressing a number key. IVR allows for the delivery of more robust information than SMS but does not require smartphones, Internet connectivity, or even full literacy because the information is audio recorded.

In 2015 K4Health, in partnership with the Kenya Medical Training College in Kitui, the District Hospital of Kitui, and IntraHealth International, launched the IVR family planning refresher training course. The IVR course content consisted of 20 multiple-choice and true/false questions selected from the online final exams of the Global Health eLearning Center Family Planning 101 and Family Planning Counseling courses and accompanying detailed explanations. K4Health with partners reviewed the final exams of the two courses and prioritized quiz questions that focused on either the methods readily available in Kenya and/or counseling messages specifically related to those methods.

Audio recordings of the questions, their solutions, along with an explanation of the solution were provided by a local staff member from IntraHealth International's Kenya office. Minimal adaptation of the source content was necessary. Instructions on how to complete the training were also recorded. The recordings were then loaded onto the IVR platform, a customized version of InSTEDD's Verboice API, which was selected as the activity's IVR platform for its ease in customizing content delivery schedules and retrieving use data for reporting.

The final exams from the Global Health eLearning Center courses served as the baseline assessment for the IVR refresher training course. It was discovered early in implementation that participants were unable to take the courses online due to limited Internet access. All participants were given paper copies of the courses and final exams to complete as part of the baseline assessment.

Then, as early as six weeks after completing the baseline assessments, participants began receiving the IVR training, delivered to their personal mobile phones. Whenever a participant was available and ready, they would text the IVR system to prompt a call, then respond to audio recorded questions using their phone's keypad. The system indicated whether the answer was correct or incorrect and provided a detailed explanation via audio recording.

Following a spaced education approach^a, all participants needed to answer all 20 questions correctly twice. Once a trainee answered a question correctly twice, the question was retired and not asked again. Successful completion of the course occurred when all questions were retired.

A midpoint assessment was conducted in March 2016 that included administering a usability survey and focus group discussions to determine the effectiveness of deploying Global Health eLearning Center quiz questions using IVR and SMS technologies. An endline analysis is underway to determine how well participants retained knowledge from the IVR refresher training course.

It was determined from this assessment that the IVR platform used in this activity was a successful method for delivering family planning content according to self-reported learner satisfaction.

Key lessons learned:

- Even when adapting English-language content, it is important to have local staff members review content for vocabulary and meaning, which might not translate to the local context.
- Training content should be relatable, so make sure audio recordings are done by native speakers taking into account local dialects and accents.
- Stakeholder engagement and local partnerships are critical, especially when rolling out a new technology.
- With IVR, content comprehension issues may not always be due to language or the quality of the audio recordings. The variety of mobile phones used by participants and their familiarity with how to use their keypad can also affect the users' experiences.

^a *Developed at Harvard Medical School, spaced education uses an interval reinforcement methodology that is scientifically proven to increase knowledge retention from 3 months to 2 years, and changes even ingrained on-the-job performance.*

Adapting a Family Planning Health Guide as a Mobile App For Frontline Health Workers In Tanzania | Hesperian Health Guide/Community Based Initiative in Health, Water and Sanitation (COBIHESA)

Hesperian Health Guides, a partner of the Knowledge for Health (K4Health) Project, is a nonprofit organization that has developed and distributed health materials in over 80 languages. Hesperian Health Guides recently translated and adapted an English-language chapter on family planning from the *NEW Where There Is No Doctor* book to a mobile-friendly HealthWiki in Swahili, and then further adapted it to a mobile app for health workers providing family planning services in Tanzania.

Since its release in 2012, Hesperian's "Safe Pregnancy and Birth" mobile app has received wide global uptake and critical acclaim, winning the "She Will Innovate" competition run by Intel Corporation and Ashoka Changemakers^b, for providing comprehensive and accessible information that can be used by community health workers and midwives to support their interactions with pregnant women and their families.

Building on this success, Hesperian chose to develop a mobile app to support health workers in the delivery of family planning services in response to the heavy global demand for its online family planning content. Hesperian's online family planning content was accessed globally by more than 1.2 million users from August 2015 to August 2016 from 222 countries and territories.

Over 75% of users access HealthWiki with a mobile device, therefore a mobile app with structured navigation could be a better tool to support health workers to counsel and deliver family planning services. The mobile app also provides access to vital information offline, making it more feasible for use by health workers in the field.

The chapter on family planning in the book, *NEW Where There is No Doctor*, was originally vetted by expert reviewers, field-tested with community-based partners, and released in an English-language HealthWiki.

The process of adapting this content for a mobile app took place in two phases:

- Translation to Swahili and adaptation to a HealthWiki and
- Adaptation of the HealthWiki to a family planning mobile app.

Before beginning the first phase of translation and adaptation, Hesperian and COBIHESA worked together closely to identify elements of the English-language version that Tanzanian audiences may have trouble understanding or that did not translate culturally, such as sections that were not relevant to life in Tanzania or different names of family planning contraceptives.

Overall, Hesperian and COBIHESA found that contextual changes were minimal because family planning content is largely standardized and the original content mostly matched family planning practices in Tanzania.

^b<http://hesperian.org/2012/11/15/hesperian-wins-award-for-safe-pregnancy-and-birth-mobile-app/>

COBIHESA then translated the information from English to Swahili and adapted it for HealthWiki. Hesperian's developer community reviewed the online HealthWiki for user interface design and experience. COBIHESA also did a full copyedit and review of the online content and assisted with site testing. Two technical experts in family planning and Swahili language reviewed the full module online before it went live.

Content adaptation for the mobile app began during the translation to Swahili. In Hesperian's model, content adaptation begins with considering differences in user interface and experience between a web page and mobile screen. Online content can serve many audiences, but mobile content must be tailored for one audience type. As a result, the first step was to define the use case before deciding on what content from the source text should be included in the mobile app.

Hesperian's mobile app is designed primarily to serve as a counseling tool for community health workers to guide counseling conversations with clients or to support decision making. Hesperian determined this use case by looking at web analytics and field studies to identify which audiences use HealthWiki content the most and to understand what functionality would be most useful to them in a mobile app.

Once the use case was identified, Hesperian created an outline of the important levels of information that community health workers need in a mobile app for this purpose.

Next, content from the chapter on family planning was extracted to fit the outline. As the family planning information in the chapter was created to satisfy multiple audiences' needs, Hesperian expected challenges related to having both too much information and not enough information relevant to the community health worker's needs. During the adaptation process, content was heavily synthesized and content gaps were identified. The gaps were then filled with content from other Hesperian publications and resources, such as the original book *Where Women Have No Doctor*.

A use case can be described as how the primary user (e.g., client, health program manager, or community health worker) interacts with the mobile app to achieve their goal of finding information on contraceptives, guidance on family planning programming, or support from a simple job aid.

Key lessons learned:

- Start with vetted content that is relevant and appropriate to your audience.
- Carefully define the primary audience and how the tool will achieve its goal before refining the content. In this case study, the use case was defined to support frontline health workers, especially community health workers, to conduct counseling or to support decision making.
- Encourage adaptation to make the translation culturally relevant. Hesperian's model also encourages local ownership of translated materials, which increases the commitment to distribution and updating over time.

Adapting Health Videos for a Southeast Asian Audience to a Sub-Saharan Africa Audience | Medical Aid Films

Medical Aid Films uses film and innovative media to transform access in low-income countries to information about women's and child health. Bringing together leading health expertise, filmmakers, and frontline health workers, they create high-quality, resource-appropriate education and training for health workers and communities around the world.

Their collection of more than 200 films in 20 languages, which cover topics in maternal, newborn, and child health, are watched in more than 100 countries worldwide, reaching millions, and empowering them with knowledge that saves lives.

In 2014, Medical Aid Films worked with leading medical technology firm, GE Healthcare, with an innovative project to provide access to lifesaving information about pregnancy and childbirth for women in developing countries. The project used low-cost portable ultrasound scanners with inbuilt film content about pregnancy and reproductive health, reaching women across Southeast Asia and sub-Saharan Africa at a crucial point of engagement with health workers.

GE identified four existing films (warning signs in pregnancy, what pregnant women need to eat, steps to a normal delivery, and family planning), which could provide valuable educational content to show on their ultrasound devices. Medical Aid Films adapted the original scripts from 10 to 15 minutes in length to new versions of 5 minutes each—the optimum length to be shown on the ultrasound devices.

After collecting feedback from their team of technical advisors and local partners, they edited these films to produce a suite of four short ultrasound device-enabled films, and then translated and dubbed them into French, Swahili, and Portuguese for GE's focus countries in sub-Saharan Africa.

The second stage was to adapt this content for GE's other area of focus, Southeast Asia. Medical Aid Films shared the films with local partners in Cambodia, Vietnam, Indonesia, and Myanmar, collected feedback about how they should be adapted in terms of cultural sensitivities, country guidelines and local practices, and then adapted the scripts to incorporate this feedback.

This included local advice on nutrition in pregnancy, for example, available and recommended food types, and adapting the animated characters to have culturally appropriate clothing.

They filmed pieces-to-camera (when a presenter or a character speaks directly to the viewing audience through the camera) with two Southeast Asian midwives in the UK, worked with local filmmakers in Thailand, Myanmar, and Indonesia to film footage in local clinics, and adapted the animations in the original films to be culturally and geographically representative.

The films were reviewed at each stage by the team of advisors. Once completed, they then translated and dubbed the completed suite of four films for Southeast Asia into Khmer, Vietnamese, Bahasa Indonesian, and Burmese.

These films support health workers to scan and advise women, and will empower women with lifesaving knowledge. They are currently being used at 200 sites in Tanzania, Nigeria, East Malaysia, and Myanmar.



Video image from “Understanding Warning Signs of Pregnancy”, 2011, Medical Aid Films

The films are freely available to partners upon request, under the Creative Commons license.

Medical Aid Films delivers their content through their website and social media platforms, through a mailing list of more than 2,000 subscribers, and through health networks such as Health Information For All. Their films are also viewed more than 2 million times each year on YouTube.

The organization works in partnership to evaluate the impact of films on increase in knowledge and change of practice in a range of education and training program with partners around the world.

Key lessons learned:

- Adapting content provides a cost-effective method to leverage existing content to make it engaging, appropriate, and accessible for new audiences.
- Translating technical medical content to simple language can be challenging, and it involves a consultative review process of material to ensure that it's user-friendly and accessible.
- It's important to work with local filmmakers to strengthen in-country capacity.
- Sourcing translation and dubbing into foreign languages can be difficult, particularly when working with health information, but it can transform your reach and engagement with audiences.