The Malawi K4Health Mobile Learning Pilot

Brief Overview

Providing health workers with access to current health information can help to improve the quality of health services. However, health managers and providers working at all levels to provide HIV and family planning services frequently lack up-to-date and relevant information. Existing information is often scattered, too technical, and difficult to access. Health workers tend to rely on outdated information, even when new guidelines or protocols have been introduced at higher levels of the health system.

The Knowledge for Health (K4Health) Malawi Pilot Project was funded by USAID and implemented by Management Sciences for Health (MSH) as part of the Global K4Health project led by Johns Hopkins University Center for Communication Programs in partnership with MSH and FHI 360.

The K4Health Malawi Pilot Project was designed in 2009 as a small Mobile Learning project, designed to improve access to and use of information by health care providers at the district all level of the health system in Malawi. The project aimed to show that providing health workers with access to current, relevant family planning, reproductive health, and HIV/AIDS information improves the quality of health services. The project worked with health managers and service providers at the national, district and community levels and ended in December 2011.

**Geographic Coverage:**
Nationwide; Salima and Nkhotakota districts, Malawi

**Implementation Partners:**
The Global K4Health project led by Johns Hopkins University Center for Communication Programs (JHU-CCP) in partnership with Management Sciences for Health (MSH) and FHI360

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About Malawi Mobile Learning Pilot
In order to provide up-to-date information in a more efficient manner, a system was developed at the district level to provide information to community-based health workers.

This distance learning program included four key components.

- A six-month Leadership Development for Knowledge Management (LD for KM) program: developed for participants from the national and district levels to align and mobilize them around the need for improved knowledge exchange.
- A national taskforce: formed to manage and disseminate technical information on family planning, reproductive health, and HIV/AIDS.
- District Learning Centers (DLC): established in the district health offices of Salima and Nkhotakota.
- A pilot mobile health program in Salima and Nkhotakota districts using SMS was implemented.

In collaboration with Frontline SMS, an SMS-based mobile telephone network was established that allows community health workers to send text messages between cell phones and other devices. Through the mobile network, the program alerts these health workers to new resources, training opportunities, changes in protocols, and other relevant knowledge exchange and public health activities in their district.

Evaluation and Results
Since the launch of the project in May 2010, K4Health project has achieved the following:

- 663 cell phones and solar chargers distributed to Community Health Workers, serving a catchment area of 652,326 Malawians;
- 1,059 SMS messages on RH/FP and HIV sent to the hub;
- Faster feedback from supervisors; with the phones the average time to receive feedback was nine minutes as opposed to over one day;
- Improved both the reliability of clinical information and the detection and prevention of stock-outs;
- Increased CHW self-confidence and client trust;
- More efficient referrals and widened coverage;
- Reduced costs of reporting to supervisors from $3.06 using public transport to $0.48 using SMS; and
- Prompt responses to outbreaks; the average time went from 523 minutes to three minutes.

Lessons Learned

- Developing a limited number of new features, such as automated responses for frequently asked questions by CHWs, might improve the use of the SMS network.
- In addition to expanding access to health information, the SMS network facilitates knowledge exchange between CHWs and higher levels in the health system.
- Since measuring the effect of using SMS network on quality of care was a challenge, the project team should consider tracking how the SMS network affects the inputs into quality of care (e.g., stockouts and quick resolution of problems) and health service indicators (e.g., contraceptive use) as proxy indicators of quality.

Conclusion
Most importantly, a final project evaluation found that the pilot project demonstrated immediate benefits to front line health workers in the areas of increased knowledge, greater self-confidence, cost and time savings, and widened service coverage.

In the context of sustainability, strengthening the Malawian health system at district level is an important investment of resources to provide timely and informed services to clients. The K4Health project provides a good platform for data collection and information dissemination via text messages in low income countries.

Information was excerpted from:
K4Health Malawi Project Overview; http://www.k4health.org/malawi#toolkit
mHealth in Malawi: Improving Access to Family Planning and Reproductive Health Information – Thozani Bema K4Health Network Coordinator K4Health Malawi Project Overview; : http://www.k4health.org/sites/default/files/Malawi%20Fact%20Sheet_1-pager.pdf