

Mobile health saving lives in the developing world

Cell phones are now a common part of our everyday lives. But not only is the technology taken for granted, its wide-reaching potential is largely unrecognised. The technology that is found in cell phones and PDAs is currently being applied to improve health services in developing countries.

By [Nicole McIntyre](#) 9 Mar 2009

The United Nations Foundation (UNF) and Vodafone Foundation (VF) Technology Partnership is using mobile health (mHealth) technology to support UN programs in developing countries. Innovative mHealth projects are powering the collection of health data, supporting diagnosis and treatment, and advancing education and research in even the most remote and poverty stricken environments.

In health care, time is of the essence. With mobile technology, data can be quickly and accurately collected allowing health workers to co-ordinate their efforts and track the success of health campaigns. This technology can also be used in disaster and outbreak response, to track the spread of an epidemic in real time. With the most up-to-date, easily accessible information and communications, mHealth is revolutionising healthcare delivery in much of the developing world. Mital Shah, senior director of Technology Partnership at the UNF, told MediaGlobal, "We are working with nearly two dozen Ministries of Health, in different parts of the globe on implementing our mHealth programs. [Our collaboration with] government health offices is facilitated by the World Health Organisation...a major partner in our mHealth efforts."

Commissioned by the UNF-VF Technology Partnership, the report, "mHealth for Development: The Opportunity of Mobile Technology for Healthcare in the Developing World" was released last month. It explains mHealth's implementation in over 50 countries, the health needs to which it can be applied, and the mHealth applications that promise the greatest impact. The UNF-VF Technology Partnership, with a commitment of \$1 million for development and deployment, has tapped DataDyne and its EpiSurveyor software for its mHealth for Development program.

Recognising the potential of cell phones and the internet to revolutionise access to information throughout the developing world, DataDyne.org, an innovative non-profit organisation, developed its EpiSurveyor software on a field-ready mobile device. EpiSurveyor acts as a digital health surveillance system, able to collect and analyse field data, and write surveys and questionnaires. Since 2006, health officers in Cameroon, Ghana, Kenya, Senegal, Sierra Leone, Uganda, and Zambia have been trained and use EpiSurveyor software.

Dr. Joel D. Selanikio, director of DataDyne.org and Assistant Professor of Pediatrics at Georgetown University, told MediaGlobal that, under WHO auspices, EpiSurveyor software has been implemented "in 10 countries, with training planned for 8-10 more during 2009." DataDyne supports an initial three-day training period in each country and follows up with further feedback and responses to requests for technical assistance. "The suggestions made by the countries, and the problems they have communicated to us have been our primary means of improving the software," said Selanikio.

Measuring the value of mHealth technology in terms of cost benefits, Selanikio noted countries had data that was needed and collected, such as vaccination surveys. "[Previously] this was [done] on paper. With paper you have low technology costs (i.e., zero) but high personnel costs because everything takes more time:

more time in the field, and more time doing data entry. Electronic data collection, saves the countries days sometimes weeks of field and data entry time.”

In considering costs, it's also important to acknowledge where data was not being collected before. The areas that are now being reached with EpiSurveyor had previously been ignored because it was too difficult and/ or expensive. Thus “the data just didn't get collected.”

The EpiSurveyor software supports health service co-ordination at the national level. But measures are in place to ensure regional co-ordination and co-operation as well.

Selanikio noted, “It's interesting to watch as EpiSurveyor has allowed countries to generate more and more data: this has really made regional co-ordination an increasing priority. We are working with the International Federation of the Red Cross, the UNF, and the Measles Initiative to allow web-based sharing of forms, data and analysis” in an increasingly standardised format.

The results speak for themselves. “What we're seeing in our longest participating countries, like Kenya and Zambia, [is that] EpiSurveyor has made it so simple to use mobile electronic data collection, it gets used all the time and people are collecting more data than [ever] before,” said Selanikio.

In Kenya over the last year, EpiSurveyor has been put to great use. Programs range from exit interviews of mothers at health clinics to investigate immunisation coverage to an investigation of Kenya's first polio outbreak in 20 years. Surveys have been used in such municipalities as Nairobi, to monitor waste management practices, as well as the national level immunisation practices which included sub-surveys of facilities, households, health workers, and exit interviews.

According to Selanikio, “Kenya's Ministry Of Health staff now understands that it is substantially easier to do surveys, so they do them more often” and without any external consultants or international staff. “There is no other example ... where a technological capacity has been so thoroughly and sustainably transferred to country staff. There are no other examples in the world where local country staff routinely and commonly do mobile data collection themselves ‘Mobile data collection made boringly simple’ could be a good slogan for the project,” said Selanikio.

DataDyne has a number of new projects in development, including highly-adaptable SMS-based systems for a number of causes including; an SMS vaccination reminder system, to alert parents when children's vaccinations are upcoming; and an SMS news system, where participants receive free news alerts with public health messages. Furthermore, EpiSurveyor software will be expanded to include cell phone and web-based versions, and complemented with data analysis software. Selanikio also recognized that EpiSurveyor technology can be applied outside of the healthcare sector, “[to] anywhere where data needs to be collected”.

The work of DataDyne and the UNF-VF Technology Partnership is at the forefront of an ongoing trend which is harnessing technological innovations to encourage development. In February, UNICEF hosted the UN's 5th Annual Web4Dev conference, which brought together global leaders and innovators from the UN, academia and the private sector to discuss the importance of new technology and partnerships for achieving the Millennium Development Goals.

Shah agreed the opportunities in technology to benefit development have been outlined across the health sector, government and public-private partnerships. “The big opportunity for technology in

development, is to develop a business case for government, the private sector and NGOs, to leverage the time and resources, to take pilot and small scale technology in development programs to large scale, and open programs that provide a mutual benefit to the many players in a development project.”

Article published courtesy of [MediaGlobal](#)

For more, visit: <https://www.bizcommunity.com>