Africa: Mobile Phones Improve Health Across Continent

Julie Frederikse 13 June 2011

INTERVIEW

***Peter Benjamin** is the general manager of Cell-Life, a South African non-profit organisation that uses cellphones to assist with healthcare in the HIV/Aids sector. Cell-Life is funded by South Africa's Vodacom Foundation and the United States and Canadian agencies for international development.*

Benjamin was invited to make a presentation at the recent mHealth Summit in Cape Town and to participate in the summit's Leadership Forum. He spoke to allAfrica's Julie Frederikse about how Cell-Life is using one of Africa's biggest social networking platforms.

Why does Cell-Life focus on HIV/AIDS in its work in mHealth?

We started off focusing on HIV in 2001, when it was the biggest killer in South Africa but the government was in denial so there wasn't a coherent response from the government health department. As an NGO it seemed the most important priority was to see if the tools of cellphones and computers could assist with this crisis. With HIV there is still such stigma that people can feel isolated, so if they have access to a cellphone they never need to feel alone.

What we've done is to link in to the MXit instant messaging service. The way MXit works is it does a little trick that sends text messages – not through SMS but through sending data, like downloading a website or ring-tone. It's charged completely differently so in effect it doesn't cost 50 [South African] cents per SMS, but less than one cent per message.

In South Africa anyone under 25 knows about MXit as the coolest way to connect with their friends for free. The numbers on MXit are close to unbelievable – more than half the country's population (of 49 million) is on MXit! So it's the way to reach people, particularly the youth, at very low cost for Cell-Life.

So Cell-Life is the HIV content on MXit, where you can get basic information, ask questions, get formal counseling. And you can access the National AIDS Helpline for free, even from a cellphone. We've set up text counseling: you type in your questions to the counsellor. It's going quite well, we've had about 35,000 text counseling sessions over the last year and a half.?

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Specialists in mobile technology say it can profoundly improve healthcare in developing countries.

Which mHealth initiatives have had the most attention internationally?

So far it's the ones that are mainly around managed healthcare in the developed world. For example there is Welldoc, which is a most impressive self-managed healthcare system in the U.S. Say you may be diabetic, then you fill in lots of information on the phone and serious algorithms are applied, dependent on your situation, which then tell you what to do.

Those successful systems are great but they they don't change the health system at all for the vast majority of people. Most people with a smartphone have medical aid, they're on the Internet, so putting lots of attention into what they can do on those phones will ultimately make for only minimal changes to the overall health of most people. There is desperately little that addresses real issues of people in the developing world. So what mHealth could do is to lower barriers to entry for all people who want to access the health system.

Can you give any examples of mHealth initiatives that are working well in Africa?

That was the best thing about this summit – meeting people and hearing about what others are doing in other parts of Africa. One of the most impressive projects I learned about is called MOTECH in Ghana. It's mobile technology applied to midwives and maternal care, supported by the Grameen Foundation and the Earth Institute at Columbia University. They've developed a really impressive system, giving cellphones to midwives in a few Ghanaian health districts so they can collect data on pregnant women and women with young babies. This is linked to SMS systems, using proper database systems that can analyse data as it comes through and spot problems before they become medical emergencies. I think it's one of the best uses of rather high tech, but for basic maternal health.

In your presentation you quoted a prominent thinker on the Internet, Clay Shirkey, who said, "These tools don't get socially interesting until they get technologically boring." Do you mean that mobile technology will be most useful when it becomes second nature to people?

Exactly. Right now much of what's called mHealth is focused on clever devices and gadgets, like ways to measure glucose levels. But what is potentially transformatory for Africa is if you can turn the 500 million phones in the hands of ordinary people into tools to assist them with health issues. This will happen because they are so familiar with the technology – simple technology, like using SMSs for doctors to get important advice while in the field or to for ordinary people to call for emergency care.

Would you agree with the view expressed at the first African mHealth Summit that there is an urgent need to formally evaluate the many small programs piloting mHealth?

Yes, but there must be proper evaluations. There are lots of studies that say we've sent a huge number of SMSs to participants and the feeling is, that's nice but so what? Most of what is being called evaluation looks like customer satisfaction surveys: Yes, I'm glad I received that SMS.

There's starting to be some evidence through randomized control trials, which are ways of assessing whether interventions are effective or not.

But there are very few published studies to show the effectiveness of mHealth. Only a few make any formal demonstration of medical benefit, and on top of that only two or three have gone to scale, meaning that they actually are being done at national level so they could be integrated into a national health system en masse. And only a handful have gone to any scale with a business model, meaning that all stops if and when the donors stop. So it really is a very embryonic sector.

Has Cell-Life done any formal evaluations of its programs?

We are running a randomised control trial to see if sending different sorts of SMSs can influence people to take an HIV test, to see if using cellphones could lead to behavior change or not. We've done another on the Prevention of Mother-to-Child Transmission of HIV, to see if supporting mothers will achieve an end result of them staying in the program, finishing the drugs, and then testing to see if their babies are born HIV positive or negative. And we are currently running two different adherence trials to determine if sending messages and support through MXit makes people more likely to take their pills.

But remember, to do proper randomised control trials takes about two years. It has to go through formal ethics approval, which takes months, and you have to run for a year to test and then get data. And what's more is that it's more tricky in our sector, because with mobile there's always a new thing on the market that people will be doing with their phones.

Are evaluations of mHealth programs being done elsewhere in Africa?

Yes, in Kenya last late year we saw the first study, in the respected medical journal, The Lancet, showing that SMSs can improve adherence to ARVs. Another encouraging example is in Egypt, where a lot of health clinics have been linked up through cellphones in a health management system. What they used to have to report on paper is now being done over cellphones and it seems to be improving the efficiency of the health system in those clinics.

In Tanzania they're using cellphones to do stock checking of drugs from pharmacies. It has reduced stock-outs – when clinics run out of drugs – from 26 percent to one percent through better supply chain management. It wasn't that there were not enough drugs, but they were sitting in the depots because the delivery system didn't know which clinics needed what drug.

So what's next in the field of mHealth?

We need to set up an advocacy body, which is largely what has come out of this summit. Many of us in the field have come together into an informal group and we aim to launch such an organization soon.