PCWorld

Witnessing the human face of mobile in Malawi

Ken Banks, IDG News and Josh Nesbit

It may not seem like much to you and me – indeed, it's unlikely to make a lot of sense – but for the person that sent it, and more importantly the one who received it, it represents the dawn of a new era in rural healthcare in the region.

The first message read *"Ineyo ndinayenda mapesent awiri sakupeza bwino amenewa ndiavuto lakhasa"*, meaning "There are two patients, very sick of cancer". It was quickly followed by another. *"Mai laulentina adamwalira pa sabata kwa chamoto omweanali pa pa h.b.c".* This one - "Laulentina, a patient in the Home Based Care program, died on Saturday". These messages, in Chichewa – the local language – represent the beginnings of a new mobile phone-based healthcare initiative, centred around the humble SMS, which is set to revolutionise communication for doctors, nurses, staff and volunteers working to improve the health of a quarter of a million Malawians within a hundred square mile radius of St. Gabriel's, the hospital running the pilot.

In the development sector, technology projects are better appreciated when they have a powerful human slant, allowing them to be really seen in context. The context can rarely be any greater than when they're positively impacting on the lives of some of the poorest and most marginalised members of society. As a result of the first text message, a nurse will take the hospital motorbike and head up to Chilembwe, about sixty kilometres away, to check on the cancer patients. And the second? Well, despite the terrible news, it saved the hospital a day-long trip to Chamoto to administer more morphine to the patient. Where time, money, staff and resources are at a minimum, these text messages – and many more besides – are having a hugely positive impact.

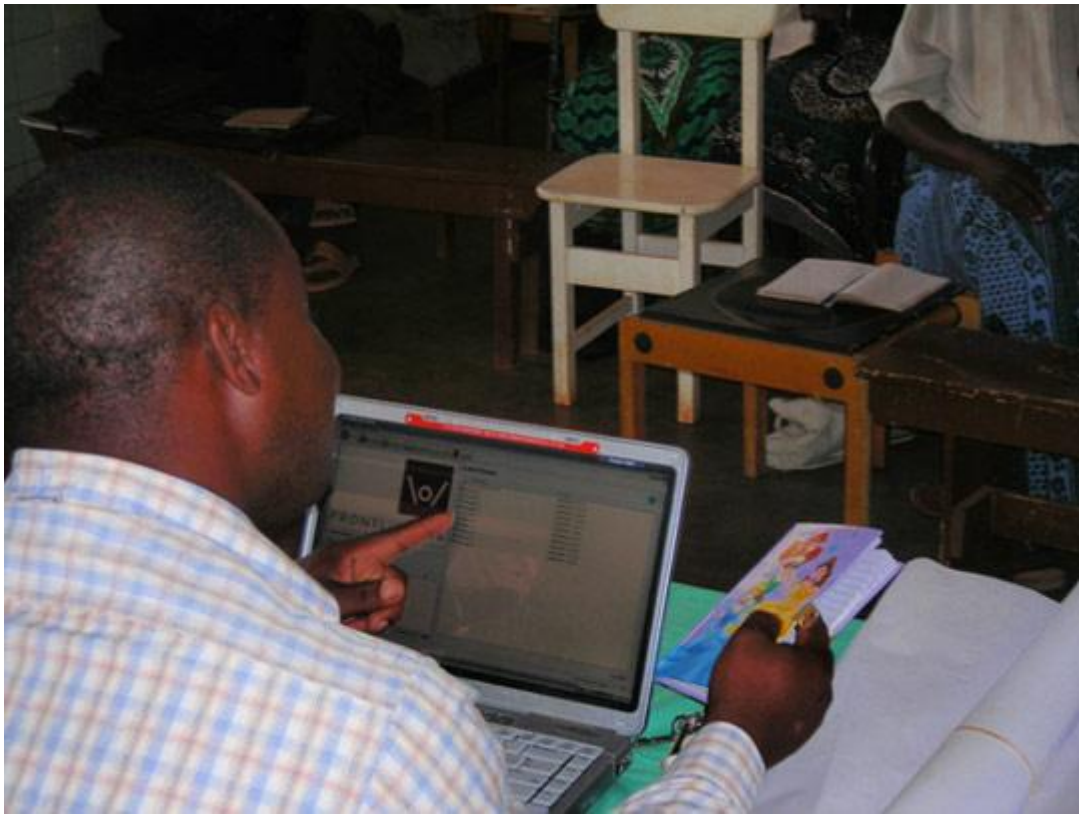
Josh Nesbit is a Senior in the Human Biology Program at Stanford University. I met him last year during my time at Stanford, and he was excited about the potential for mobile phones to revolutionise the work of this communications-starved hospital in Malawi, which he had visited the previous year. He had heard about my work, and we met and talked about what he wanted to do. Later, he returned to Malawi with the first version of my FrontlineSMS messaging platform – which was designed for the very communication challenges he was trying to solve – along with a laptop computer and a Nokia 6100 mobile phone. Not a huge amount happened, but the hospital staff and management were truly inspired and motivated by the possibilities, and talked about how mobile phones could help them with tasks such as patient follow-up, TB and HIV drug adherence monitoring and fielding the community's medical questions.

St. Gabriel's Hospital – where Josh will be spending the best part of his summer armed with a couple more laptop computers, one hundred mobile phones and the new version of FrontlineSMS – is no

stranger to assaults on well-being spread by disease and illness. Located in Namitete, Malawi, it lies within a country with a national HIV prevalence rate of 15-20%. Children orphaned by AIDS will represent as much as one tenth of the country's population by 2010. With tuberculosis (TB), malaria, malnutrition and pneumonia ravaging immuno-compromised populations, the health system - including St. Gabriel's Hospital – faces a disquieting burden. Malawi's health challenges are compounded by its devastatingly low GDP per capita, by some measures the lowest in the world.

With just two doctors and a handful of clinical officers, St. Gabriel's Hospital is strikingly understaffed. This perennial state of affairs explains the shift of primary healthcare towards Community Health Workers (CHWs), trained for specified tasks. Through the hospital's antiretroviral (ARV) treatment program – drug therapy for HIV/AIDS – over 600 volunteers have been recruited. These volunteers are spread throughout villages in the Hospital's catchment area. Some CHWs are HIV and TB drug adherence monitors, while others accompany patients during long journeys – up to a hundred miles, often by foot – to the hospital.

A few of the more inspired volunteers record their activities in notebooks, and travel to the hospital to have their good work acknowledged. The vast majority, however, remain disconnected from hospital activities, interacting with hospital staff only to pick up their drugs. It's not that they don't want to play a legitimate role in a community health system – there's just no communication to foster such a role. This is true of hundreds, if not thousands, of health centres in sub-Saharan Africa and beyond, but so often it needn't be that way.



(Photo credit: Josh Nesbit – Staff a St. Gabriel's Hospital get to grips with their new messaging platform)

FrontlineSMS is now the cornerstone of a new, text-based communications initiative at St. Gabriel's Hospital. Funded by the Haas Center for Public Service at Stanford University and the Donald A. Strauss Foundation, Josh is currently knee-deep in the pilot program. According to Josh, "FrontlineSMS is being used to connect the hospital with its CHWs, expanding the role of the volunteers. Drug adherence monitors are able to message the hospital, reporting how local patients are doing on their TB or HIV drug regimens. Home-Based Care volunteers are sent texts with names of patients that need to be traced, and their condition is reported. 'People Living with HIV and AIDS' (PLWHA) Support Group Leaders can use FrontlineSMS to communicate meeting times. Volunteers can be messaged before the hospital's mobile testing and immunization teams arrive in their village, so they can mobilize the community. Essentially, FrontlineSMS has adopted the new role of coordinating a far-reaching community health network".

The hospital sees intense promise in the formidable duo of FrontlineSMS – which is provided free to the non-profit community – and the cell-phone-yielding health worker. The usefulness of a well-managed communications network is undeniable, particularly when the information is so vital. In the first few hours of the pilot program, a deceased patient's extra ARVs were secured, the Home-Based Care Unit was alerted of ailing patients, and meetings were arranged (and subsequently re-arranged!).

Solutions to these types of communication problems needn't cost vast amounts of money, or take months or years to develop. After all, the mobile phone network provides the communications platform and, thanks to the rapid spread of the technology, that's usually already there. All that's usually missing are the tools to do the job – in this case a piece of free software and a bag full of second-hand, recycled mobile phones. Heaven knows, we have plenty of those in the West.

If a hospital such as St. Gabriel's can be empowered with a relatively small investment of time and money, imagine what else could be possible if we were just able to get these tools into the hands of others? Sadly, there's no shortage of hospitals and clinics out there that desperately need them.

Ken Banks devotes himself to the application of mobile technology for positive social and environmental change in the developing world, and has spent the last 15 years working on projects in Africa. Recently, his research resulted in the development of FrontlineSMS, a field communication system designed to empower grassroots non-profit organisations. Ken graduated from Sussex University with honours in Social Anthropology with Development Studies and currently divides his time between Cambridge (UK) and Stanford University in California on a MacArthur Foundation-funded Fellowship. Further details of Ken's wider work are available on his website at www.kiwanja.net