

## Südafrika: Mobile Technologie für das Gesundheitssystem

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<http://www.scidev.net/global/health/feature/mobile-technology-supports-frontline-health-workers.html>

Das südafrikanische Unternehmen Mobenzi hat ein System entwickelt, mit dem Angestellte des Gesundheitswesens über Mobiltelefone Zugriff auf Patientenakten erhalten und diese aktualisieren können, zudem lassen sich Krankenbesuche und weitere medizinische Dienstleistungen organisieren. Die Daten werden zentral erfasst und sind jederzeit abrufbar. Insgesamt unterstützen 500 verschiedene Mobiltelefone die Anwendung - auch nicht internetfähige Modelle. So soll das personell unterbesetzte Gesundheitswesen Südafrikas effizienter und die Grundversorgung gewährleistet werden. Das System wird seit 2012 in der Provinz Westkap getestet und umfasst etwa 1.200 Patienten. In dem Pilotprojekt sind drei Kliniken und ein Team von zehn Angestellten aus dem Gesundheitswesen miteinander vernetzt. Die Ausweitung des Projekts auf zwei weitere Teams mit einem Schwerpunkt auf die Erkennung und Behandlung von Tuberkulose ist bereits in Vorbereitung.

### Mobile technology supports frontline health workers

Could telemedicine solve challenges facing South Africa's overstretched healthcare services? *Munyaradzi Makoni* reports.

Primary healthcare in South Africa is notoriously overstretched and under-resourced, making the daily demands of record-keeping, home visits and patient monitoring a challenge for workers. Telemedicine — the remote provision of healthcare using information and communications technology (ICT) — holds great promise for a country with a shortage of healthcare workers. It is also an opportunity for innovative private-service providers.

Mobenzi, a company that provides technology and professional services to organisations involved in research, statistics collection, logistics and community service delivery, provided the answer. Using a mobile-powered programme that aims to manage healthcare more efficiently, Mobenzi has become the backbone of a project to reengineer public healthcare.

Previously, all record-keeping, reporting and planning was paper-based, severely limiting timely access to information, says Andi Friedman, Mobenzi's director. "The logistical and administrative burden on public healthcare workers jeopardises the ability of these teams to deliver on their mandate to provide efficient primary healthcare, and lack of data makes decision-making difficult," he says. Mobenzi has radically streamlined this process, he adds.

A portmanteau of 'mobile' and the Zulu word *'umsebenzi'* (which means work), Mobenzi enables community health workers to feed information into their mobile phones, which then sends state of patient's health to a centralised computer system.

Mobenzi itself dates back to 2004, when it was developed by Clyral, a Durban-based software development company initially set up to support organisations that wanted to collect various data using mobile technology in fields including healthcare.

In 2006, Clyral created Mobenzi Researcher, which allows organisations to capture relevant statistics in remote locations using standard mobile phones. So when, in 2007, the Health Systems Trust (HST) — a South African non-profit organisation that promotes primary healthcare delivery across Southern Africa — needed to collect information in rural communities, it turned to Mobenzi.

The Mobenzi team used mobile phones to collect data on health from communities — and was so successful that Clyral's engineers went on to develop a full-scale generic platform to collect information from the field through mobiles. Friedman says the organisation has been expanding its capabilities ever since.

## Piloting innovation

In 2012, a pilot project, using a refined version of Mobenzi, was launched in the country's North West province. The project was commissioned by the Medical Research Council and the University of the Western Cape in collaboration with the North West Department of Health and HST.

It aimed to demonstrate the role mobile technology can play in supporting the work of community health workers — the majority of whom are women. These are the outreach teams that provide services to communities otherwise lacking healthcare access. The project involves three clinics, one team leader, and ten community health workers who service more than 1,600 households.

Patients' records are centralised and accessed through Mobenzi, which community health workers can update from the field, and the programme has become a management tool for their workflow and patient visit scheduling.

The programme has support tools that enable community health workers to identify and treat conditions, while allowing for remote consultations and the referral of cases to specialists electronically. Inbuilt text messaging enables interaction with patients as well as appointment reminders. Community health worker activities, workloads and data verification are recorded, and the web interface allows for supervision, reporting and entry of new information. Mobenzi supports 500 different handset models, including most low-cost feature phones.

## Streamlining healthcare

Friedman explains that, to date, the Mobenzi pilot scheme has enabled automated visit scheduling in accordance with the latest government guidelines for prenatal and postnatal care for children under five. The project has facilitated electronic referrals and feedback on referral outcomes, and healthcare workers can now manage their entire workload, including helping patients comply with treatment plans, Friedman says.

Mobenzi also enables the submission of official reports of workers' rosters and care monitoring distribution. And clinics can now report births with an automated text message notification sent to community health workers. The outreach team piloting the project currently services more than 1,200 patients and more than 8,000 patient visits have taken place. They have facilitated more than 250 clinic referrals, with 70 per cent of clients taking up referrals.

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## Reaping the rewards of innovation

In May 2013, Mobenzi was shortlisted for the second Innovation Prize for Africa, which celebrates practical solutions to some of the continent's most intractable problems. Friedman says the success of the project hinges on its participatory approach, with feedback from all stakeholders — particularly those on the ground — being used to guide each iteration.

The approach accommodates a flexible technology platform, enabling quick configuration as requirements change. In addition, a multidisciplinary team — including health experts, research scientists and engineers — enables rapid decision-making, he says. "Outreach teams are the primary stakeholders impacted by the technology. By empowering these teams to be more effective, improving links to primary healthcare facilities and providing support to front-line care workers, the communities they serve will benefit," says Friedman.

Ronel Visser, HST's acting CEO, says good-quality data is crucial for the successful planning and implementation of public health projects, and that initiatives such as Mobenzi will play a more prominent role in future health interventions.

But, as personal health information will be transmitted remotely, fears have been raised on how this data will be shared, stored and managed by health practitioners. To protect people's right to privacy Visser says they took measures to safeguarding patients' health information falling into wrong hands. "Issues such as standards, data security, confidentiality and ensuring valid and reliable back-up systems were important considerations when planning projects of such nature," she says.

### Costs and sustainability

Friedman says South Africa's national development plan has committed to the community health worker-based approach, and that the anticipated costs for empowering these workers using mobile technology will be a fraction of what it costs to run the primary healthcare programme.

The project is already being replicated, with training under way for two additional teams in the Western Cape that will focus on detecting tuberculosis and providing treatment support.

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