



Credit: Cell-Life

I. Global Health

Mobile Technology in Health

The Millennium Development Goals (MDGs) acknowledge the centrality of health in reducing poverty and increasing human development. The role of mobile phones, as with other information and communication technologies (ICT), is under increasing scrutiny in the health arena, precisely because the stakes are so high and the potential gains from technology development so significant.

Take HIV/AIDS, for example. A 2007 report on the MDGs states: “The number of people dying from AIDS worldwide increased to 2.9 million in 2006, and prevention measures are failing to keep pace with the growth of the epidemic. In 2005, more than 15 million children had lost one or both parents to AIDS.”³

Furthermore, of the one billion people living in extreme poverty, 75 percent live in rural areas. A report by InfoDev notes: “Health conditions in rural areas are generally poorer, and access to information, services, and supplies is most limited.”⁴

Informa Telecoms & Media estimates that in mid-2007, mobile networks covered 90 percent of the global population, and that in 2008 worldwide mobile phone penetration will hit 50 percent, with well over 3 billion subscriptions.⁵ With rapidly increasing mobile coverage around the world and expansion to rural areas where Internet access is still years away, mobile technology holds great promise for making health prevention and medical care more effective for the world’s poorest people.

Mobile technology has been piloted in a range of health-related areas, including improving dissemination of public health information (e.g., disease outbreak and prevention messages); facilitating remote consultation, diagnosis, and treatment; disseminating health information to doctors and nurses; managing patients; monitoring public health; and increasing the efficiency of administrative systems. In all these areas, evidence exists that mobile phones can play a significant role. Further work is underway to look at the actual impact of mobile phones on improving health outcomes. The PanAsian Collaboration for Evidence-based e-health Adoption and Application (PANACeA), a project underway at the International Development Research Centre, is assessing the effect of mobile phones on improved health.

³United Nations. *Millennium Development Goals Report, 2007* (United Nations, 2007).

⁴Chetley, Andrew, ed. *Improving Health, Connecting People: The Role of ICTs in the Health Sector of Developing Countries* (Washington, DC: InfoDev, 2006). www.infodev.org/en/Publication.84.html.

⁵Informa Telecoms. *Mobile Industry Outlook 2008, 6th Edition* (London: Informa Telecoms, 2007).

Delivering Patient HIV/AIDS Care
(South Africa)13

Connecting Health Clinics and Remote
Health Workers (Uganda)16

Lowering the Barriers for Access to Public
Health Data (Kenya, Zambia)19

Connecting Youth to Sexual Health
Information (United States)23



Credit: DataDyne

While impact assessments and outcome measurements are hard to come by, there is evidence that text message reminders increase patient compliance in taking medication for such diseases as tuberculosis and HIV.⁶ Yet much of the published evidence about the use of mobiles in health remains in the proof of concept stage.

The case studies featured here explore areas where mobile phones show great potential: health workers making better treatment decisions because of information delivered via the mobile network (e.g., Academy for Educational Development (AED)-Satellite), people making informed choices about their health with better access to information delivered via mobile phones (e.g., SexInfo), and the collection of medical data on mobile devices for better patient and public health management (e.g., DataDyne and Cell-Life).

In order to justify investing in the use of mobile technologies in the health sector in poor countries, much more attention needs to be paid to how such technologies effectively integrate and improve basic service delivery on the ground. Furthermore, the potential benefits in improved access, quality of care, and better clinical results need to be clearly demonstrated.

The challenge is how to move from proof of concept to larger scale implementations of promising projects. We are optimistic that with increased investments in evaluating the health impact of using mobile technologies and, more importantly, in the scaling of projects that are shown to work, we will see significant progress in some of the areas discussed. Lastly, we hope that there will be continued investment in new and innovative uses of mobile technology in exploring, for example, how mobile phones can play a role in maternal health.

⁶Vodafone Group. *The Role of Mobile Phones in Increasing Accessibility and Efficiency in Health Care. Vodafone Group Policy Paper Series* (Newbury, UK: Vodafone Group, 2006).