Mobile health-care information for all: a global challenge

Access to health-care information for citizens is a key determinant to reach both the Millennium Development Goals (MDGs) and the emerging post-2015 Sustainable Development Goals, but this challenge has repeatedly been relegated to the sidelines.[1] What might kickstart progress? An obvious candidate is the mobile phone, which is becoming ubiquitous in low-income and middle-income countries.

It is vital that citizens in these countries have access to actionable health-care information, largely because they typically have no access to trained health workers. People who need medical attention in such contexts are especially vulnerable to ineffective or even harmful treatment from parents, lay carers, or traditional healers; in these settings, mistreatment and delays in obtaining effective treatment can contribute to increased morbidity and mortality. For example, findings from a study in India[2] showed that four in ten children with acute diarrhoea were incorrectly given less to drink than normal, potentially increasing their risk of death from dehydration.

We recently commissioned a survey of 1700 projects of mobile technology for health (known as mHealth).[3,4] Our findings showed that none of these services provided essential, actionable, offline guidance for direct use by citizens addressing the range of acute health-care situations commonly encountered in low-resource settings, and very few provided any such content at all (an example is HealthPhone, see below).

There is clearly a huge and growing opportunity for citizens to have health-care information on their phones, available offline as and when they need it. Up to now, this opportunity has been constrained by three challenges.

First, most mobile phones in low-resource settings are basic phones that can accommodate only voice and SMS text messaging with no internet connectivity or multimedia capability. Consequently there is a plethora of SMS messaging services that push short messages about health education to citizens. However, this approach is not appropriate to empower citizens with as-needed health-care information to deal with acute situations such as child illness, complications of pregnancy, and first aid. Additionally, text is not appropriate for people with low literacy. The situation is, happily, rapidly changing. Feature phones (basic phones that can accommodate a memory card, carrying video and other media (with or without wifi capability, but without full internet access) are becoming commonplace, and smartphones becoming more and more affordable.[5]

Second, there is a shortage of appropriate content. A few non-profit organisations such as Medical Aid Films and Global Health Media Project are producing open-access audio and video content in local languages, in collaboration with reputable international health organisations such as WHO and UNICEF. There is, however, little investment in such content. There is a real risk that the pharmaceutical industry and infant nutrition companies will take advantage of this gap in information provision to promote their own products, with potentially disastrous public health consequences. Indeed, the US health-care and pharmaceutical industry alone is already spending $373 million per year on advertising via mobile phones.[6]

Third, how to place the content onto individual phones? We believe the ideal approach is for handset manufacturers to preload health content onto mobile phones at the time of manufacture, in the same way that games and other content are currently made freely available. Content can also be made available on micro-SD cards, which cost just a few dollars each. HealthPhone, for example, is helping to make Medical Aid Films, Global Health Media Project, and other videos available in this way, and this year aims to directly reach more than 170 million people in India with information about nutrition, through a partnership with Indian Academy of Pediatrics, UNICEF, and the Government of India, and with support from Vodafone.

Additional content could also be made available free to download for offline use. More and more people are able to access the internet freely (eg, via wi-fi), or at low cost, continuously or at least intermittently. Health centres, public libraries, schools, community centres, and local non-governmental organisations could help to raise awareness and provide access points to guide people about what content to download and how to use it, or even provide local wi-fi hotspots to disseminate this content for free.

We call on content providers, mobile phone manufacturers, network operators, application developers, and international health organisations to collaborate to empower citizens in low-resource settings with essential health care information. Production and free availability of such applications to directly empower citizens in low-resource settings with essential, accessible, actionable health-care knowledge, as and when they need it, could open up a new chapter in global health.

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For **Mobile Healthcare Information for All** see www.hifa2015.org/the-first-hifa-smart-goal-mobile-healthcare-information-for-all/

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