

Mobile Health: Why Go Mobile?

The Internet is transforming health care in the U.S., but it is still limited in reach, particularly among underserved populations where health challenges are most acute. According to the Pew Internet & American Life Project, while 73% of American adults have access to the Internet, only 50% of those with chronic conditions have access. Among people with less than \$30,000 in income, only 31% have broadband Internet access. Only 41% of African Americans and 55% of English-speaking Latinos have access.

Cell phones represent a much greater, yet still largely untapped tool for improving individuals' health. Over 1.5 trillion text messages were sent in the U.S. in 2008 (Source: Cellular Telephone Industries Association). Nearly 90% of adults in the U.S. own a mobile phone, and 18% of American households rely only on a cell phone. Sixty-three percent of people with incomes under \$30,000, and 73% of African Americans have mobile phones. Mobile phones are the most personal technology device; they are almost always with us -- in our hands, in our pockets or on our night tables. As health devices, cell phones can remind us to take our medications or visit the doctor, help us track our weight loss or quit smoking, monitor our glucose levels or give us vital information about prenatal and infant care.

The best place to look for these kinds of innovative models in action is in the developing world where the relative lack of fixed line phones and Internet access has led to a burst of creative uses of mobile technology. In Mexico, HIV/AIDS patients are reminded to take their medications via text messaging. South African physicians monitor tuberculosis patients via their phones.

Studies from around the world have shown that mobile health applications can help smokers quit^{1,2}, help HIV/AIDS patients adhere to treatment³ and help diabetics manage their disease^{4,5}. The U.S. has been slow to utilize mobile health and mobile applications in general, but the tide has started to turn with the mass adoption of SMS (text) messaging and the advent of smart phones like the iPhone.

As U.S. Department of Health and Human Services Secretary Kathleen Sebelius remarked at the National Institutes of Health Mobile Health Summit in October 2009:

They're the most direct, convenient, and dependable form of communication we have. That's why the President and I believe mobile phones have so much power to empower the consumer toward a healthcare system in the future....Mobile health also has enormous benefits for individuals and improving the health of all Americans. We have a new program that will provide guidance to pregnant women and new moms that's about to launch. We have not only our

¹ Bauer S, Haug S et al. "Continuous individual support of smoking cessation using text messaging: a pilot experimental study." *Journal of the Society for Research on Nicotine and Tobacco*. (2009).

² Bramley D, et al. "Do u smoke after txt? Results of a randomized trial of smoking cessation using mobile phone text messaging." *Tobacco Control*. (2005).

³ Xanthe, et al. "Improving the efficiency of monitoring adherence to antiretroviral therapy at primary health care level: a case study of the introduction of electronic technologies in South Africa." *Development Southern Africa*. (2007).

⁴ Anderson N, et al. "Diabetes education via mobile text-messaging." *Journal of Telemedicine and Telecare*. (2006).

⁵ Franklin, VL, et al. "A randomized controlled trial of Sweet Talk, a text-messaging system to support young people with diabetes" *Diabetic Medicine*. (2006).

Administration but the National Healthy Mothers, Healthy Babies Coalition, Voxiva, CTIA-The Wireless Foundation, Johnson & Johnson and many others who are using this as a prototype to see if we can reach out to a population who often are hard to access and hard to find....We think this technology has enormous promise.

Because it relies of the ubiquity of text messaging, text4baby is a model for reaching and engaging the broadest possible cross section of the population. With text4baby, a woman doesn't need the Internet or an iPhone to receive critical information to help keep her and her baby healthy.