

# Mobile phones improve outcomes for HIV-positive people across the globe

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Mobile health has proved a vital health tool, such as when the Red Cross shared public health information via text messaging following the 2010 earthquake in Haiti. Credit: Russell Watkins, U.K. DFID

The use of mobile technology shows great promise for those who are HIV-positive, especially among those who have limited resources and those in poor areas of the world, according to a new paper published by researchers at the University at Albany.

Known as mobile health interventions (mHealth), such tools include dosing reminders, data about medication intake and questions about care communicated electronically, all of which result in better feedback and

improved communication between patients and their care providers. These technologies have already proven to be effective for other patients with chronic conditions such as diabetes, asthma, tuberculosis and malaria, according to UAlbany Assistant Professor of Communication Archana Krishnan.

"The near-ubiquitous access to mobile technology has encouraged entrepreneurs, nongovernmental organizations (NGOs), researchers and governments to develop secure methods for data collection that include secure servers, data encryption and HIPAA-compliant security protocols," said Krishnan.

The excitement around mHealth initiatives stems from [mobile technology](#)'s ability to address perennial barriers to [health care access](#) like cost, infrastructure and accessibility. "The global health community has now created and implemented a myriad of mHealth solutions in response to problems that previously seemed intractable," said Krishnan. "But, there is still a good deal of evaluation that needs to be completed."

The paper, "A Multipronged Evidence-Based Approach to Implement mHealth for Underserved HIV-infected Populations," published in Mobile Media & Communication, incorporates real-world projects and previous previously completed research on mobile technologies and healthcare.

The study showed that text messages were especially effective in reminding participants to keep medical appointments and that participants found them useful and easy.

Medical professionals ascertained that participants attended their HIV medical appointments, an indicator of successful long-term care retention. In addition to the reminders, the cell phones enabled participants to contact providers with health-related concerns and

questions, thereby establishing bidirectional communication.

While the physical geographic location of these studies ranges from South East Asia to Latin America and the United States, the technological context for these studies is remarkably similar, said Krishnan. She noted that the simple use of text messages has been most successful with HIV patients in underserved areas, especially in regions like Africa, India and South America where individuals have limited resources.

Despite the promising trends, however, there are populations where mobile technologies have not been tenable, including sex workers, those with substance abuse disorders, injection drug users, prisoners, and those who are homeless or suffer from mental illness and neurocognitive impairment.

Krishnan authored the paper with Claire Cravero, an mHealth technical consultant and a graduate student at the Harvard T.H. Chan School of Public Health.

The study recommends a three-pronged approach to improving care:

- Assess accessibility of communication technology tools – mobile phones and computers – and the feasibility and acceptability of mHealth interventions through descriptive studies.
- Conduct case studies, usability tests and pilot projects that implement mHealth-based protocols and interventions.
- Integrate mHealth tools into existing large-scale clinical, pharmacological or socio-behavioral randomized control trials.

**More information:** Archana Krishnan et al. A multipronged evidence-based approach to implement mHealth for underserved HIV-infected populations, *Mobile Media & Communication* (2017). [DOI:](#)

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