



## The Potential for Health-Related Uses of Mobile Phones and Internet with Homeless Veterans: Results from a Multisite Survey

|                          |  |
|--------------------------|--|
| <b>AUTHORS:</b>          | D. Keith McInnes, Sc.D., M.Sc.<br>Leon Sawh, M.A.<br>Beth Ann Petrakis, M.P.A.<br>Sowmya R. Rhao, Ph.D.<br>Stephanie L. Shimada, Ph.D.<br>Karin M. Eyrich-Garg, Ph.D.<br>Allen Gifford, M.D.<br>Henry D. Anaya, Ph.D.<br>David Smelson, Psy.D. |
| <b>DATE:</b>             | 2014   |
| <b>PUBLICATION:</b>      | <i>Telemedicine and e-Health</i> , 20(9),<br>801-809   |
| <b>PUBLICATION TYPE:</b> | Peer-Reviewed Journal Article  |
| <b>KEYWORDS:</b>         | Homeless persons, veterans, cellular<br>phone, mobile phone, informatics,<br>access to care  |

### ABSTRACT

“*Background:* Addressing the health needs of homeless veterans is a priority in the United States, and, although information technologies can potentially improve access to and engagement in care, little is known about this population’s use of information technologies or their willingness to use technologies to communicate with healthcare providers and systems. *Materials and Methods:* This study fills this gap through a survey of homeless veterans’ use of information technologies and their attitudes about using these technologies to assist with accessing needed healthcare services. *Results:* Among the 106 homeless veterans surveyed, 89% had a mobile phone (one-third were smartphones), and 76% used the Internet. Among those with a mobile phone, 71% used text messaging. Nearly all respondents (93%) were interested in receiving mobile phone reminders (text messages or phone call) about upcoming medical appointments, and a similar proportion (88%) wanted mobile phone outreach asking if they would like to schedule an appointment if they had not been seen by a health provider in over a year. In addition, respondents already used these technologies for information and communication related to health, housing, and jobs. *Conclusions:* These findings suggest new avenues for communication and health interventions for hard-to-reach homeless veterans.”

### RESEARCH HIGHLIGHTS

- Homeless veterans often have difficulty using outpatient primary care efficiently and effectively due to problems keeping appointments and confirming location of care. Given the use of technology to remind patients of appointments and healthcare locations, this study assesses homeless veterans’ attitudes towards and access to technology for health-related use. This study examines whether mobile technologies, such as smart phones and email, can bridge the gap between VA health services and homeless veteran populations.
- Veterans indicated that they are interested in using mobile technology to find local VA healthcare facilities, receive reminders about appointments, and be contacted if they have not had a medical appointment in over one year. This finding indicates that access to information technologies such as smartphones, email accounts, and text messaging may provide a viable option for homeless veterans to meet their healthcare needs.
- Homeless veterans desire more interaction with their healthcare providers via information technologies. Given these findings, practitioners’ offices should offer mobile and internet technology services to homeless veterans and other at risk populations.

## IMPLICATIONS

### FOR PRACTICE

Using mobile communication as a mechanism for more consistent communication with healthcare and other service providers could help improve homeless veterans overall health and wellbeing. Therefore, homeless veterans who have trouble maintaining contact with healthcare providers should request mobile communication assistance. Counselors and social workers who work with homeless veterans should inquire on their veteran's mobile usage to determine if a mobile-based plan of communication would be beneficial. If veterans report having irregular access to mobile communications, counselors and social workers should identify barriers to access and work with veterans to devise a contingency plan for contact, including when their mobile device is out of service, lost, or stolen. Service provider offices should consider offering mobile and internet technology services to homeless veterans and other at risk populations.

### FOR POLICY

Given that veterans find technological healthcare notifications beneficial, the VA might expand its overall mobile notifications efforts. This expansion might include a strategy to address how technology and mobile devices might reduce the barriers to regular access to homeless veterans. Specific programs that would benefit from greater implementation of mobile communication are HUD-VA Supportive Housing, Supportive Services for Veteran Families, Health Care for Homeless Veterans, and VA Homeless Patient Aligned Care Teams. To build a stronger and more consistent program of care for veterans, the VA might offer mobile communication options to homeless veterans. In addition to appointment reminders, the VA might also use mobile technology to remain connected with veterans. Opportunities to remain connected might include providing notifications for upcoming appointments, sharing laboratory test results, and tracking progress toward overall health goals. Policymakers may consider new initiatives to support existing mobile phone access and technology use among homeless veterans. These initiatives might include higher-value mobile packages that include more minutes or free text messaging. Packages might also include smartphones and plans that help veterans keep a working phone even with missed payments.

### FOR FUTURE RESEARCH

A limitation of this study is that the participants are from a convenience sample of veterans currently utilizing healthcare services and did not include any homeless living on the streets. Since these veterans have been utilizing healthcare services, their attitudes towards and access to mobile technologies might differ from that of homeless veterans who do not regularly frequent a healthcare provider. Further research is needed on the trends of homeless veterans and their access to and use of mobile technologies for health-related care. Some of the participants took advantage of supportive housing programs. Therefore, some of the participants might have had more stable access to IT communications. Future studies should examine the accessibility of information technologies for a wider range of homeless populations, for example those who are living on the streets, in a car, or other "literally homeless" situations. Additionally, eligible veterans were recommended for this study by housing staff. Housing staff might have identified veterans who they knew regularly use technology. Thus, the findings in this study might be skewed. Future studies should use a random sample to control for bias. Also, it might be beneficial to conduct intervention studies in which mobile phones are used to delivery health information, reminders, advice, and motivation to increase homeless persons' access to and use of appropriate health care services. Future studies should include female veterans and veterans from all war eras.

## AUTHOR INFORMATION

**D. Keith McInnes, Sc.D., M.Sc.** <sup>1,2,3</sup>

**Leon Sawh, M.A.** <sup>2,4,5</sup>

**Beth Ann Petrakis, M.P.A.** <sup>2</sup>

**Sowmya R. Rhao, Ph.D.** <sup>2,6</sup>

**Stephanie L. Shimada, Ph.D.** <sup>2,3</sup>

**Karin M. Eyrich-Garg, Ph.D., M.P.E.,  
L.C.S.W.** <sup>7</sup>

**Allen Gifford, M.D.** <sup>2,3</sup>

**Henry D. Anaya, Ph.D.** <sup>8</sup>

**David Smelson, Psy.D.** <sup>2,4,5</sup>

<sup>1</sup> Keith.McInnes@va.gov

<sup>2</sup> Center for Healthcare Organization and Implementation Research, Department of Veterans Affairs, Edith Nourse Rogers VA Hospital

<sup>3</sup> Department of Health Policy and Management, Boston University School of Public Health

<sup>4</sup> VA National Center on Homelessness Among Veterans

<sup>5</sup> Department of Psychiatry, University of Massachusetts Medical School

<sup>6</sup> Department of Quantitative Health Sciences, University of Massachusetts Medical School

<sup>7</sup> School of Social Work, Temple University

<sup>8</sup> Department of Veterans Affairs, Los Angeles, California; UCLA David Geffen School of Management; Center for Management of Complex Chronic Care - Chicago, Illinois