

mHealth: an avenue for promoting health among sexual and gender minority populations?

Deborah Bowen¹, Jennifer Jabson², Charles Kamen³

¹Department of Bioethics and Humanities, University of Washington, Seattle, WA 98195, USA; ²Department of Public Health, University of Tennessee, Knoxville, TN 37902, USA; ³Department of Surgery, University of Rochester, Rochester, NY 14614, USA

Correspondence to: Prof. Deborah Bowen. Department of Bioethics and Humanities, 1959 NE Pacific Street, University of Washington Box 357210, Bioethics and Humanities, Seattle, WA 98195, USA. Email: dbowen@uw.edu.

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Electronic communication systems have come of age

The use of online electronic systems to communicate information has become both commonplace and important. Internet access, cell and smart phone use, and electronic mail use are at all-time highs in the US (1). The prevalence of social media continues to increase steadily in the U.S. In 2014, 74% of U.S. adult Internet users reported using a social media platform, representing a 7% increase from 67% in 2012 (1,2). The NIH is building a large cohort study based on the concepts that people can provide, receive, and interact with health data via personal mobile devices, and that they use these data to inform their health choices (3). Given easier accessibility through mobile technology (2) online communication strategies, including social media, are becoming viable platforms in modern health communication (4,5).

Increased access and attention to online electronic communication systems has created opportunities for health researchers and practitioners to enhance health-related communication with patients. Electronic health records are being installed in major medical centers, and many of these platforms include patient portals that facilitate patient engagement with physicians and with their personal health information. Recent publications highlight the use of electronic health communication systems and patient portals to support patients' health choices, decisions, and actions (6-8). As these digital interventions are tested and are implemented into clinical and public health practice, they will become the standard of care and a key tool in health care and health promotion.

Sexual and gender minority individuals might benefit from online electronic communication systems

Sexual (lesbian, gay, bisexual) and gender (transgender) minority individuals share several qualities that would make them appropriate targets for electronic health communication interventions. First, in general sexual and gender minority populations report health disparities relative to the general population in multiple health outcomes, including mental health, substance abuse, some cancers, and multiple health related behaviors related to cancer (9,10). These largely preventable cancer and cancer-related disparities mean that sexual and gender minority individuals need increased exposure to opportunities for health promotion and health outcome change. Some of this exposure can come from online electronic communication systems. Second, sexual and gender minority groups are relatively rare populations that are only partially bounded by geography. Sexual and gender minority individuals live in every state, and in urban, rural, and suburban areas (10). However, the nationwide prevalence of sexual minority status is estimated to be between 1% and 10%, a small percentage in any individual community. Finally, some aspects of sexual and gender minority identity and lifestyle are hidden from public view due to stigma and discrimination that still exist for these populations. Taken together, these characteristics make identification and recruitment into interventions designed to promote health and ameliorate health disparities difficult using traditional media and community methods.

Online electronic communication systems might

Table 1 Characteristics of sexual minority individuals and how electronic communication can help

Sexual minority individuals are
Experiencing disparities in health outcomes
Relatively rare in the population
Stigmatized and often not fully public
Not receiving appropriate cancer-related health care
Not always “out” to provider or family
Less likely to have health care insurance
Be socially isolated
Electronic communication could:
Provide needed communication and intervention to reduce these disparities
Deliver communications that are not based in geography and that come directly to the individual
Deliver communication’s in privacy and on demand
Get accurate information on guidelines, etc.
Provide opportunity for communication from safe environment
Provide pathways to access to care
Connect with experts and peers about health issues

overcome some of these barriers. *Table 1* presents some of the characteristics of sexual and gender minority individuals and the ways that online electronic health communication systems could help provide health communication to target each of these characteristics. As can be seen in this table, online electronic systems might resolve some of these issues.

What do we know about use of electronic systems among sexual minority populations?

Very little evidence is published about the use of online electronic communication systems among sexual and gender minority individuals. From this evidence we know that HIV prevention studies have used websites and other electronic forms of communication to disseminate health information with some success (11). Preliminary evidence from the Health Information National Trends Survey (HINTS) indicates that sexual minority people access the internet at higher rates than heterosexual people (94.2% vs. 79.5% respectively; $P < 0.001$). In the HINTS analyses

sexual minority individuals use electronic communication systems for health-related information on par, and in some cases, at slightly higher rates than heterosexuals. These data reinforce the idea that providers, researchers, and public health scientists can use online electronic communication systems to deliver health promotion interventions for sexual minority individuals. No data have yet been published concerning gender minority individuals’ use of electronic systems for health information. This is an important area for future attention.

Of course, not all sexual and gender minority individuals can be reached via online electronic systems and those with intersecting marginalized identities (e.g., SGM of color, SGM with disabilities) may be less likely to be reached with these systems. There is still a digital divide between White individuals and people of color in access to the Internet and in use of some electronic systems, although this gap might be decreasing (1,4). For example, after controlling for participant characteristics, African Americans were less likely to register for their patient portal accounts in federally qualified health centers in comparison to White participants (12). Prior research reports low health information technology (HIT) adoption among certain racial/ethnic, gender-specific, age-specific, and socioeconomic U.S. adult Internet users and subgroups (13). We need to continue to eliminate the digital divide, especially as increasing amounts of health relevant information is communicated online.

Conclusions

Online electronic communication systems are useful for: reaching invisible and difficult to locate populations, reaching beyond geographic boundaries, and providing broad accessibility to health information. Therefore, online electronic communication systems may be one solution for reducing and eliminating health disparities experienced by sexual and gender minority people. There is early and preliminary evidence indicating that sexual minority people are online and seeking health information at rates higher than their heterosexual counterparts. Future endeavors to reduce disparities should involve building on this trend by developing and testing online electronic communication systems that facilitate sexual and gender minority patients’ engagement with personal health and health promotion information. Additionally, online electronic communication systems could be multidirectional, i.e., built and applied with the goal of improving patients’ health outcomes as well as healthcare providers’ knowledge about and cultural

competence in the unique health issues faced by sexual and gender minority patients. In this way online electronic communication systems could foster positive change in healthcare systems that reduce bias and its deleterious health effects for sexual and gender minority patients. Future work in this area should progress thoughtfully to develop strategies that include individuals with intersecting identities and to guard against widening the digital divide.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

References

1. Brenner J, Smith A. 72% of Online Adults are Social Networking Site Users. Washington, DC: Pew Research Center's Internet & American Life Project, 2013.
2. Project PI. Social networking fact sheet 2014. Available online: <http://www.pewinternet.org/factsheets/social-networking-fact-sheet/>. Accessed March 1, 2015.
3. Smith A. Why Americans Use Social Media. Washington, DC: Pew Research Center, 2011.
4. Fox S, Duggan M. Health Online 2013. Washington, DC: Pew Research Center's Internet & American Life Project, 2013.
5. Thackeray R, Crookston BT, West JH. Correlates of health-related social media use among adults. *J Med Internet Res* 2013;15:e21.
6. Bowen DJ, Burke W, Hay JL, et al. Effects of web-based intervention on risk reduction behaviors in melanoma survivors. *J Cancer Surviv* 2015;9:279-86.
7. Ventura F, Ohlén J, Koinberg I. An integrative review of supportive e-health programs in cancer care. *Eur J Oncol Nurs* 2013;17:498-507.
8. Buller DB, Berwick M, Lantz K, et al. Smartphone mobile application delivering personalized, real-time sun protection advice: a randomized clinical trial. *JAMA Dermatol* 2015;151:497-504.
9. Solarz AL. editor. Lesbian Health: Current Assessment and Directions for the Future. Washington, DC: The National Academies Press, 1999.
10. Institute of Medicine. The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding. Washington (DC): National Academies Press (US); 2011.
11. Mustanski B, Greene GJ, Ryan D, et al. Feasibility, acceptability, and initial efficacy of an online sexual health promotion program for LGBT youth: the Queer Sex Ed intervention. *J Sex Res* 2015;52:220-30.
12. Smith SG, O'Connor R, Aitken W, et al. Disparities in registration and use of an online patient portal among older adults: findings from the LitCog cohort. *J Am Med Inform Assoc* 2015;22:888-95.
13. Hsiao CJ, Hing E. Use and characteristics of electronic health record systems among office-based physicians practices: United States, 2001-2013. Hyattsville, MD: National Center for Health Statistics; 2014.

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